FINAL PROGRESS REPORT

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Evaluation of Farm Safety 4 Just Kids Day Camps

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List of Abbreviations

ANCOVA	Analysis of Covariance
ANOVA	Analysis of Variance
ATV	All-Terrain Vehicle
CCL	Chapter Camp Leader
CES	Cooperative Extension Service
D.A.R.E	Drug Abuse Resistance Education
EMT	Emergency Medical Technician
FS4JK	Farm Safety 4 Just Kids
FFA	formerly Future Farmers of America
GEE	General Estimating Equation
GENMOD	Generalized Linear Model
HIPPA	Health Information Patient Privacy Act
IRB	Institutional Review Board
KR 20	Kuder-Richardson
NIOSH	National Institute of Occupation Safety and Health
PAF	Progressive Agriculture Foundation
PI	Principal Investigator
POST	Posttest
PPE	Personal Protective Equipment
PTO	Power take-off
PRE	Pretest
ROPS	Roll over protective structure
SAS	Statistical Analysis System
SD	Standard Deviation
TIER	Training Intervention Effectiveness Research
UK	University of Kentucky
U.S.	United States

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Abstract

The purpose of this 3-year, multi-site evaluation research was to examine the effectiveness of farm safety day camps organized and delivered through five Farm Safety 4 Just Kids (FS4JK) chapters in different regions of the nation. The locations of the chapters included in the study encompassed a variety of agricultural commodities and farm compositions.

The specific aim was to evaluate whether the camps positively influenced: (1) children's knowledge about farm safety and health, their safety attitudes, and subsequent safety behaviors; and (2) parents' attitudes and behavior toward children's farm safety behavior. In addition, the effect of the camps on the local community was assessed. This research was grounded in the social-ecological framework of McLeroy and colleagues (1988) and in the National Institute of Occupational Safety and Health Training Intervention Effectiveness Research (TIER) Model.

A multi-level mixed-method evaluation strategy that combines both quantitative and qualitative data collection methods was used to examine the long-term effects of the day camps on children, their families, and their communities. A quasi-experimental, no-control-group, pretest-posttest design with repeated measures was used. Data were collected from children and their parents (guardians) over 18 months following children's camp experience. Results indicate children gained knowledge about selected farm safety topics and changed safety behavior. Parents also indicated benefits from their children's camp experience. Instructional practices at the camps were appropriate. Some effect, though limited, was noted in the larger community.

The partnership of local FS4JK Chapters, the North American Farm Safety 4 Just Kids organization, and the University of Kentucky provided a unique approach to examining the effectiveness of FS4JK day camps. The evaluation results can be used to assist FS4JK with refinements of future programs and will assist camp leaders in articulating their theoretical framework, goals, and objectives of the day camps. The findings also will contribute to the national research agenda in farm child safety knowledge, attitudes, behavior, and injury rates.

Highlights/Significant Findings

Farm Safety 4 Just Kids (FS4JK) is a national organization with over 140 chapters across the United States and Canada. The mission of FS4JK is to promote a safe farm environment to prevent health hazards, injuries, and fatalities to children and youth. This mission is carried out through the development and dissemination of educational materials and programs. One of the most popular methods to deliver farm safety messages is through locally based farm safety day camps. Camps are led by local FS4JK chapters and use local volunteers to provide instruction to children about farm safety and health topics. While camps have been in existence for over ten years, there has been little evaluation of the effectiveness of this method of instruction. The purpose of this study was to examine changes in knowledge, attitude and behaviors toward farm risk based on a cohort of children who attended a farm safety camp. Do the camps provide children with the knowledge they need to promote their own safety on the farm and protect then from harm, or do they result in children performing more risky work on the farm because of their camp experience? What effect, if any, do the camps have on parental behavior toward farm safety? The camps bring together a wide variety of community leaders and groups for the day. What is the impact of the camp on the larger rural community? Does this interaction result in more collaborative work after the camp or more emphasis on farm safety by individual organizations?

This three-year evaluation study used a sample of six FS4JK farm safety day camps in Kentucky, Colorado, Iowa, North Carolina, and Wisconsin. Although farm safety camps are also sponsored by other organizations and local communities, FS4JK camps were selected to ensure continued access to the community; thus, an examination of the effects of the camp on the larger community could be conducted. Three high risk farm exposures were the focus of data collection: exposure to tractors, powered equipment, and large animals. Data were collected from 1,325 children who attended the camps (1,347 attendees – 22 refusals). In addition, a farm cohort of 273 children and their parents completed four additional post-camp surveys across 18 months following the camp. Video and ancillary data were collected at each camp to assess quality of the instruction and children's responses to the instruction. Camp leaders (n=5) provided field data to determine camp influence on the larger community and to assess the prevalence of serious child agricultural injury in the local community following the camp. The local chapter camp leaders also provided data regarding other farm safety initiatives or sentinel events that might influence the results of the follow up surveys.

The specific aim was to evaluate whether the camps positively influenced: (1) children's knowledge about farm safety and health, their safety attitudes, and subsequent safety behaviors; and (2) parents' attitudes and behavior toward children's farm safety behavior. In addition, the effect of the camps on the local community was assessed.

Survey data indicate that both farm and nonfarm children significantly increased their knowledge about the selected farm safety topics by attending the day camp and this knowledge was sustained over the length of the study. There was no difference in knowledge gain by farm resident status.

Results indicate parents were strongly influenced by their child's camp experience even though the parents did not attend the camps. Ninety percent of the parents reported their child talked to them about safety messages learned. These discussions led parents to implement new and/or more stringent safety rules for their children, increase supervision, improve animal confinement areas, and to repair/or replace safety shields on machinery and equipment. Three-fourths of the parents reported their own knowledge of children's farm safety increased. Half reported they made new safety rules for their children, including prohibiting certain farm work by children. At one month post camp only 5% of the respondents indicated they allowed the child to do more on the farm. Overall, parents of children who attended the camps did not increase farm job responsibilities of the children who attended the camp.

Instructional style, preparation of instruction, and appropriateness of instruction varied both between and within camp settings; however, overall instruction was appropriate for children ages 8-12, the age range included in attendance at the camps in this study. With the exception of one camp, camps were loosely organized with few planning meetings, no written objectives, and no plans for evaluation of the camp. Instructors provided thoughtful insight in framing their presentations; many drew heavily upon their own personal farm experiences when delivering their messages. Few instructors received guidance on preparing for their sessions or feedback following the camp. Analysis of resources sent home with the children after the camp revealed that content was sometimes overwhelming and needed to be organized for the intended recipient (adult or child), and no reference to the resources was made in individual instructional sessions.

Data did not indicate a significant effect of the camp on the larger community. There was some evidence of new and continued collaboration among community agencies that addressed farm safety issues. The overall prevalence of injury reported by children was 5.4%, and the prevalence of close calls for injury was 11.5%. Prevalence did not vary across time.

Results of this evaluation study were shared in local, national, and international health and agricultural conferences. Two scientific articles have been accepted for publication. As a result of an all-day conference in Dublin, Ireland (International Seminar on Occupational Health and Safety in Agriculture), the Irish Agriculture and Food Development Authority at Teagasc are planning to hold the first farm safety day camps in Ireland within the year. Consultation with the U.S. research team will assist in the planning, development, delivery, and evaluation of those camps. An unanticipated result was the adoption of evaluation methods used in this study by two of the enrolled camps. Those camps instituted pretests and posttests at the camp and video monitoring of their instructors. They also developed their own written objectives and reframed their camps based on what they learned from their participation in the study. In addition, a chapter guide to conducting a successful day camp was developed and published by Farm Safety 4 Just Kids to assist their chapters in the planning, delivery and evaluation of camps.

These research findings illustrate the importance of developing accurate safety messages and ensuring the messages are delivered appropriately in an intervention program. Further, it supports that children are effective carriers of farm safety messages. Findings from this study were used by FS4JK to develop guidelines for conducting farm safety day camps that can also be implemented by other intervention programs to evaluate the effectiveness of their programs.

Parents seem to benefit from messages delivered at the camps. Future camps should examine ways to include parents in the camp and improve home delivery of camp messages.

This study was developed and executed thanks to the financial support of the NIOSH and the collaborative efforts of Farm Safety 4 Just Kids and the University of Kentucky. We extend our thanks to the local chapter leaders and community volunteers who participated in the study and to the schools and teachers who dedicated a full day to this topic. The children and their parents devoted a substantial effort in the study. Efforts to improve community-based farm safety educational programs, such as farm safety day camps, deserve continued support to improve the camps and reach an increasing number of children.

Translation of Findings

Farm Safety day camps appear to be an effective method for improving the knowledge of children about the injury risks associated with the farm environment. There was also support that their child's camp attendance had some influence on the parents of children who attended the camp. Observational data support that children were attentive to the camp instruction, seem highly engaged, and enjoy the camp experience. However, instructors appear hurried in their presentations, lack a standard format for content and delivery of instruction, and are not able to use interactive teaching techniques due to time constraints. The following suggestions for improving the camps and their outcomes are as follows:

- Instruments used for children's surveys need refinement. There were no instruments to use at the beginning of this project. The researchers tried to develop and test survey instruments for administration to children. The reliability of these instruments remains low, except for a limited number of subscales that were created. For future investigations these instruments should be refined.

- Children may be effective change agents for farm safety. While children are relatively powerless in decision-making, they carried messages from the camps that parents acted upon. The power of children to effect change should be explored more closely. Interventions that utilize children as change agents should be explored.

- Over 16% of the child sample reported injuries or close calls. Those caused by machinery and ATVs increased over time, with a higher prevalence reported at 18 months post camp. This shift in injury agent demonstrates the movement of children into riskier exposure on farms as they age. It is important for educational programs and for other interventions to focus increased attention on these two mechanisms of injury to children aged 9-11.

- Better mechanisms for assessing community impact of the camp need to be developed. This study enlisted the support and participation of camp leaders in the community. These participants knew little about the research process and life events precluded them from full participation. It was thought that the use of local community leaders in farm safety would be an automatic mechanism for relaying local events that might influence attention to farm safety. This part of the study required intensive effort on the part of the research team and resulted in less than optimal data. A better mechanism for capturing the data would be to enlist the local emergency medical providers to capture serious injury data, comb local newspapers for articles related to farm safety by using a clipping service, and have more direct and more frequent contact with the local camp leader.

- The reports of positive shifts in parental safety behavior after the camp indicate that camps may be effective in adult instruction on farm safety. Although parents in this study did not attend the camp, perhaps developing a program where parents can attend with their children would be a mechanism for reinforcement of instruction. This has been tried with some success by the Progressive Agriculture Foundation Day Camp program and

should be a focus for future research. Parents enrolled in this study indicated that they examined resources brought home from camp by their child. These resources should be refined and guidelines for material inclusion developed.

- Although children's knowledge of farm safety improved significantly and these improvements were somewhat sustained over time, an even greater retention of knowledge might be obtained if fewer sessions were conducted at the camps. Video data and instructor supplied data noted that camp sessions were rushed, leaving little time for interaction with children or to answer questions. Sessions were limited to about 15-20 minutes. While this time is a good length for children, it might be that each session should cover only a very limited objective. For example, for tractor safety one session could highlight the "no extra rider" rule. Another session could cover blind spots around tractors. It may be better to cover less topics but more in depth.

- Overall, instructors received little guidance or feedback on their sessions. This is important to improve future interventions. In some of the camps involved in this study the camp leaders instituted evaluation and feedback provisions for their future camps.

Outcomes/Relevance/Impact

The results of this study may be interpreted either as a series of case reports from six farm safety day camps or in the aggregate as an examination of both cross sectional and longitudinal analyses. From either interpretation the results provide the first in-depth probe into the function and outcomes of children's attendance at these grassroots community-led events. The results are encouraging: both farm and nonfarm children increased their knowledge about farm injury risk, changed their behaviors, and disseminated their new information to others. The information shared with their parents resulted in changes in selected safety behaviors of parents, especially in supervision of children. Supervision is directly linked to the incidence of farm injury, therefore, it is possible that this increased attention to supervision may decrease child farm injury. Although the prevalence of injury reported by children in this sample was 5.4% and any injury is unacceptable, most of the injuries did not result in lost time from usual activities, therefore these were not of the magnitude generally reported in the literature.

The camps in this study were purposively selected on the basis of camp history, location, and number of participants in the camp. Analysis revealed no differences in knowledge gain by any of these factors. Variation in individual instructor preparation was noted, yet this did not seem to influence the outcomes examined in this study. Overall, the instructors were highly motivated to present their topics and did so through methods that were appropriate. Results indicate that the majority of parents do not use their child's attendance at the camp as a primary factor in assignment of farm tasks, and more parents use the information they gain as a result of their child's attendance to restrict the child's jobs or exposure. This is very encouraging and demonstrates the potential power of the camp to decrease risk for the child.

This study provides evidence that these one day community safety events, led by lay volunteers, result in sustained knowledge increases on selected high risk farm safety topics, for the children who attend the camps. Camps also influence attention to safety for the parents of the children who attend the camps. There was some evidence to indicate that the camp coalesced the local community: several local community groups provided support for the camp in terms of volunteer time, instructors, and financial support. Even though educational programs are not the complete answer to solving the problem of child safety on the farm, results from this study demonstrate that these one day events, led by local volunteers, can be influential. From a practical standpoint, these low cost efforts bring the farm community together, reinforce safety messages, and provide an acceptable and accessible venue for teaching children about safety. Ways to bolster their effectiveness and sustainability should be encouraged and investigated. Model programs should be established to serve as best practice examples.

Scientific Report

Background

Agriculture consistently ranks among the top four most hazardous industries, yet children begin work in the fields at young ages. Nearly 1.4 million farm children live, play, and work on farms and they are surrounded by animals, machinery, and structures that provide their families' incomes; an additional .6 million work for hire (Myers and Hendricks, 2001). Annually, 23,000 children are injured on U.S. farms and over 100 succumb to injury (Myers and Hendricks, 2001). Belville and colleagues documented that permanent disability reported by New York children who worked on farms surpassed similar outcomes of injury in other occupations (Belville et al, 1993). Farm Safety 4 Just Kids (FS4JK) is a national nonprofit organization with chapters across the United States and Canada that addresses the safety of children on farms. The mission of FS4JK is to promote a safe farm environment to prevent health hazards, injuries, and fatalities to children and youth. This mission is carried out through the development and dissemination of various educational materials and programs. In addition to their year-round presence in the local community, the FS4JK chapter system is a resource for conducting farm safety programs in communities. Chapters have community ownership and responsibility for conducting local children's farm safety activities using resources and assistance from FS4JK. Thousands of volunteer hours are spent teaching children, youth, and farm families about farm safety each year. To date, nearly 140 communities have initiated chapters to help promote farm safety in their community, area, or region. Thousands of children have attended farm safety day camps, school programs, booths, health fairs, family seminars, and other programs conducted by FS4JK chapters.

One of the most popular methods to deliver the farm safety messages is through locally-based farm safety day camps. Camps are led by local FS4JK chapters and use local volunteers to provide instruction to children about farm safety and health topics. Similar camps are led by the Progressive Agriculture Foundation and other local communities, bringing the total number of camps held each year in the hundreds. While camps have been in existence for well over a decade, only limited evaluation of the effectiveness of this method of instruction has been published (Baker et al, 2001; DeRoo and Rautiainen, 2000; and McCallum et al, 2005).

Purpose

The purpose of this three-year study was to evaluate the effectiveness of community-based farm safety day camps in providing children with new knowledge about farm safety, positively affecting children's attitudes about safety, and influencing farm safety behaviors. While children were the primary focus of the study, this project did not limit its scope to the effects of the day camp on the children who attended the camp but extended its net to capture changes that might occur, at least in part, from dissemination of camp information to the children's parents and the surrounding community. Figure 1 illustrates the dissemination of safety messages, the populations that might be impacted by the farm safety day camps, and the interlocking of each to portray the complete picture of the "touchpoints" of the camps.

Figure 1. Farm safety day camp touchpoints

Specific Aims

The specific aims of the study were outlined as follows:

1. Evaluate whether the camps positively influence:
   a. children's knowledge about farm safety and health, their safety attitudes, and subsequent safety behaviors; and
   b. parents' attitudes and behavior toward children's farm safety behavior.

2. Assess the effect of the camps on the local community.

Research Design

A multi-level evaluation strategy and mixed-method protocol that included both qualitative and quantitative methods was used to test the effectiveness of day camps at the individual, family, and community level. The following hypotheses were tested:

H_1: Community-organized farm safety day camps positively influence farm safety behavior of children, as reported by children and parents.

H_2: Children who participate in farm safety day camps will demonstrate increases in farm safety knowledge, safety attitudes, and intent to practice safe farm behaviors.

H_3: Among children who attend farm safety day camps, those who are not members of farm households will demonstrate a greater increase in knowledge about farm safety than will farm children.

H_4: Instructional methods that are appropriate for the children's age, developmental and cognitive levels, and reading level will be more effective in increasing safety knowledge, improving attitudes toward farm safety, and increasing intent to practice safe farm behaviors compared to instructional methods that are not focused appropriately.

H_5: Camp attendance by children will positively influence their parents' attitudes and behavior toward children's farm safety behavior.

H_6: Communities that have farm safety day camps will demonstrate increases in community awareness and in the number of educational programs about farm safety.

A quasi-experimental no-control-group pretest-posttest design with repeated measures was used to test the hypotheses. Figure 2 depicts the study protocol.

Because the breadth of topics varied by camp, the study focused only on three areas of instruction known to be universal at farm safety day camps and directly relevant to the major causes of farm child injury: tractors, power driven equipment, and animals. All camps participating in the study were required to include these specific areas in their camps. This focus fostered the depth of the evaluation on the most critical areas of camp influence.

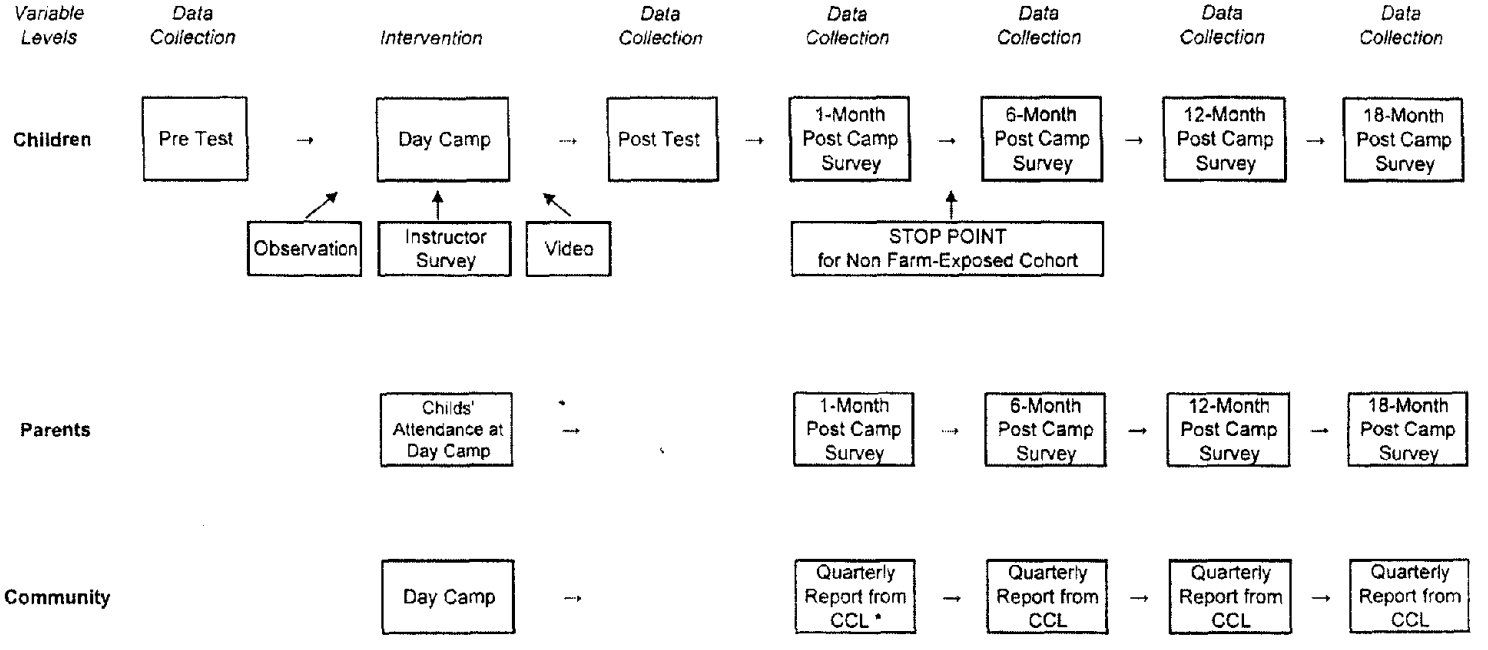
To address the immediate objectives of the camps, each child completed pre- and posttests of farm safety knowledge, attitudes, and behavior to determine what changes in these three dimensions may lead to injury prevention behavior. Follow-up surveys of children and their parents assessed attitude and behavioral changes and farm injuries over the 18 months following children's attendance at the camp. Follow-up surveys were confined to farm-exposed children after 1 month. In addition, community changes with regard to farm safety were analyzed.

This study addressed the following questions:

Do the camps provide children with the knowledge they need to promote their own safety on the farm and protect them from harm, or do they result in children performing more risky work on the farm because of their camp experience?

What is the impact of the camp on the larger rural community?

Does the camp interaction between community organizations result in more collaborative work after the camp and/or more emphasis on farm safety by individual organizations?



* Chapter Camp Leader

Figure 2. Protocol for evaluation of FS4JK farm safety day camps

A logic model was developed to outline factors which contribute to children's exposure to farm hazards and the desired impacts of farm safety day camps on those factors to reduce the amount of exposure. By nature, children who live on, work on, or visit farms are exposed to farm hazards. Age, gender, and parents' attitudes are also key factors that contribute to the extent of such exposure. The primary objective of farm safety day camps is to teach children about hazards on the farm and to equip them with safety rules. The desired outcome is that after hearing the messages, children will increase their safety knowledge and, as a result, positively change their behavior on the farm. Furthermore, both the children and the adult volunteers attending the camps will carry the messages home to parents and other family members. This ripple effect may then cue adults to repair and/or improve equipment, increase supervision of their children while on the farm, adopt additional safety rules for their children, prohibit their children from being around certain places on the farm or from doing certain farm tasks, and make positive changes in their own behavior. As these changes take place, children's exposure to farm hazards can be greatly reduced. This, in turn, may result in fewer injuries to children on farms. The model is illustrated in Figure 3.

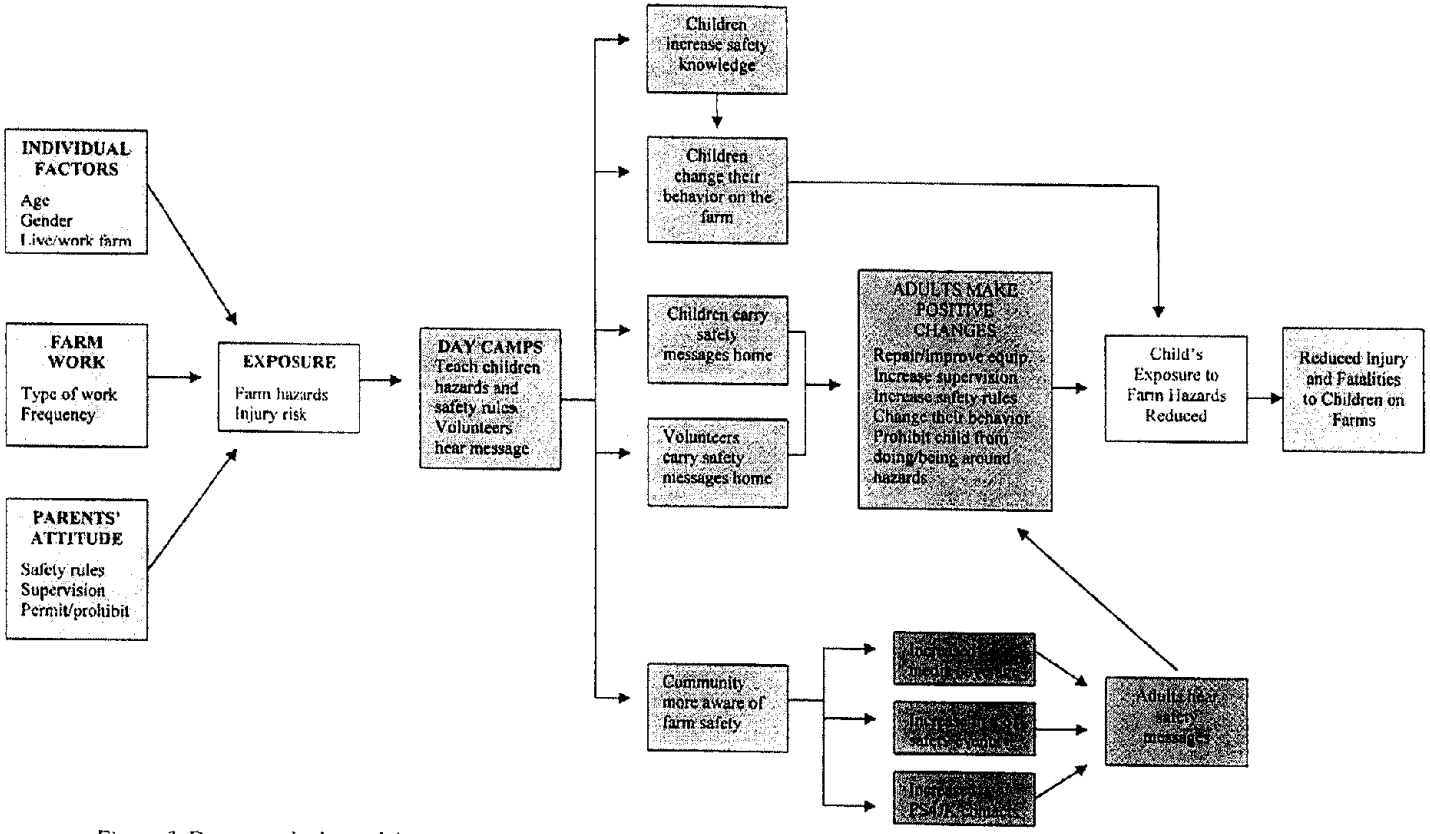


Figure 3. Day camp logic model

Instrument Development

No standard instruments to measure the effectiveness of farm safety day camps existed at the time this study began; therefore, rudimentary instruments were developed as part of this project. Six different child surveys, four parent surveys, a teacher information sheet, a camp demographic form, an instructor survey, and a direct observation survey were developed by the research team to collect and document data needed to evaluate the effectiveness of the day camps. Three additional forms were designed to assist chapter leaders in tracking farm safety events and child injuries in their communities. Final versions of these instruments are included in Appendix A.

Pre- and Posttests

Pre- and posttests were developed to measure the campers' knowledge on farm safety prior to the camp and the level of knowledge gained by attending the camp. The questions on the pre- and posttests were identical to provide ease in comparability. The format of these tests included multiple choice, yes/no, and true/false options. Questions and design of questions were gleaned from surveys used in previous studies and through direction from educational resource experts. The research team worked in conjunction with the Progressive Agriculture Foundation who were currently conducting a similar study to ensure comparison compatibility of selected items that could be made at the conclusion of both studies (Table 1). Two questions in each of the three targeted areas, for a total of six questions, were incorporated into both day camp studies. The use of identical questions will afford the opportunity to compare across day camp models, thus increasing the value of each study. The pre- and posttests were reviewed by FS4JK's educational director and tested with 4th grade students and their teachers in two different states (Iowa and Kentucky) before they were used in the study. Subsequent surveys were reviewed only by content experts due to time constraints of the study period.

Table 1. Pretest Questions Compatible for Comparisons with PAF Foundation

PAF Questions	PAF	UK	Similar UK Questions
TRACTOR SAFETY			
How often do you ride on a tractor while someone else drives?	#3	#12	How often do you ride on a tractor while someone else drives?
Should a person wear a seat belt when driving a tractor that has a rollover protective structure (also called a ROPS)?	#23	#10	You should use a seatbelt if your tractor has a rollover protective structure.
ANIMAL SAFETY			
How often are you near large farm animals like horses, cows, pigs, or sheep when there is not a fence between you and the animals and there is not an adult watching you?	#11	#18	How often are you near livestock when there's no fence between you and the animals?
Are mother animals sometimes more dangerous when their babies are nearby?	#22	#22	Female animals can be more dangerous when they have babies.
POWER EQUIPMENT SAFETY			
Does a safety shield make it safe to step over a power take-off shaft (also called a PTO)?	#25	#28	A safety shield makes it safe to step over a power take-off.
When working around farm equipment is it best to wear loose clothing?	#29	#29	It's better to wear loose clothing when doing farm work, especially around power take offs (PTO).

Camp Data Instruments
In addition to the pre- and posttests, a number of forms were developed for use on the day of the camps. These included a station instructor data sheet, a day camp demographic sheet, and a research team form. Completion of these forms assisted in analysis of instructor background and experience, characteristics of each day camp (e.g., number of volunteers and adults attending camp, weather, training sessions), and instructional methods and settings of the selected training sessions.

Follow-up Surveys
Follow-up surveys were developed to track knowledge retention, changes in attitudes and behavior, injuries and close calls, and new rules of both the children who attended the camps and their parents. In addition to knowledge, attitudes, and behavior changes, injury and farm work history was collected through the post-camp surveys. Questions included farm demographics, child characteristics, parental concerns, child risk-taking behavior, and injury history. The three-year project period did not allow enough time to test the instruments and revise them before use. While refinement was made to subsequent surveys, the changes resulted in difficulty in the analyses when trying to compare responses over time and between children and parents' responses. With additional time and funding, higher quality instruments could be formed from the instruments used in this study.

To present a more complete picture of the effectiveness of the program, the use of mixed-methods was applied as opposed to depending solely on quantitative instruments. The use of mixed-methods in program evaluation research is important (Thompson & McClintock, 1998). Narrative data, gathered through open-ended questions included in surveys or by interviews with chapter camp leaders helped identify real-world barriers to the process and outcomes of the intervention.

Surveys to the parent/child dyads were mailed at 1, 6, 12, and 18 months post camp. The 1-month surveys were reviewed by an evaluation consultant and the chapter leaders prior to distribution to ensure day camp objectives and measurement indicators were sufficiently addressed. Surveys were reevaluated at each level to eliminate confusing questions and to add new questions which better solicited responses helpful in evaluating the effectiveness of the day camps. While the questions were similar throughout, the failure to word the questions identically made it difficult to compare behavior and attitudes across time for certain issues. However, the final survey incorporated the same questions that appeared on the pre- and posttests to measure knowledge retention of children attending the camps.

Sample Selection

Chapters
Six farm safety day camps located across the United States were purposively selected to participate in the study. Consideration was given to geographic diversity, history of presenting farm safety days camps at least once before the study, and previous working relationship with the national FS4JK organization. In an effort to capture the qualities of both large and small camps, the number of children attending camp in previous years was also considered. To minimize the

challenges of instructional messages delivered across variable age groups, the chapters had to plan to have a school-based farm safety day camp for fourth or fifth grade students in the upcoming year. The national FS4JK organization identified camps that met these criteria. From these, they identified eligible chapters and purposively selected chapters that had the best rapport with the organization. The FS4JK chapter liaison then contacted these chapters and explained the study. This contact was followed by an interview with the principal investigator of the study to clarify the requirements for participation. All camps who met the criteria for selection agreed to participate. The final sample included camps in Colorado, Iowa, Kentucky, North Carolina, and Wisconsin. The study protocol received the approval of the institutional review boards of the University of Kentucky and FS4JK prior to each phase of the study (Appendix B). Figure 4 illustrates the locations of the participating chapters.

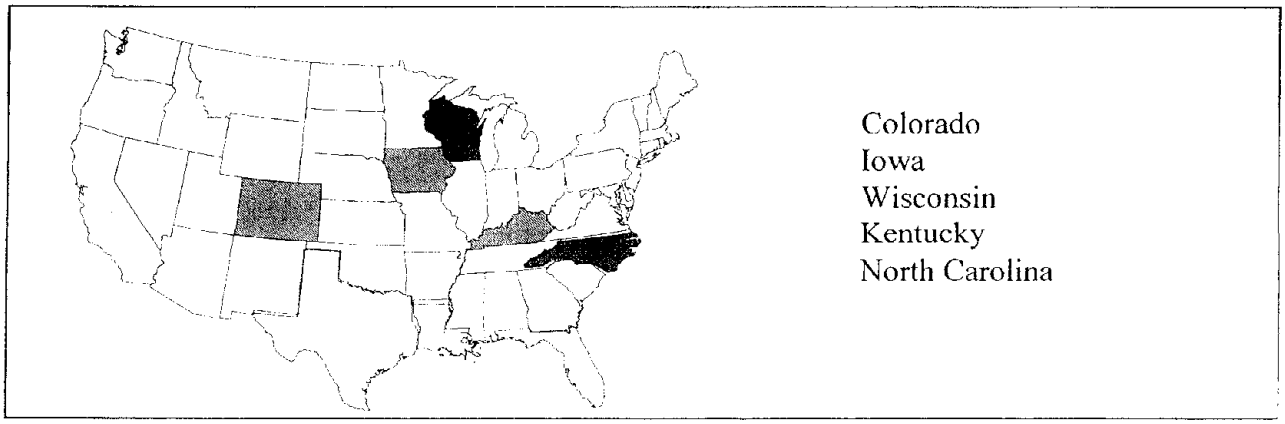


Figure 4. Geographic locations of FS4JK chapters participating in study

Five FS4JK chapters sponsored the six camps included in this sample. One camp was organized and delivered entirely by an FFA group. Another chapter coordinated its camp through a local office of the Cooperative State Research Education and Extension Service. The three remaining chapters conducted their camps in conjunction with the Progressive Agriculture Foundation (PAF). PAF camps are provided with instructional materials, liability insurance, and t-shirts for all campers and staff. The camp leader is also required to complete a two-day training session several months prior to the camp. Cooperation and agreement between the principal investigators of the study at the University of Alabama and this study insured that PAF camps selected for this study were not approached for the Alabama-based study.

Each of the selected camps targeted children in grades 3-5 with 4th grade students being the primary focus. Originally only one camp conducted by each chapter was to be included in the study. However, a 2nd camp was added from Chapter 4 due to severe weather which resulted in the children being sent home before the first camp was completed. In addition, the Chapter 5 camp was conducted at two different sites on two consecutive days. Since these two camps were conducted by the same individuals within the same time interval and held in close proximity, the two-day event was counted as one camp. Thus, a total of 6 camps were included in the study. Total attendance in those six camps was 1,347 as reflected in Table 2.

Table 2. FS4JK Chapters Participating in Study

Chapter	Yrs w/Camps	Date of Camp	**# of Children Attended**
Chapter 1, Camp A	7	4/17/02	**165**
Chapter 2, Camp B	> 3	4/25/02	**58**
Chapter 3, Camp C	7	4/29/02	**271**
Chapter 4	5		
Camp D		5/2/02	**173**
Camp E		9/19/02-9/20/02	**319**
Chapter 5, Camp F	> 10	9/11/02-9/12/02	**361**
TOTAL			**1,347**

Households (parent/child dyads)

Children attending the farm safety day camps were the primary focus of this study. We had projected that 1,150 children would attend the camps. Actual attendance was 1,347; however, some of the children did not meet the strict study criteria. Ninety-one campers (6.8%) were eliminated from the study because they were missing either a pre- or posttest. Additional campers were eliminated if they did not meet age or grade specifications or their parents refused to participate in the study. Children (campers) were enrolled in the project by completing both a pre- and posttest at the time of the camp with their parent or guardian's consent and child's assent. Only 22 parents initially refused for their children to participate; none of the children refused in the first round of data collection, therefore, the initial refusal rate was only 1.6% (22/1,347). Study criteria eliminations resulted in a sample size of 1,233 for pre- and post-knowledge measurements.

An additional 70 children were dropped from follow-up tracking because two or more children were from the same household (33), the children were unable to attend all three required sessions (29), or no address could be obtained for the child (8). For multiple members of the same household, the choice of which child remained in the study was determined by coin flip. After excluding those children who were not eligible, our initial sample pool for follow up surveys was 1,163. Data were solicited from the children attending the camps and a parent or guardian of each child. Only matched data sets (survey from both the child and parent/guardian) were eligible for inclusion and used in our analyses for follow-up surveys.

The majority of children were White, aged 9 or 10, and in the 4th grade. Slightly more boys than girls attended the camps. Only 20% of the children had never been on a farm, indicting that the large majority of the sample had at least some exposure to the farm environment. Demographic details of the campers are presented in Table 3.

Table 3. Camper Demographics (N = 1,233)

		Frequency	%
Grade:	3rd	64	5.19
	4th	1085	88.07
	5th	83	6.74
	Unknown	1	--
Age:	8	30	2.43
	9	634	51.42
	10	450	36.5
	11	112	9.08
	12	7	.57
Gender:	Boys	653	52.96
	Girls	580	47.04
Race:	White	1,110	90.10
	American Indian	30	2.44
	Black	15	1.22
	Hispanic	72	5.84
	Other	5	.40
	Unknown	1	--
Farm Status:	Live on farm	159	12.91
	Live/work on farm	205	16.64
	Work on farm	181	14.69
	Visit farms	444	36.04
	Never on farm	243	19.72
	Unknown	1	--

In comparing the child sample demographics across time there were slightly more boys than girls at pretest (53 versus 47%), but with sample attrition this difference disappeared at subsequent times. There were no differences in age or gender by farm status. The mean age of the children across each survey wave was 9.5 years (SD.73).

Despite efforts to obtain minority participation, over 90% of the children attending the camps were White. Other ethnicities/races included in the study were American Indian, Black/African American, or Hispanic/Latino. Table 4 reflects the breakdown of pre- and posttest enrollees by ethnicity and race.

Table 4. Ethnic/Racial Demographics of Pre- and Posttest Enrollees by Gender

	Males	Females	Unknown	Total
Asian				
American Indian	19	11		30
Black/African American	9	6		15
Hispanic/Latino	43	29		72
White	578	532		1,110
Other or Unknown	4	1	1	6
Totals	*653*	*579*	*1*	*1,233*

Parents of children enrolled in the pre- and posttests that were eligible for the survey phase of the study comprised the initial sampling pool for adult participation. However, we were unable to reach six of the eligible households by telephone or mail; thus, these households were not provided the opportunity to participate. In addition, it was discovered late in the study that seven data sets of children whose parents had declined to participate prior to the camp were inadvertently included in the pre/post count. Upon discovery of this error, these data sets were expunged. These households were never approached for the follow-up phase of the study. As a result of these adjustments, the sampling pool for follow up was reduced to 1,150 parent/child dyads.

Parents were enrolled in the study upon both their completion and their child's completion of either the 1 or 6-month follow up surveys. Only matched parent/child dyads were accepted for participation. 438 parent/child dyads completed the 1-month survey; an additional 106 completed the 6-month survey that had not completed the 1-month, making the total parent/child dyad of farm and nonfarm enrollment 544. This resulted in a 47% enrollment rate for the follow-up survey phase.

The final enrollment figures exceeded our original expectations in the number of participants. We projected 1,150 campers with 35% of them coming from farm families. Actual attendance was 1,233 with farm families comprising 44% of the sample. The demographic breakdown of the participants, however, was different than anticipated. There were more Hispanic children and fewer Black in the camps than projected and many more women participated than men. Table 5 reflects this comparison.

Table 5. Comparison of Projected Enrollment Figures to Actual Enrollment

	Proposal	Actual
Camp Attendance	1,150	1,233
Members of farm families	400	545
Girls	575	580
Boys	575	653
American Indian/Alaska Native	46	30
Black, not of Hispanic origin	58	15
Hispanic	12	72
White, not of Hispanic origin	1,034	1,110
Other or unknown		6
TOTAL	1,150	1,233
ADULTS:		
Women	201	303
Men	201	51
Unknown		190
TOTAL	402	544
American Indian/Alaska Native	16	
Black, not of Hispanic origin	20	2
Hispanic	4	9
White, not of Hispanic origin	362	357
Other or unknown		176
TOTAL	402	544

Enrollment was closed after the 6-month survey. The 1- or 6-month surveys had to be completed in order to receive the 12- and 18-month surveys. Ethnic and racial demographics of the adult enrollment are presented in Table 6. Over half (54%) of the adult respondents were White females, generally mothers of the children who attended the camps. Because of an oversight, race and gender could not be determined for 35% of the adult participants. Age data were not collected. It was assumed that parents of children ages 8-12 would generally be between 24 and 50 years of age.

Table 6. Ethnic/Racial Demographics of Adult Enrollment by Gender

	Males	Females	Unknown	Total
Asian		1		1
Black/African American		2		2
Hispanic/Latino	1	8		9
White	50	292	15	357
Other or Unknown			175	175
Totals	*51*	*303*	*190*	*544*

Informed Consent

Two procedures were followed to secure informed consent from participants. For the initial pre- and posttest of the children a letter about the day camp was included in the packet that the child took home from school. This letter explained the purpose of the study, information about the pre- and posttests, and information about the follow up surveys. Consent for the child to participant in the pre- and posttests was included on the permission form that the parent signed in order for the child to attend the camp. The parent was instructed to line out the statement about participation in the pre-and posttest if permission was denied. Logistics of the camp day did not permit a prescreen of all the children's permission slips, so all children were invited to complete the pre- and posttests at the camp. The intent of the tests and the study was explained to the children prior to data collection by a member of the research team present at the camp. Children were instructed not to participate if their parents had told them not to complete the forms or if the child did not wish to participate. Identification on data sets were compared to the signed parental permission slips by the UK research team upon receipt of data. Any data sets for those children whose parents did not grant permission were destroyed prior to data entry.

Follow-up surveys were mailed to all children's households for children who had complete pre- and posttest data. Packets were addressed "To the parents of [child name]" so they were clearly marked to be opened by the parent. Included in the packet was a letter explaining the study along with complete contact information for the principal investigator and the UK Office of Research Integrity. Parents were asked to discuss the study and participation with their child before completing the survey. Consent was implied by completion of the survey. Some parents called the PI for further information prior to completion. A variation of the introductory letter was included in each packet for the 1-, 6-, 12-, and 18-month surveys. For telephone completions the purpose of the study and participation requirements were explained in a standard script by the research team member conducting the survey. Telephone surveys were conducted only as a follow up to the mailed surveys, thus respondents had received information about the study prior to the phone call. This was verified by the telephone surveyor.

Instructor Data

Instructor data were collected at each camp. No written consent was obtained from individual instructors as the camp had entered into agreement for the study; however, the purposes of the study were explained by a member of the research team (either a UK team member or National FS4JK team member) on site prior to the camp and at each individual instructor station.

Instructors were then asked for verbal permission for the research team to videotape their session.

Participant Attrition

Enrollment was not closed until the end of the 6-month survey wave. Recruitment of parent/child dyads with farm exposure (live on farm, work on farm, or visit farms) continued after the 1-month survey by sending the 6-month survey to 1-month nonresponders, thereby giving these farm households a second opportunity to enroll. No attempt was made after the 1-month survey to enroll households that had indicated the child was never on a farm since the remainder of the study targeted only farm-exposed children. Enrollment closed after completion of the 6-month survey.

Several methods were used to retain participants for the duration of the study. A progressive monetary incentive was built into the project. In addition, a drawing for two bonus incentives ($500 savings bonds) was also conducted for subjects who completed all surveys. We anticipated very little attrition over the course of the study due to the incentives given for participation; however, the incentives did not prove to be a major factor in the household's decision to remain in the study. In certain cases, the financial aspect was detrimental. A signed W-9 form was required for payment by the University, and some families chose not to participate as a result.

The Dillman method was used to locate and track respondents (Dillman, 2000). This method suggests that multiple contacts are essential in personal, telephone, and mail surveys for achieving acceptable response rates. The primary source of household contact information available for our use was the "Farm Safety Day Camps Release and Consent Form". Surveys were mailed to the households using the addresses supplied by the parents on the consent forms. When no response was received from the mailed surveys or surveys were returned undeliverable, several steps were taken to reach the households. First, the team attempted to contact the household by phone using the phone number provided on the consent form. In many cases the telephone had been disconnected and was no longer in service. The next step was to try the alternate contact person listed on the consent form. Internet searches were also performed to obtain updated telephone numbers and/or mailing addresses. Surveys were re-mailed using new addresses. Through these efforts we were able to recruit some households that would have otherwise been lost for follow-up surveys.

To encourage participation, public service announcements about the study were placed in local newspapers, phone calls were made to the households to remind them about the study and offer them a chance to complete the surveys by phone, and postcards were sent to those households we were unable to reach by phone. For Spanish-speaking households, an interpreter who spoke fluent Spanish was enlisted to contact the family by phone to encourage them to respond to the mail survey or to translate and complete the survey by telephone if the household had requested this option. Survey instructions were translated into Spanish to assist the family in completing the survey packets. Finally, due to the low volume of response to mailed surveys, telephone calls were made to households that did not respond to repeated mailings in an effort to complete the surveys over the phone.

Despite these efforts, some households (parent-child dyads) still chose not to participate in the follow-up phase of the study either by explicit refusal or, most often, by not responding to the mailed surveys. As a result, 606 households in the sampling pool did not enroll (Table 7).

Table 7. Refusals and Nonresponders to Follow-Up Phase of Study

	Live/Work	Visit	Never	Total	% of Pool (N = 1,150)
Explicit refusals at 1-month	15	19	5	39	3.4%
Explicit refusals at 6-months (no 1-mo)	20			20	1.7%
Nonresponders to 1 or 6 months	163	225	159	547	47.6%
Total that did not enroll	198	244	164	606	52.7%

Enrollment of 544 parent-child dyads was achieved. However, over the course of the project some dyads were purposely removed from the study based on their farm status. To remain eligible for the study, children had to report being on a farm within the past six months. Over the first 6-month study period, 111 children did not meet these criteria and were discharged from the sample. Forty-eight households were dropped after the 1-month survey if they had reported on the pretest they were "never" on a farm. An additional 62 were dropped after the 6-month survey since they indicated on the 1- and 6-month surveys that they had not been on a farm since the day camp. One other household was dropped following the 1-month survey after discovering two campers were in the same household. These adjustments reduced the eligible households for the 12- and 18-month surveys to 433.

The attrition rate was slightly higher than the 20% predicted in the original proposal. We retained 72% of the subjects across the study period. A total of 151 households enrolled in the follow-up phase later elected to leave the study (Table 8).

Even with the discharges due to ineligibility and the attrition, the sample size was close to the projected size. We projected that 282 parent/child dyads from farm households would participate throughout the course of the study; 273 actually completed the course of surveys.

Table 8. Participant Attrition

	Live/Work on Farm	Visit Farm	Never on Farm *	Total	% of Enrollment (N = 544)
Explicit elections to leave study:					
6-month refusals	11	2	0	13	2.4%
12-month refusals	14	5	1	20	3.7%
18-month refusals	2	0	0	2	.4%
Nonresponders:					
Did not respond to 12-mo survey	41	29	2	72	13.2%
Did not respond to 18-mo survey	34	9	1	44	8.1%
Total Attrition	102	45	4	151	27.8%

* Farm status changed during study. Reports on follow up surveys indicated the children were on farms

Camp Descriptions

All of the camps in this study were school-based. Children were bussed to and from the camp site on a regular school weekday. They were accompanied by their teachers and chaperones. Weather conditions forced one camp to move inside, but for the most part, camps were conducted outside in large open areas. The length of the camps ranged from 3 hours to 7 hours, with the number of sessions per camp ranging from 9 to 21. Attendance at the camps varied; however, the camp leader knew in advance the number of children to expect, which made it easier to plan for the appropriate number of instructors and groups. None of the camps charged a fee for children to attend. Vignettes of the camps are provided to illustrate the historical context and working environment of each camp. Data were provided by chapter leaders and through on-site camp observation and video tape records by the research team.

Chapter 1, Camp A – This FS4JK chapter had been conducting farm safety day camps for seven years under the leadership of the same chapter leader with basically the same instructors each year. No formal training sessions were held for the instructors or other volunteers other than by phone. The camp used FFA members to assist adult volunteers with instruction, and some class time was devoted to discussing the training sessions with FFA students involved in the camp. The camp used the PAF guidelines for conducting the camp. The camp was held in the spring (April 2002) at a local fairground. The weather was windy and sunny with comfortable temperatures. The camp primarily served 4th and 5th graders but included kindergarten through 5th grade children as a result of allowing home-schooled children to attend the camp. The 165 children who attended the event rotated through 21 training sessions during the 7 hours of the camp. Children attended the individual sessions in groups ranging in size from 5 to 14 campers. The primary mode of instruction in each of the three sessions evaluated was lecture/demonstration. Props were used in the animal and power equipment sessions.

Chapter 2, Camp B – This group was organized as a FS4JK chapter in April 2000 but had been conducting farm safety day camps for at least two years prior to that. This camp was unique in that it was conducted totally by FFA students under the direction of the FFA instructor who was also the FS4JK chapter leader. The students selected a topic and worked on their presentations throughout the year. Presentations were made periodically and critiqued by the teacher and fellow students. By the time the camp was held, students were very knowledgeable about their subject, comfortable with the message, and fully prepared to teach the campers. The camp was held in the spring (April 2002) and was scheduled to be outside at the school; however, cold and windy temperatures forced them to move inside. The camp length was 3 hours and consisted of 13 different training sessions. The camp was attended by 58 children aged 9-11. Session group sizes ranged from 4-6 campers, and children were seated in chairs or on the floor during the sessions. The primary mode of instruction was lecture accompanied by demonstrations, videos, and/or handouts.

Chapter 3, Camp C – This FS4JK chapter had offered farm safety day camps for seven years and conducted its camps under PAF guidelines. No formal training sessions were held for instructors. FFA students served as instructors for the three sessions evaluated. This camp was held in late April 2002 and had 271 children in attendance. During the 3-hour camp, 14 training sessions were conducted. The camp was held outdoors at a local fairground. Children were placed in groups ranging from 4 to 22 campers. The campers stood during the presentations of the 3 sessions video taped in our study. Lectures with props (live animals/equipment) were the primary methods of instruction. The number of instructors per station was 4-5. The student instructors indicated their participation was part of their required class work.

Chapter 4, Camps D and E – This chapter had been conducting farm safety day camps for five years under the PAF guidelines, with the same leadership and basically the same instructors. No formal training sessions for instructors were held; however, letters were mailed to instructors along with the information provided in the PAF manual for the session to be taught. Two camps from this chapter were included in our study. Both were held outdoors at a local fairground and served 4th grade students from local schools. Children sat on hay bales or chairs during the individual sessions. Group sizes ranged from 18-22 campers. The scheduled 5-hour camps consisted of 10 individual sessions plus one overall session on powered equipment safety. The primary mode of instruction was lecture with props and hands-on activities included in each of the sessions. The first camp was held in May 2002 but was cut short due to a tornado warning. Not all of the 173 children who attended the first camp were able to complete all sessions. The second camp was a 2-day event held in September 2002 with 167 children attending the first day and an additional 152 from different schools attending the 2nd day. FFA members assisted adults with the sessions, but did not necessarily know ahead of time which sessions.

Chapter 5, Camp F – This chapter had been conducting farm safety day camps for over 10 years. They conducted camps on two successive days for 4th grade students. Each day was for a specific county. Both camps were held outdoors – one at the fairgrounds and one at a county park. A total of 361 children attended. Children were placed in groups of 21-26 campers. Tiered benches or picnic tables were available for campers to sit on during the sessions. The camps contained 9-10 training sessions and lasted 5-5.5 hours. No formal training sessions were held

for the instructors. Lectures were the main method of instruction but hands-on activities and props were used as well. No FFA members assisted in this camp.

Data Collection Procedures

Initial data were collected from the children through pre- and posttests. As previously explained, all camps in the study were school-based. Teachers administered the pretest during class on the day prior to the camp visit. Teachers read each question aloud to the children as a group. This allowed the teacher to keep the children on task, address terms children did not understand, and help those children less advanced in the class to more easily complete the pretest. These procedures were intended to obtain more sincere and accurate responses from the children. The pretests were delivered to the chapter leader or research team member by the teacher upon arrival at the camp. Teachers were also asked to complete a "Teacher Information Sheet" which identified any activities conducted in class to help prepare students for the day camp. These sheets were collected with the pretests.

With the exception of the camp cut short due to severe weather, all posttests were administered at the camp at the end of the camp day. A teacher, group leader, or a research team member followed the same procedure as described for the pretest. Questions were read aloud to each group of children to facilitate children's understanding of the questions. The posttests were collected from each group before the children returned to the buses. The severe weather camp posttest was completed when the children returned to their school that day and were picked up by the camp leader. All pre- and posttests were taken from the camp site by a research team member and delivered to the principal investigator.

Other data collected on the day of the camp included camp demographics (date, weather, length of camp, unusual circumstances, and attendance counts); instruction session checklists (teaching methods used, number of children in each session, seating arrangements, and distractions); and instructor characteristic surveys (experience, source of information, farm background, and extent of training in educational techniques for children). The camp demographics form was completed by the chapter leader or a research team member. The research member was also responsible for completing the instruction session checklist. Each instructor was asked to complete a "Station Instructor Data Sheet" before leaving the camp at the end of the day. In addition to the written data collected, at least one instruction session on each targeted risk (tractors, power equipment, and animals) was videotaped by two research team members to gather a complete picture of the training sessions. A full description of the instruction data is described in detail under hypothesis 4.

Recruitment Efforts

Efforts were made to contact each child/parent for the one-month follow-up. Surveys were initially mailed to the households using the addresses supplied by the parents on the consent forms. When no response was received from the mailed surveys or surveys were returned undeliverable, several steps were taken to reach the households as outlined by the Dillman method (Dillman, 2000). Telephone calls, internet searches, and re-mails were conducted to

contact these households. For Spanish-speaking households, an interpreter who spoke fluent Spanish was enlisted to contact the family by phone to encourage them to respond to the mail survey or to translate and complete the survey by telephone if the household had requested this option. Survey instructions were also translated into Spanish to assist the family in completing the survey packets. A more detailed explanation of these efforts is described in the "Participant Attrition" section of this report.

Surveys were mailed to all households at 1-month and only to farm-exposed households at 6 months. To be eligible for the 12- and 18-months surveys, the household must have been determined to be "farm" and to have completed either the 1- or 6-month survey. Each survey packet at each time point included one survey for the child and one survey for the child's parent or guardian. An instruction sheet enclosed with the surveys asked that the two participants fill out the surveys independently. Only paired surveys (i.e. both parent and child completed surveys) were used in our analyses. Monetary incentives increased for each level (range of $5 - $25 per household) in an effort to retain households' participation in the project. Households who completed all surveys were eligible for inclusion in drawings for $500 savings bonds. Two bonds were awarded.

Little response was received from the initial 1-month mail surveys. To boost response rates, public service announcements for local newspapers were written by the research team and submitted through the chapter leaders to stress the importance of the project and highlight the fact their community was purposely selected. The research team placed telephone calls and mailed post cards to remind households about the surveys and encourage them to fill them out and return them. When these efforts yielded minimal results, the survey method was expanded to include telephone surveys. Mailed surveys continued to be used for the initial contact; however, when no response was received, households were contacted by phone. Households reached were given the option to complete the surveys over the phone or return them by mail. One problem with the telephone surveys was locating both the child and the parent home at a time when both were available for answering the surveys. Despite these intensive efforts, response rates remained low for the 1 and 6-month surveys. Table 9 summarizes the number of surveys received and response rates achieved for each wave of data collection. Flowcharts have been provided in Appendix C to outline the efforts taken to reach these final response rates. Final response rate for the farm exposed (live, work, or visit farms) was 59.2%. This was calculated as follows:

$$\frac{376\ (1\text{-month}) \ + \ 102\ (6\text{-months})}{238\ (18\text{-months})} = 59.2\%$$

Table 9. Survey Response Rates

Wave	Households Eligible	Mail Surveys Completed	Phone Surveys Completed	Total Surveys Completed	Response Rate
1-month *	1,158	338	100	438	37.82%
6-month [f]	930	260	109	369	39.68%
12-month [f]	420	214	113	327	77.86%
18-month [f]	328	218	65	283	86.28%

* – all households (farm and nonfarm) eligible
[f] – only "farm" exposed households eligible

Data Management and Analyses Procedures

The database management and the statistical analysis for the study was coordinated through the University of Kentucky College of Nursing. Data for the mailed survey components of the study were double entered with range limits and mandatory fields coded into the data entry screens. Appropriate validation checks were performed on the data. Data from the mail surveys were entered using the Epi-Info program for data entry (Centers for Disease Control and Prevention, 2001) and then converted to SAS files for further data management and analysis (SAS Institute, 1990). Questionnaires were coded with unique identification numbers for each participant in the study. Hard copy data were kept on file for further validation checks as needed. Qualitative data were entered verbatim into an Excel spreadsheet. Video data were archived on VHS tapes.

Quantitative Analyses

Data analysis began with a descriptive examination of the variables including frequency distributions, means, standard deviations, and ranges, as appropriate for the level of measurement of the variables. Bivariate relationships between the sociodemographic characteristics of the children who attended each camp and their parents and the outcomes of children's knowledge, attitudes, and behavioral intent toward farm safety and health hazards as well as the impact variables of exposure to farm injury hazards, safety and health behavioral change, farm-related injuries, and close calls for farm-related injuries were examined. Bivariate associations between parents' sociodemographic characteristics and their attitudes and behaviors toward farm safety for their children was also explored. Additional analyses are explained within the relevant context of this report.

Qualitative Analyses

With regard to qualitative data, responses to open-ended questions were first reviewed to clear data of unrelated answers. Examples of such responses included indications they were never on a farm or had not made any changes. Responses that did not directly answer the question were also eliminated from our analyses. Once the data were cleaned, the qualitative data were analyzed

independently by two research assistants using codes established by the principal investigator or the project manager. After initial coding, assistants met to compare results and discuss any discrepancies until 100% agreement was reached. All further discussions relative to qualitative results are based on cleaned data only.

Results

Results from this study are discussed in order of the hypotheses originally outlined in the grant proposal. In cases where there are both quantitative and qualitative results, the quantitative report is presented first. Additional findings not fitting in one of the six hypotheses follow the discussions of the hypotheses.

H_1: Community organized farm safety day camps positively influence farm safety behavior of children, as reported by children and parents.

Both quantitative and qualitative analyses were conducted for this hypothesis. Data were gathered from the follow-up surveys completed by the children attending the farm safety day camps and their parents.

Quantitative Report for Hypothesis 1 – Influence on Farm Safety Behavior of Children

Sample

The baseline sample consists of 1233 children who attended day camps at 6 locations and participated in at least one wave of data collection. Of these, 545 (44%) lived and/or worked on a farm, while the remainder either visited farms or were never on farms. Of the 1233 children who attended the camps and participated in the pre- and post-test surveys (both conducted at baseline), 376 farm children and their parents participated in the surveys beginning at 1-month post-camp; all of these lived and/or worked on farms or visited them and were invited to participate at 1, 6, 12, and 18 months. Of the 376 farm families who participated in the post-baseline interviews, 273 (73%) completed the 18-month survey.

Item coding and subscale creation

Four mulit-item subscales were created for data analyses as reflected in Table 10. Three items from the children's surveys were combined to form the child-reported safety behavior subscale (S1). Since the order of the responses and the number of response was different for the tractor item (relative to the livestock/power equipment items), it was recoded and rescaled for each wave. Now all three items are scored at each wave from 0 to 3, with 0 indicating the action is never taken and 3 indicating it is done most often (of the choices given). Thus the total score for this 3-item subscale ranges from 0 to 9 with 0 indicating the safest behavior and 9 indicating the most risky. If a child did not answer any of the three questions (or said 'don't know' for the auger question) their subscale score is missing since mean substitution was not possible with only 3 items total for each wave.

Similarly, three items from parent surveys were combined following recoding and rescaling to determine parent-reported child safety behaviors (S2). Each item ranges from 0 to 3 with 0 being safest and 3 most risky. The summary score ranges from 0-6.75 out of a possible score of 9. In order to make parent and children responses comparable, parent responses were rescaled to match the range of possible scores for the children. Original coding, ranging from 0-4, was rescaled by multiplying the parents' score by .75 (the same as what was done for the pre- and post-test for the children), so that the rescaled items each ranged (potentially) from 0-3. But there are non-integers in the possible range of values so the actual top score on this sum of three items is 6.75 (out of a possible score of 9). If the parent skipped any item, they do not have a calculated summary score for the reason noted in the paragraph above.

Table 10. Subscales for Hypothesis 1 Analyses

Subscale	Items Included	1 mo	6 mo	12 mo	18 mo
S1: Child-reported safety behavior	How often/many times have you ridden tractor with someone else driving?	Q2	Q15	Q6	Q21
	How often/many times have you been close to farm animals with no fence between you and the animal?	Q3	Q16	Q11	Q22
	How often/many times have you been near augers when they were in use?	Q4	Q17	Q12	Q23
S2: Parent-reported child safety behavior	How often does your child ride a tractor with someone else?	Q39			
	How often is your child near livestock when there is no fence between them and the animals?	Q41			
	How often does your child walk or stand near augers when they are in use?	Q42			
S3: Child-rated frequency of talking about farm safety	How much have you talked about how someone in your family might get hurt on a farm or ranch?	Q28	Q37		
	How much have you talked about ways to protect yourself from injury while on a farm?	Q29	Q38		
	How much have you talked about how following safety rules can prevent injuries on the farm?	Q30	Q39		
S4: Parent-rated frequency of child talking about farm safety	Compared to before camp, how much has child talked about tractor safety?	Q45			
	Compared to before camp, how much has child talked about animal safety?	Q46			
	Compared to before camp, how much has child talked about power equipment safety?	Q47			

The other areas for which subscales were created included child-rated frequency of talking about potential for injury, prevention and protection (S3) and parent-rated frequency of the child talking about tractor, animal and power equipment safety (S4). Within each of these two subscales, the items had the same response sets so no recoding or rescaling was needed. Each item was scored from 1-3 with 3 indicating the most frequent talking about safety; the summary score had a possible range from 3-9.

Data Analysis

Factor analysis and reliability were calculated for the multi-item scales.

Child and parent responses to the same item were linked using correlation analysis or chi-square analysis (as appropriate). For the summary safety behavior scores, based on children's and parents' reports (S1and S2), a paired t-test also was considered to determine whether the parent-child pairs answered the corresponding items similarly.

For the repeated measures models, t2 responses (post-test) were not used because it was assumed that there could be no change in behavior from pre- to post-test (given these assessments were on the same day, before and after the intervention), but any change reported would likely be due to the social desirability of reporting safe behaviors. The procedure MIXED in SAS, which employs a mixed model method, was used for the repeated measures ANOVA models. Repeated measures models for binary outcomes were determined using GEE methodology (the GENMOD procedure in SAS). An alpha level of .01 was used for all statistical tests to control the overall Type I error rate in light of multiple comparisons.

The repeated measures models are of two forms:

1) One type of model has both farm and nonfarm respondents (with farm defined as working and/or living on a farm), and compares outcomes measured at both T1 (pre-test) and 1-month, both over time and between farm status groups (i.e., farm versus nonfarm). The number of time periods in these models is limited because very few nonfarm families participated after the 1-month survey.

2) The second type of model considers only the farm children/parents and assesses whether there are changes over time (using T1, 1-mo, 6-mo, 12-mo and 18-mo responses, or whatever subset of these are available) in outcomes among these respondents. For the purpose of the analysis using this model, the definition of a farm participant was expanded to include those who visited farms as well (in addition to those who lived and/or worked on farms).

Results

I. Child responses to questions on their safety behavior

A. Safety behaviors of the children reported by the children (subscale S1):

- The factor analysis and reliability for this 3-item scale at pretest(baseline) indicate the items are relatively consistent. The items each have loadings in excess of .7 on the single factor, and Cronbach's alpha is 0.7.

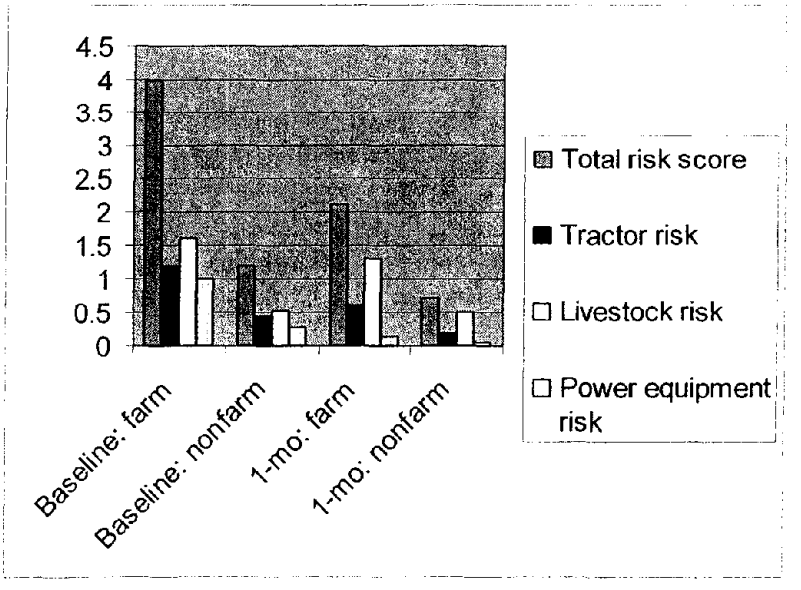
- For the total safety score (with higher scores indicating more risky behaviors), there was a significant interaction between time and farm status ($F = 42.2$, $p <$

.0001). This interaction demonstrates a larger decline in risky activities among farm children, compared with the decline in these types of behavior among their nonfarm peers (see Figure 5). One would expect this since farm children would experience greater exposure, thus, greater opportunity to change behavior.

- For the subscale scores of tractor and power equipment, this same phenomenon was found: the decline in risky behaviors was greater among farm children compared with the decrease among nonfarm children (Figure 5). The repeated measures ANOVA F values for the interaction between time and farm status was significant in each case, with $F = 17.6$ ($p < .0001$) for tractor and $F = 48.2$ ($p < .0001$) for power equipment.

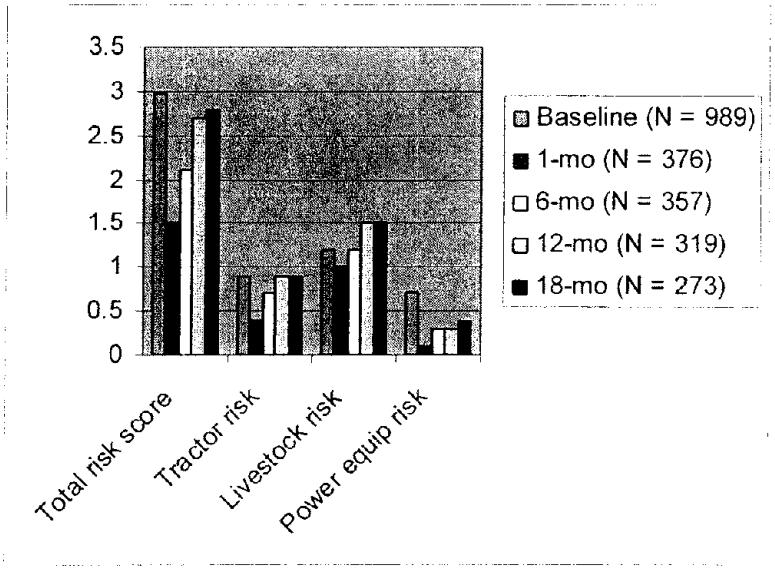
- For livestock, there was a significant decline over time in this type of risky behavior ($F = 7.2$, $p = .007$), but the degree of decline did not differ between the two farm groups (as evidenced by a nonsignificant interaction between the factors of time and farm status; the mean scores are shown on the vertical axis in Figure 5).

- Among the subset of farm children only, the change in safety behaviors over time was significant for each of the four scores (total, tractor, livestock and power equipment; see Figure 6). In each case, the scores reflected an initial decrease in risky behavior (between baseline and 1 month) followed by an increase over time; by 18 months the scores were approximately at or above the baseline risk levels. The ANOVA F values for the main effect of time were 29.3, 19.3, 11.2, and 42.1 for the total score, tractor, livestock and power equipment, respectively; all of these tests had p-values smaller than .001.



Model 1: farm = live or work; nonfarm = visit or never

Figure 5. Average risk scores by type of activity, time and farm status (N=1233)



Model 2: farm = live/work/visit; nonfarm = never

Figure 6. Average risk scores by type of activity and time for farm children (N=989)

B. Did anyone ask you (the child) to do a job you didn't know how to do?

- The percent of farm children who were asked to do a job on the farm they didn't know how to do remained fairly stable over the course of the study (15% at 1-mo, 13% at 6-mo and 16% at 18-mo); there was not a change over time in the frequency of this outcome.

C. If yes, did you (the child) tell the person you didn't know how to do the job?

- Of the children who had been asked to do a job they didn't know how to do, most did tell the person they didn't know how to do it (71% at 1-mo, 90% at 6-mo and 84% at 18-mo); there was not a significant change over time in the frequency of this outcome.

D. Did you (the child) do the job?

- Of those children who indicated at the 18-mo survey that they were asked to do a job they didn't know how to do, most (82%) did the job. This question was only asked during the final interview so no comparison over time is possible.

II. Parent responses to questions on the safety behavior of their child

A. Has your child entered areas on the farm they've been instructed not to go?

- This was only assessed at 6 months, and relatively few parents (8%) indicated this had occurred.

B. Safety behaviors of the children reported by the parents (subscale S2):

- The factor analysis and reliability for this 3-item scale at 1-month indicate the items are somewhat consistent (although less so than the child responses). The items each have loadings in excess of .6 on the single factor, and Cronbach's alpha is 0.4.

- The average total safety score (sum of the tractor, livestock and power equipment items) at 1-month was 1.2, out of a possible score of 0-9 and with an actual range of 0-6.75. Parents tended to rate their children's safety behaviors more favorably (less risky) than the children themselves.

- Riding on a tractor was the only item asked after 1-month; it was also asked at 12-months. While these are not exactly identical due to differing response sets, they are fairly consistent. In particular, at 1-month, 94% of parents reported their child rode on a tractor (as a passenger) either "never" or "1-2 times per month". At 12-months, 98% indicated their child rode on a tractor "a few times a month" or less.

C. Has child told adult they didn't know how to do a farm task?

- In the 18-month survey, 38% of parents indicated their child had told an adult they didn't know how to do a farm task they were asked to do

III. Consistency between child and parent responses to these safety behavior questions (comparison of results in sections I and II above)

- The summary scores for safety behaviors of the child as reported by the child and by the parent were significantly correlated ($r = .61$, $p < .0001$). The average difference between the safety scores of child and parent in each family dyad was 0.2; the conclusion is that children rated their own behavior as less safe (more risky) than did their parents, and this was significant ($t = 2.8$, $p = .005$). Correlation analysis of the individual safety items (tractor, livestock and auger) indicated that the child and parent assessments were most highly correlated for livestock safety ($r = .64$, $p < .0001$) and less so for tractor safety ($r = .46$, $p < .0001$) and power equipment safety ($r = .23$, $p < .0001$).

- Of the children who indicated they had told someone they didn't know how to do a farm task they were asked to do, less than half (42%) had parents who also indicated their child responded in this manner. It is possible that the child may have told an adult other than the parent who completed the survey, thus accounting for the discrepancy.

IV. Child responses to questions on changing their safety behavior

A. Stopped playing around any places on the farm? (yes/no/not on farm)

- The frequency of yes responses to this question was stable over time: 34% at 1-month, 33% at 6-months, and 30% at 12-months; the change over time was not significant for this outcome.

B. Changed the way you do farm work?

- The frequency of yes responses decreased after 1-month: for the 1-month, 6-month and 12-month surveys, the frequency of yes responses was 39%, 25%, and 25%, respectively. The change over time (decrease from 1- to 6-months) was significant (GEE $\chi^2 = 12.9$, $p = .002$).

C. Done anything to make the farm safer?

- 17% of respondents indicated 'yes' to this question at the 6-month survey; since the question was only asked at this time, longitudinal analysis was not possible.

D. Made anyone follow a farm safety rule they didn't follow before?

- 45% of respondents indicated 'yes' to this question at the 18-month survey; since the question was only asked at this time, longitudinal analysis was not possible.

V. Parent responses to questions on changing their safety behavior

A. Child convinced someone in household to change the way they do farm task to make it safer:

- 43% of respondents indicated 'yes' to this question at the 18-month survey; since the question was only asked at this time, longitudinal analysis was not possible.

B. Child convinced parent to adopt new farm safety rules:

- 35% of respondents indicated 'yes' to this question at the 18-month survey; since the question was only asked at this time, longitudinal analysis was not possible.

VI. Consistency of child and parent responses to questions on changing safety behavior (comparison of results in sections IV and V above)

- There was a significant association between children's response to influencing others to follow a safety rule and parents' reports that the child convinced someone in the household to change the way they did a farm task to make the task safer ($\chi^2 = 24.5$, $p < .0001$). Of the child respondents who said (at 18-months) that they did make someone follow a farm safety rule they didn't follow before, 60% of their parents agreed that the child convinced someone in the household to change the way they do a farm task to make it safer.

- There was also a significant association between children's response to influencing others to follow a safety rule and parents' reports that the child convinced someone in the household to adopt new safety rules ($\chi^2 = 19.7$, $p < .0001$). Of the child respondents who said (at 18-months) that they did make someone follow a farm safety rule they didn't follow before, 49% of their parents agreed that the child convinced someone in the household to adopt new farm safety rules.

VII. Child responses to questions on talking about safety

A. Talked to parents about farm safety rules learned at camp:

- The question was only asked at the 1-month interview so no longitudinal analysis was possible; 82% of children indicated they had talked to their parents about safety rules learned at camp.

B. How much child talked about safety behaviors (subscale S3):

A "think-talk" grid (Figure 7) was incorporated into the pre/posttests and children's 1-month and 6-month follow-up surveys. The number of children who did not respond completely to this set of questions indicated the children may have encountered problems with the grid. On the pretest, the number of missing responses for part A of the question (how much they "thought" about the idea) ranged from 51-67 while the number of missing responses for part B was much larger (164-178). The number of missing responses decreased for the 1 and 6-month surveys wherein ranges were 8-11 and 47-60, respectively.

	How much I **thought** about the idea			How much I **talked** to others about the idea		
Ideas I have thought about and talked about in the last month	Not at all	A Little	A Lot	Not at all	A little	A lot
How someone in my family might get hurt on a farm or ranch.	1	2	3	1	2	3
Ways to protect myself from injury while I'm on a farm or ranch.	1	2	3	1	2	3
How following safety rules can prevent injuries on the farm.	1	2	3	1	2	3

Figure 7. Think-talk grid used in children's pre/posttests and follow up survey

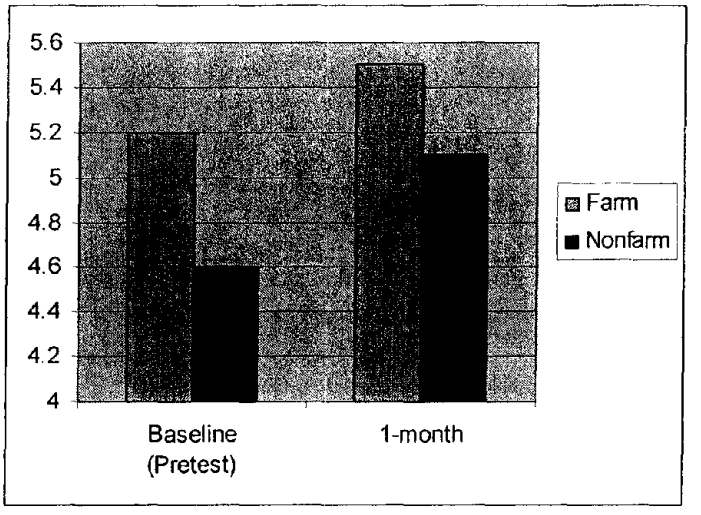
- The factor analysis and reliability for this 3-item scale at pretest(baseline) indicate the items are relatively consistent. The items each have loadings in excess of .8 on the single factor, and Cronbach's alpha is 0.7.

- For the total 'talked about safety score' (with higher scores indicating more discussion initiated by the child), farm children had higher scores than nonfarm children (ANOVA $F = 22.6$, $p < .0001$) and there was a significant increase over time in talking about safety for both farm and nonfarm children (ANOVA $F = 13.9$, $p = .0002$), but the amount of increase was about the same for both groups; the interaction between time and farm status was not significant (see Table 11 and Figure 8).

Table 11. Farm vs. Nonfarm Scores for "Talked About Safety"

	Baseline Scores	**1-Month Scores**	**Increase**
Farm	5.2	5.5	.3
Nonfarm	4.6	5.1	.5
Difference: farm > (nonfarm >)	.6	.4	(.2)

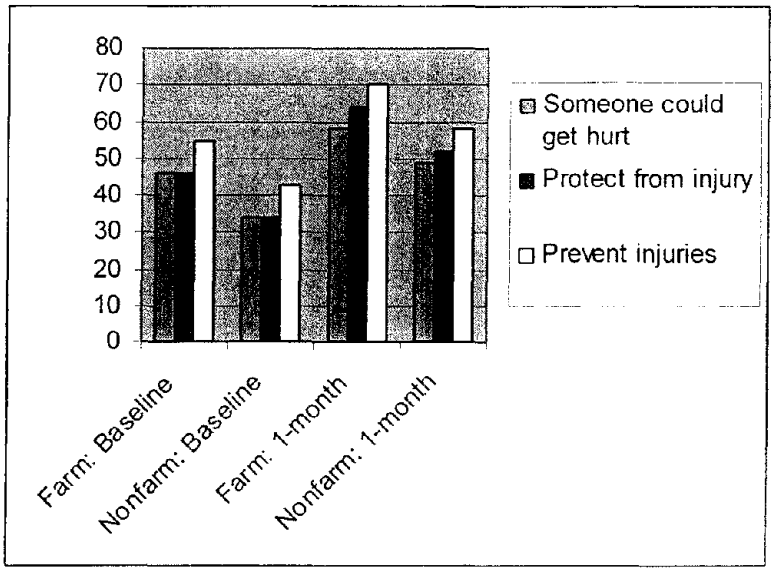
Model 1: farm = live or work; nonfarm = visit or never



Model 1: farm = live or work; nonfarm = visit or never

Figure 8. Average amount of talking about safety by time and farm status. (N = 1,233)

- The same phenomenon was true for the individual items as well: there were differences between farm and nonfarm children in the degree of talking about safety, and there was a significant change over time, but interaction between time and farm status was not significant (Figure 9 displays the percent of children at each time and in each group who indicated talking either 'a little' or 'a lot' as opposed to 'not at all' about each safety issue). In particular, for the 'hurt' item, the F value for the comparison of farm to nonfarm was 11.6 ($p = .0007$), while the F value for the time factor was 11.5 ($p = .0007$). For the 'protect' item, the F values for farm status and time were 19.2 ($p < .0001$) and 28.0 ($p < .0001$), respectively. For the 'prevent' item, the ANOVA F values for farm status and time were 13.0 ($p = .0003$) and 18.5 ($p < .0001$), respectively.



Model 1: farm = live or work; nonfarm = visit or never

Figure 9. Percent of children discussing safety issues, by time and farm status (N=1233)

- Among the subset of farm children only, the change in talking about safety behaviors over time was significant for three of the four scores (total, protect from injury, prevent injuries); only the item about someone getting hurt did not change significantly over time. The ANOVA F values for the remaining scores were: 6.8 ($p = .001$) for the total score, 10.5 ($p < .0001$) for protect, and 7.2 ($p = .0008$) for prevent. For each of these measures, the tendency was an increase from baseline at 1-month and then decrease back down to about baseline level by the 6-month survey. The mean values for the total score (with higher scores indicating more discussion) were 5.0, 5.3, and 4.8, for the baseline, 1-month and 6-month surveys, respectively. For each of the individual items, the frequency of responses of either 'a little' or 'a lot' to the three surveys (at baseline, 1-month and 6-months) were: 42%, 54%, and 46% for someone getting hurt; 51%, 59%, and 48% for protecting self from injury; and 51%, 64%, and 53% for preventing injuries by following safety rules (see Table 12).

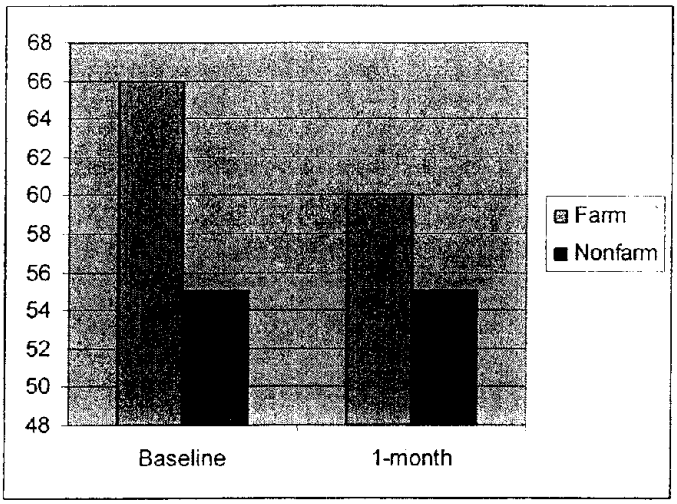
Table 12. Talk Frequency Breakdown Between "a little" and "a lot"

	Pretest	1-Month	6-Month
Talked about getting hurt	*Q34*	*Q28*	*Q37*
Not at all	58%	46%	54%
A little	30%	42%	39%
A lot	12%	12%	7%
Total	**100%**	**100%**	**100%**
Talked about protecting self	*Q35*	*Q29*	*Q38*
Not at all	49%	41%	52%
A little	32%	43%	35%
A lot	19%	16%	13%
Total	**100%**	**100%**	**100%**
Talked about following safety rules	*Q36*	*Q30*	*Q39*
Not at all	49%	36%	47%
A little	27%	41%	38%
A lot	24%	23%	15%
Total	**100%**	**100%**	**100%**

Model 2: farm = live/work/visit; nonfarm = never

C. Have you talked to your parents about safety behaviors:

- For the comparison of the percent who answered yes to this item at baseline and 1-mo for farm and nonfarm children, there was a significant difference in prevalence by farm status (GEE $\chi^2 = 14.3$, $p = .002$) but not by time; in addition, the interaction between farm status and time was not significant. Children who lived and/or worked on farms were more likely to talk to their parents about farm safety than nonfarm children (see Figure 10).



Model 1: farm = live or work; nonfarm = visit or never

Figure 10. Percent of children who talked to parents about safety by time and farm status (N = 1233)

- Among farm children only (N = 989, which includes those who visit farms as well as those who live and/or work on them), the percent who talked to their parents about safety at baseline, 1-mo and 6-mo was 61%, 58%, and 47%. The change in prevalence over time was significant (GEE $\chi^2 = 22.9$, $p < .0001$) and due to the decrease from 1-month to 6-month.

D. Has it been easier to talk to your parents about safety since the camp:

- At the 1-mo survey, 80% of respondents indicated it was easier to talk to parents about farm safety since the day camp experience; this was only asked one time so longitudinal analysis is not possible.

E. Have you told a friend, sibling or family member about safety:

- At the 18-mo survey, 60% of respondents indicated they had told a friend, sibling or family member about safety; this was only asked one time so longitudinal analysis is not possible.

VIII. Parent responses to questions about child talking about safety

A. Child talked to you about safety issues learned at camp:

- This was only asked at the 1-month interview so no longitudinal analysis possible; 90% of parents indicated their children had talked to them about safety issue(s) learned at camp.

B. Compared to before camp, how much has child talked about tractor, animal, power equipment safety (subscale S4):

- The factor analysis and reliability for this 3-item scale at 1-month indicate the items are relatively consistent. The items each have loadings of at least .8 on the single factor, and Cronbach's alpha is 0.8.

- For the individual items of tractor safety, animal safety, and power equipment safety, the percent of parents who reported their children talked more about these issues since the camp was 46%, 41%, and 42%, respectively.

- These items were only asked at the 1-month survey, so longitudinal analysis was not possible.

C. Has child told other children about farm safety rules:

- At the 18-mo survey, 74% of parents reported their child had told other children about farm safety rules; this was the only time this item was asked so no comparisons over time are possible.

IX. Consistency of child and parent responses to questions about child talking about safety (comparison of results in sections VII and VIII above)

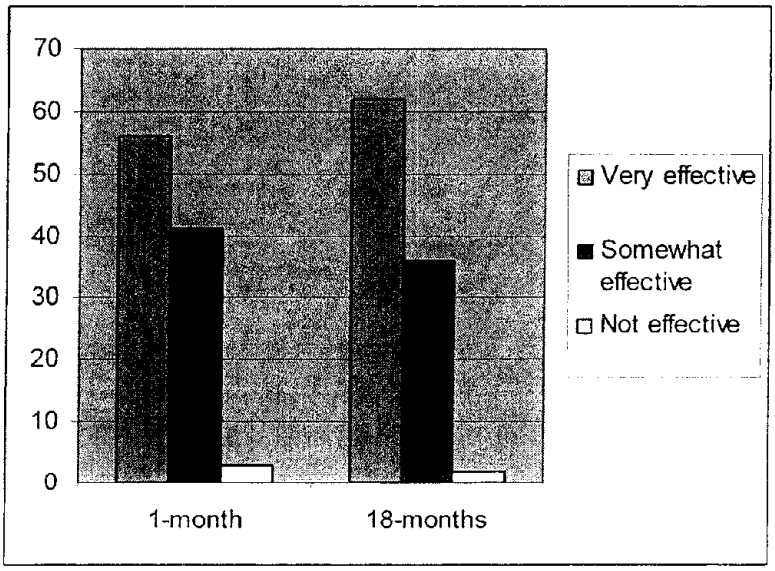
- The association between child and parent responses to the question of whether the child had talked to the parent about farm safety rules since the camp was significant ($\chi^2 = 67.4$, $p < .0001$): of the children who indicated they had talked to their parents about this issue, 96% of their parents also indicated their child had discussed farm safety with them.

X. Parent opinion on the influence of the camp on child's farm safety behavior

Parent rating of influence of camp on farm safety behavior of child:

- Nearly all parents perceived the camp was at least somewhat effective in influencing the farm safety behavior of their child, and this was indicated by responses to this item at both 1-month and 18-months (see Figure 11). The 226

parents who participated at both 1- and 18-months were included in this chi-square analysis to test the relationship between the two responses over time. The association between responses at these two timepoints was significant ($\chi^2 = 21.8$, $p = .0002$).



Model 2: farm = live/work/visit; nonfarm = never

Figure 11. Parent rating of influence of camp on child farm safety behavior (N=226)

Qualitative Report for Hypothesis 1 – Influence on Farm Safety Behavior of Children

The qualitative data for hypothesis 1 was analyzed independently by two research assistants using codes established with the principal investigator. Children's responses that contained more than one item (for example, reporting that they stopped playing in the barn and on machinery) were coded individually making the number of coded responses greater than the number of children who actually responded. Initial agreement rates ranged from 82% to 97.4%; however, all differences were discussed until 100% agreement was reached. A list of codes used for this analysis is provided in Table 13.

Qualitative data were collected by asking a series of open-ended questions in the surveys to explore the types of changes children reported and in what areas they had made the most changes. Table 14 illustrates the nature and timing of these questions as well as the number of children responding to the questions. Only the 1-month survey included nonfarm children (those who were "never" on a farm) but the number of nonfarm children responding to the analyzed questions were minimal.

Table 13. Codes used for H_1 Qualitative Analyses

Where are the places you stopped playing around?

A = Animals
M = Power Equipment/Machinery (augers, chainsaws, pto, elevator, bush hog, grain wagon/bed, lawn mower, bucket)
B = Buildings (barns, loft, shed, silos- any type building/storage area)
T = Tractor
E = Stationary Environmental Hazards (ponds, water area, burn pile electric fence, field, driveway)
X = Does not relate (cement, backyard, home)
O = Other (vehicles-not specified, chemicals)

Why did you stop playing there?

I = Injury Concern (hurt, killed or physical harm)
Ia = Injury Concern from Animals
Ib = Injury Concern from Buildings
Ie = Injury Concern from Stationary Environmental Hazards
Im = Injury Concern from Power Equipment/Machinery
It = Injury Concern from Tractors
C = Learned at Camp
D = Dangerous or unsafe
O = Other
X = Does not relate

What changes have you made in way you do farm work?

A = Adult supervision
D = Distance self from animal and/or equipment
C = More careful/observe safety rules/more aware of dangers
R = Obey Rider rules
P = Protective gear
O = Other
X = Does not relate

What have you done to make your farm safer?

P = Protective equipment or gear
D = Distance from animals and/or equipment
F = Fencing (new, replacement or fencing material)
G = Generic safety rules
S = Specific safety rules
T = Tell others (or instruct)
A = Adult supervision
X = Does not relate
O = Other

What have you done to show safe behavior to a friend or sibling?

A = Action shown to prevent or stop potential injury
D = Demonstrated safe rules
O = Other
S = Self behavior (practicing but not showing someone else)
X = Does not relate (can't remember, don't know)

Table 14. Children's Qualitative Responses for Safe Behavior Actions

Children's Surveys	Survey (month)	Total Surveys Possible	# Children Responded	% Children Responded	Coded Responses	Initial Agreement
Where are the places on the farm you stopped playing around? *	1-6-12	1134	290 (5 nonfarm)	25.57%	358	91-95%
Why did you stop playing there?	1	438	98 (5 nonfarm)	22.37%	99	88.5%
What changes have you made in way you do farm work? *	1-6-12	1134	213 (3 nonfarm)	18.78%	220	82-93.6%
What have you done to make your farm safer?	6	369	59	15.99%	66	97.4%
What have you done to show safe behavior to friend or sibling?	18	283	169	59.72%	172	89.5%

* questions were time-anchored so responses covered time since previous survey where appropriate

The children reported environmental hazards (water areas, burn piles, fields, driveways, and electric fences) and power equipment (other than tractors) as the two primary areas they stopped playing around (21.8% and 21.5%, respectively). Other places cited were around animals, tractors, and buildings such as barns, silos, and storage sheds. The largest report of change was reported at the 6-month level with responses decreasing at 12 months (see Figure 12). Injury concerns were cited the most (57.6%) as the reason for making these changes. Another 30.3% described the areas as being "dangerous" or "unsafe" as their reason. Eight children (8.1%) specifically cited the camp as the reason they stopped playing in the aforementioned areas.

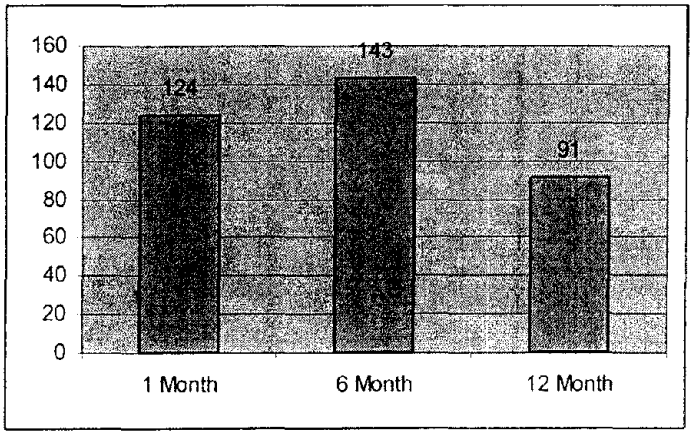


Figure 12. Number of coded responses for places children stopped playing

Children also reported changes in the way they do farm work. Distancing themselves from animals and/or equipment (34.5%), obeying rider rules such as "no extra riders" (7.3%), increasing use of personal protective equipment such as ear plugs, safety glasses, and helmets (5.0%), being more careful and/or aware and obeying general safety rules (48.6%) were positive measures taken by children to decrease their risk of injury.

Some of the same descriptions were given by the children when asked what they had done to make their farm safer. Many of the responses mirrored the changes they had made in the way they do farm work such as distancing themselves from dangerous areas and activities, following safety rules more closely, and wearing protective gear. Specific actions reported that would make the farms safer for themselves and others included telling others about safety rules (9.1%), repairing or installing fences (19.7%), and cleaning up areas or filling in holes (9.1%).

Finally, at 18 months, children were asked what they had done to show safe behavior to a friend or sibling since the camp. Nearly 60% of the children responded to this open-ended query. Of those who responded, over half of them (52.9%) reported practicing safe behavior themselves in which they are cautious and follow farm safety rules to set a good example for others. Other responses included demonstrating safe ways of doing tasks (8.7%), telling others about safety rules (29.7%), and taking action to prevent a potential injury (7.0%).

In order to assess the extent of the child's influence on parental farm safety behaviors, parents were asked at 1-month and 18-months post camp what changes they had made related to farm safety since the camp. This question was followed by, "Which changes were because your child talked to you after camp?" Some parents reported more than one change. In these instances, each change was treated as an individual response. The initial coding agreement rate was 84.8%. Differences were discussed and resolved to 100% agreement. Although parents of nonfarm children (those children who reported they were "never" on a farm) were eligible to complete the 1-month survey, only 5 nonfarm parents responded to this set of questions. Thus, responses included in the parent analyses reflect primarily farm families.

From the 1-month post-camp survey, 49 parents reported they had made changes related to farm safety (8.22% of parents completing the 1-month survey). Almost 75% of those parents (36/49) reported they had made the changes because their child talked to them after the camp (see Table 15). The total number of changes reported by the parents was 60, with 75% of them because the child had talked to their parents after the camp.

Table 15. Parents' 1-Month Qualitative Responses for Farm Safety Changes Because Child Talked to Them After the Camp

Parent Surveys (N=438)	# Parents Reporting Changes	% of Parents Reporting Changes	Coded Responses (Changes)	% of Changes Because Child Talked
Changes made for non-specified reasons	13	26.53%	15	25.00%
Changes made because child talked to parent after the camp	36	73.47%	45	75.00%
Total changes made related to farm safety	49	100%	60	100%

Changes made by parents as a result of children sharing information from the day camps included distancing themselves or their children from animals, equipment, and environmental hazards (26.7%); more strictly enforcing the "no extra rider" rule (20.0%); exercising more caution around farm machinery and equipment (15.6%) or animals (11.1%); increasing supervision of children on the farm (6.7%); and the increased use of protective equipment or development of fire safety plans (11.1%). The remaining responses (8.9%) reflected general statements of just being more careful.

The questions were repeated in the 18-month survey. Parents were asked if they had made any farm safety changes in the last 6 months and if any of the changes were the results of their child talking to them after the camp. The same codes and process for determining eligibility were applied. Initial coding agreement was 88.9%. Fifty-nine parents reported they had made changes related to farm safety. Over half (52.54%) of those parents reported changes were made because their child talked to them after the camp (see Table 16). From the total of 55 changes reported by the parents, 60% of the changes occurred because the child shared information from the camp with their parents. Only 5 of the parents reporting making changes because their child talked to them in the 18-month survey had also reported making changes for the same reason at 1-month. All but one of the five reported different changes at the two time periods, indicating these were not duplicated responses from the 1-month survey.

Table 16. Parents' 18-Month Qualitative Responses for Farm Safety Changes Because Child Talked to Them After the Camp

Parent Surveys (N=283)	# Parents Reporting Changes	% of Parents Reporting Changes	Coded Responses (Changes)	% of Changes Because Child Talked
Changes made for non-specified reasons	28	47.46%	22	40.00%
Changes made because child talked	31	52.54%	33	60.00%
Total changes made related to farm safety	59	100%	55	100%

The same type of changes made because their child talked to them after the camp were reported at the 18-month survey as was reported in the 1-month survey but with slightly different variations in percentages (see Figure 13).

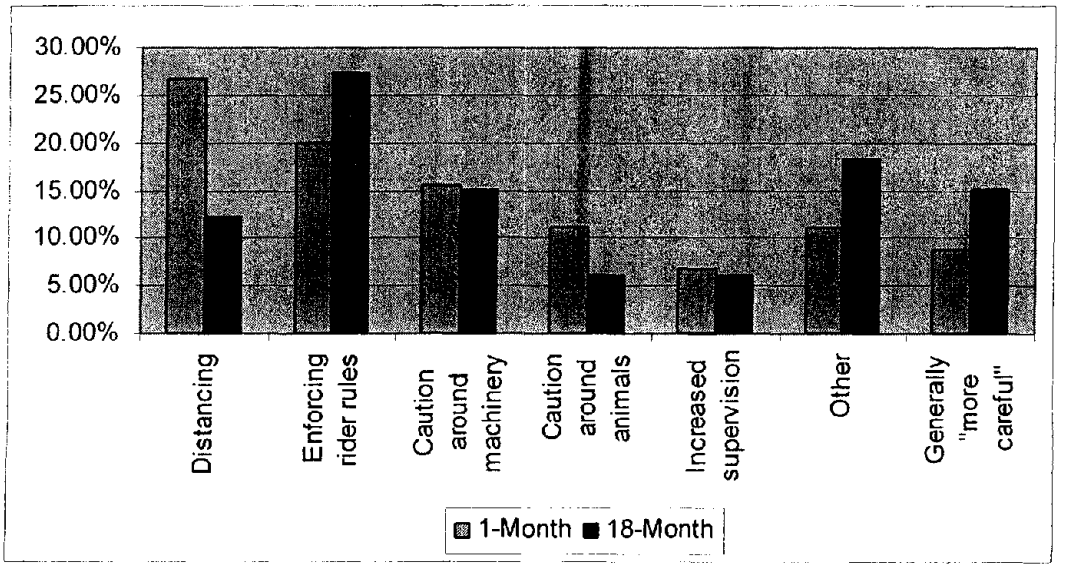


Figure 13. Changes by parents because child talked to them after camp

This analysis provides evidence that some children positively *applied* the safety messages learned at camp not only to their own safety behavior but also passed the messages on to others.

Summary for H1

A total safety score decrease was noted. Farm children's scores reflected a greater decrease (e.g. less risky behavior) than nonfarm children, particularly for tractor and power equipment. However, this effect waned over time. From 6 months to 18 months scores returned to or above baseline. This could either be a function of the waning of the effect of intervention or a natural function of their added jobs over time.

The majority of children admitted being asked to do a farm job they did not know how to do, however, only 18% did not actually perform that job. The reason for job performance was not assessed but is of great importance and should be explored in future studies.

Discrepancies between the child's report and the parent's report of child's safety behavior and for child telling an adult they didn't know how to do a job were identified. Children's reports indicated they engaged in more risky behaviors than the parents suspected; less than half of the parents affirmed their children had told an adult they didn't know how to perform a farm task they were asked to do, however, this could have occurred because the child told an adult other than the parent respondent.

Although there was a decrease across time in the percentage of children who changed the way they did farm work (39% at 1-month to 25% at 12-months), the persistence of changed behavior indicates that the child continued to be attentive to safety as new farm jobs were added. Whether or not this was due to camp experience is speculative; however, the continued vigilance is noteworthy. This is further supported even in the 18 month survey where nearly half of the children influenced the safety behavior of someone else. Parents provided evidence that the child influenced the parent's safety behavior. Although there was some inconsistency between children and parent responses on individual items, there were items that displayed strong associations. More research into the strength of safety-focused communication between child and parent should be conducted.

H_2: Children who participate in farm safety day camps will demonstrate increases in farm safety knowledge, safety attitudes, and intent to practice safe farm behaviors.

Both quantitative and qualitative analyses were conducted for this hypothesis. Data from the pre- and posttests and follow-up surveys completed by the children attending the farm safety day camps and their parents were used to test the hypothesis.

Quantitative Report for Hypothesis 2 – Knowledge/Attitude/Safe Behavior Intent

Sample

The baseline sample consists of 1233 children who attended day camps at 6 locations and participated in at least one wave of data collection. Of these, 545 (44%) lived and/or worked on a farm, while the remainder either visited farms or were never on farms. Of the 1233 children who attended the camps and participated in the pre- and posttest interviews (both conducted at baseline), 376 farm children and their parents participated in the interviews beginning at 1-month post-camp; all of these lived and/or worked on farms or visited them and were invited to participate at 1, 6, 12, and 18 months. Of the 376 farm families who participated in the post-baseline interviews, 273 (73%) completed the 18-month survey.

Item coding and subscale creation

Nine multi-item subscales were created for data analyses of hypotheses 2 as reflected in Table 17. Each subscale is described in detail in the paragraphs that follow.

Table 17. Subscales for Hypothesis 2 Analyses

Subscale	Description	# Items
S1	Child tractor knowledge scores	4
S2	Child animal knowledge scores	6
S3	Child power equipment knowledge scores	6
S4	Child summary knowledge scores (S1+S2+S3)	16
S5	Parents' perception of children's knowledge increase	3
S6	Children's attitude scores for 1-month survey	9
S7	Children's attitude scores for 6-month survey	4
S8	Children's intent to practice safe behavior scores for 1-month	3
S9	Children's intent to practice safe behavior scores for 6-month	3

Farm safety knowledge items

Knowledge scores (based on child responses) were formed for each of the content areas of tractor, animal and power equipment safety; each score indicated the total number of correct items within each content area. The tractor score was based on 4 items, while the animal and power equipment scores were each made up of 6 items; a total score, ranging from a possible 0-16 points, was formed by summing the total number of correct responses to the tractor, animal and power equipment safety items. Higher scores indicated a greater increase in knowledge. These knowledge items (Table 18) were asked of the children at pretest, posttest, and 18 months.

Table 18. Children's Farm Safety Knowledge Items

	Subscale S1: Tractor Safety Knowledge
1.	It's okay to have an extra rider on a tractor if the tractor has an enclosed cab.
2.	You should use a seatbelt if your tractor has a rollover protective structure.
3.	Dad's lap is a safe place to ride on a tractor.
4.	Which would be the safest way to travel from one end of the field to the other? As a rider in the tractor cab; on the fender of a tractor; walking along beside the tractor; none of these ways are safe
	Subscale S2: Animal Safety Knowledge
1.	You should wear hearing protection when working with pigs inside a building.
2.	Farm animals can become scared when someone walks up behind them.
3.	I can outrun a cow if it starts to chase me.
4.	Female animals can be more dangerous when they have babies.
5.	When working around animals it is best to: move quickly (run); wave your arms and shout; be sure the animal can see you; don't know
6.	When feeding livestock which is the safest? Keep a fence between you and the animals; shout and yell at the animals to keep them away; run in the pen, leave the feed, and run back out; don't know
	Subscale S3: Power Equipment Safety Knowledge
1.	It is okay if the safety shield is not on power equipment if it saves time or makes the job go easier.
2.	A safety shield makes it safe to step over a power take-off.
3.	It's better to wear loose clothing when doing farm work, especially around power take offs (PTO).
4.	It is better to leave equipment running when you work on it.
5.	It is okay to climb over equipment if it is not running.
6.	Which of the following is important when working around farm equipment? wear a hat; pull long hair back; wear dark clothing; don't know

Parents' ratings of their children's increase in knowledge were asked at 1, 6, and 18 months. The 6-month responses to increase in tractor, animal and power equipment safety (Table 19) were

summed to form a total score for perceived increase in this type of knowledge. These change in knowledge score (attributed by the parents to day camp attendance) had a potential range of 3 to 12, with higher scores indicating a more marked increase in knowledge.

Table 19. Subscale S5: Parents' Perception of Child's Knowledge Increase (6-month survey)

Parent Survey Questions
How much has child's knowledge increased re: should never be an extra rider on tractor?
How much has child's knowledge increased re: should have fence between them and animals?
How much has child's knowledge increased re: should not step over PTO?
Response choices for each question = less; same; a little more; a lot more

Farm safety attitudes items

Children's attitudes about farm safety were measured at 1, 6 and 18 months. At the one-month survey, 9 items (Table 20, q15-q23) were combined (subscale S6) to determine overall attitude toward safety; the summary score was based on the number of correct responses to the 9 items, with a potential range from 0 to 9. At 6 months, there were 4 safety attitude items that were similar to each other (these were the assessments of how dangerous certain activities were: Table 20, q21a-q21d, subscale S7); the potential scores ranged from 4-12, with higher scores indicating the child felt the activities were more dangerous. There were 3 items at 6 months and 2 items at 18 months that were considered singly since they were not able to be combined with other items to form subscales (Table 21). A single item at the 6 month survey (q29) assessed the parent's opinion of the child's attitude about safety.

Table 20. Children's Farm Safety Attitude Questions

Subscale S6: Children's farm safety attitude at 1-month survey	Q#
I should let adults know when I don't know how to do a farm task.	15
I could be injured while doing farm work.	16
Safety rules should be followed even if they slow the job down.	17
If my Mom or Dad don't follow safety rules, I don't need to either.	18
Some safety rules I would not follow if I thought my friends would laugh at me.	19
Some injuries could affect me for the rest of my life.	20
There are places on the farm that are dangerous for me to play or be around.	21
There are places on the farm I don't go near because they are dangerous.	22
Farm safety rules are only important for people who live or work on a farm.	23
Subscale S7: Children's farm safety attitude at 6-month survey	
How dangerous do you think it is to play on the tractor?	21a
How dangerous do you think it is to play where animals are?	21b
How dangerous do you think it is to play around the barn?	21c
How dangerous do you think it is to play in the front yard?	21d

Table 21. Single-item Questions for Measuring Children's Farm Safety Attitude

Survey	Question
Child 6-mo	#20 - How likely is it that you would do something on a dare if you might get hurt? #30 - Safety rules should be followed even if they slow the job down. #31 – Farm safety rules are only important for people who live or work on a farm.
Child 18-mo	#40 - Safety rules should be followed even if they slow the job down. #41 – Farm safety rules are only important for people who live or work on a farm.
Parent 6-mo	#29 - How likely is it child would do something risky/dangerous on a dare?

Intent to practice safe behaviors

Three intention items were asked of the children at 1 month (Table 22, q33-q35); the number of correct responses to these three items was determined, and this served as the summary score. Similarly, three items at six months also measured intent to practice safe behaviors (Table 23, q29, q35, q36); the number of correct responses to these three was recorded as the summary intention in the 6-month survey. The parent survey contained a single item at 6 months (Table 24, q22) and a different single item at 18 months (q11f).

Table 22. Subscale S8: Children's Intent to Practice Safe Behavior at 1-Month

Children's 1-Month Surveys	Q#
Going home from field scenario – what would you do?	33
Showing friends the new calf scenario – what would you do?	34
Operating feed machine but don't know how scenario – what would you do?	35

Table 23. Subscale S9: Children's Intent to Practice Safe Behavior at 6-Months

Children's 6-Month Surveys	Q#
I let adults know when I don't know how to do a farm task.	29
Weedeater task w/ goggles and ear plugs scenario – what would you do?	35
Brother laughs at gear for weedeater task scenario – what would you do?	36

Table 24. Single-item Questions for Measuring Children's Intent to Practice Safe Behavior

Survey	Q#	Question
6-mo	22	Because of camp my child takes more risk when doing farm tasks.
18-mo	11f	Hearing about farm safety from camp makes child more likely to follow farm safety rules

Data Analysis

Factor analysis and reliability were calculated for the multi-item scales. For ordinal items, Cronbach's alpha was used as a reliability assessment, while the Kuder-Richarson 20 was used for binary items, such as correct/incorrect responses on the knowledge and attitudes scales. For subscales whose single-factor loadings indicate more than one factor, the appropriate number of factors were determined and rotated using a varimax rotation. Items were considered to load decisively on a factor if their loading was at 0.4 or above.

When possible, child and parent responses to the same item were linked using chi-square analysis.

Unlike the analysis for the first hypothesis (related to actual safety behaviors), the analysis for this second hypothesis includes posttest items, where appropriate. Here the changes in knowledge, attitudes and intention to practice safe behaviors are being assessed, so the change from pretest to posttest (and beyond) is relevant. For continuous measures, a repeated measures analysis of variance (ANOVA) was used to determine changes over time. The procedure MIXED in SAS, which employs a mixed model method, was used for these repeated measures ANOVA models. Changes in ordinal variables between two timepoints were determined using the Wilcoxon signed rank test. Changes in binary variables between two time periods were assessed using the McNemar test. An alpha level of .01 was used throughout to control the overall Type I error rate in light of multiple comparisons.

Since none of the measures used to indicate the outcomes of this hypothesis were asked at both the pretest and one month, and since specific comparisons between farm and nonfarm children between pretest and posttest are presented later in the analysis of the third hypothesis, the analysis comparing farm to nonfarm respondents (i.e., as described in the analysis for the first hypothesis) was not replicated. Rather, all comparisons include all respondents with complete information for the measures of interest.

Results

I. Child responses to questions on farm safety knowledge

A. Factor analysis and reliability

- The factor analysis of the 4-item tractor knowledge scale indicated the items tended to load together, with loadings ranging from 0.5 to 0.6. The Kuder-Richardson 20 (KR 20) for this scale was 0.29, likely due to the small number of items.

- The factor analysis of the 6-item animal knowledge scale demonstrated low loadings of 0.3 for two of the items; the KR 20 was also relatively low for this scale: 0.50. A second model was considered that retained 2 factors and rotated them using the varimax option. The loadings on the rotated factors indicated that one factor was formed by the animal items 2, 4, and 5 (with loadings of .60 to .75 for these three items on the first factor) and the second was formed by items 1 and 3 (with loadings of .72 and 0.65). The final animal item, number 6, loaded somewhat weakly on both factors (with loadings of .41 and .45 on Factor 1 and Factor 2, respectively). The KR 20 values for the subscales suggested by the factor analysis were .52 (for the an2, an4 and an5 subscale) and .15 (for the an1 and an3 subscale: this is very low because of only 2 items).

- For the 6-item power equipment knowledge scale, all but one of the items had loadings above 0.5, and the KR 20 was slightly higher than for the animal scale, at 0.53. The 2-factor solution for this subscale indicated two factors emerged from the varimax rotation: items 1-4 loaded on one factor, with loadings ranging from .54 to .66; items 5 and 6 loaded on the other, with loadings of .57 and .85. The KR 20 for the pe1-pe4 subscale was .52 and for the pe5 and pe6 subscale the KR 20 was .22 (again, low because of only 2 items).

- The combined scale of 'farm safety knowledge,' comprised of all 16 items, indicated the 3-factor solution had the optimal fit. The varimax rotated factors were: 1) animal 2, 4, 5, 6 and power 6 (with loadings ranging from .42 to .65); 2) power 1, 2, 3, 4 (with loadings from .47 to .73); and 3) tractor 1, 3, 4 and power 5 and animal 3 (with loadings from .44 to .60). Tractor 2 and animal 1 items did not load at or above .4 on any factor. The KR 20's were as follows: for an2, 4, 5, 6 and pe6: .56; for pe1-pe4: .52 (as noted above); and for tr1, 3, 4, pe5, an3: .33.

- The conclusion from the above analysis is that knowledge on one aspect of any of these content areas (tractor, animal, power equipment) is not necessarily linked with knowledge of all aspects of the given content area since there is some overlap among the items from the different content areas in the 3-factor solution described in the bullet immediately above.

B. Comparisons over time and descriptive summary

- For tractor safety (out of a potential score of 4), there was a significant increase from pre- to posttest (see Figure 14), followed by a slight decrease from posttest to 18 months; the means are 2.0, 3.3, and 2.6. All pairwise comparisons were significant.

- For animal safety (out of a possible score of 6), there was an increase from pre- to posttest, and this was maintained at 18 months (Figure 14); the means are 3.9, 5.1, and 5.2. The pretest scores were significantly lower than posttest or 18 months, while the posttest and 18-month scores were not significantly different.

- As shown in Figure 14, power safety scores (with a possible total of 6) showed in initial increase (from pre- to posttest) and this score was relatively stable between posttest and 18 months; the means are 3.2, 4.7, and 4.9. The score at pretest was significantly lower than the other two timepoints, but there was not a significant difference between posttest and 18 months.

- Total safety scores (the sum of tractor, animal and power equipment, out of a possible total of 16) increased from pretest to posttest and then declined slightly at 18 months: the average scores over these three time periods were 9.2, 13.0, and 12.6. All three pairwise comparisons were significant.

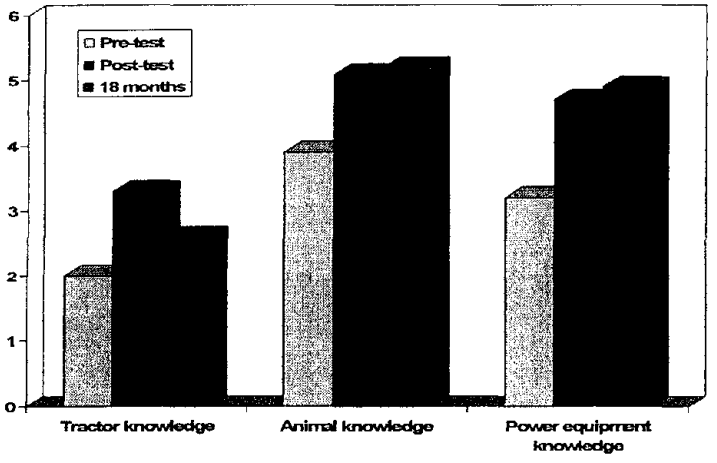


Figure 14. Average knowledge scores over time, by content area (N = 1233)

- Three knowledge items were only asked of the children at 6 and 18 months:

  The tractor item (okay to ride if holding on tight) was answered correctly by 79% of participants at 6 months and 92% at 18 months; although a higher percentage of respondents endorsed the correct response at 18 months, the McNemar test comparing the change from 6 to 18 months was not significant.

The animal item (okay to play with cow as long as you don't bother it) was answered correctly by 81% at 6 months and 88% at 18 months; the McNemar test for this comparison was not significant.

The power equipment item (power equipment not dangerous if not running) was answered correctly by 80% and 82% at 6 and 18 months respectively; as with the other safety items in this section, the McNemar test comparing the two timepoints was not significant.

- One item was asked in the children's survey only at 1 month: 84% of child respondents indicated their farm has safety rules.

II. Parent responses to questions on child's farm safety knowledge

A. Factor analysis and reliability

- The factor analysis of the 3-item parent-rated child knowledge scale at 6 months, subscale S5, (i.e., increase in knowledge in the areas of tractor, animal and power equipment safety) indicated the items tended to load together, with loadings ranging from 0.7 to 0.8. Cronbach's alpha for this scale was 0.63, which is reasonably high given the limited number of items.

B. Comparisons over time and descriptive summary

- The majority of parents rated the camp as 'very effective' for increasing their child's knowledge at both 1 month and 18 months. This percentage was 64% at both timepoints and the Wilcoxon signed rank test was not significant, indicating the perception of effectiveness did not change over time.

- At 6 months, the parents were asked about how much the child's knowledge increased in specific areas of tractor, animal, and power equipment safety as a result of the camp. Out of a possible total of 12 (with 12 indicating 'a lot' of increase in knowledge) the average score was 9.5 (SD = 1.8); the range of scores was from 5-12 out of a potential range of 3-12. The parents rated the increase in knowledge of tractor safety the highest, followed by power equipment and then animal. The percent who indicated 'a lot' for each of these was 46%, 44%, and 39%, respectively.

III. Child responses to questions on farm safety attitudes

A. Factor analysis and reliability

- The factor analysis of the 9-item safety attitude scale asked at 1 month (subscale S6) indicated the items mostly loaded together, with most of the loadings in the 0.5 to 0.6 range; one item at 0.4. The KR 20 for this scale was 0.67.

- The factor analysis of the 4-item safety attitude scale asked at 6 months (subscale S7) indicated somewhat cohesive items, with factor loadings ranging from 0.4 to 0.7. Cronbach's alpha for this scale was 0.55.

B. Comparisons over time and descriptive summary

- Out of a possible total of 9, the average number of correct items scored in the 9-item attitude scale at 1 month was 8.2 (SD = 1.3).

- Out of a possible total of 12 (with 12 indicating the child felt the each listed activity was 'very dangerous'), the average score on the 4-item attitude scale asked at 6 months was 7.8 (SD = 1.7).

- Two of the safety attitude items were asked at 1, 6 and 18 months (Table 25):

Table 25. Safety Attitude Items Asked Across Time

Item	1-mo	6-mo	18-mo
Safety rules should be followed even if they slow the job down.	Q17	Q30	Q40
Farm safety rules are only important for people who live or work on a farm.	Q23	Q31	Q41

Nearly all respondents agreed safety rules should be followed even if they slowed a job down, and this did not change appreciably over time. The percent of children who agreed with this statement was 93%, 97% and 99% for 1, 6, and 18 months, respectively.

Most respondents (79% at 1 month, 84% at 6 months, and 87% at 18 months) disagreed that farm safety rules are only important for those who live or work on a farm.

- At 6 months, the children were asked how likely it was that they would do something on a dare if they might get hurt. The most prevalent responses were 'not likely' (79%) and 'don't know' (11%). This item was not asked at other timepoints.

IV. Parent responses to questions on farm safety attitudes

A. Descriptive summary and comparison to child rating

- 63% indicated it was 'not likely' their child would do something risky or dangerous on a dare; another 10% of parents indicated they didn't know how their child would react to this type of dare.

- There was a strong association (as evidenced by a significant chi-square test of association) between the child's response to whether they would do something on a dare and the parent's response to this same item.

V. Child responses to questions on intent to practice safe behaviors

A. Factor analysis and reliability

- For the 3-item intent to practice safe behaviors scale asked at 1 month (subscale S8), the factor loading ranged from 0.5 to 0.8; KR 20 for this brief scale was 0.44.

- For the 3-item intent to practice safe behaviors scale asked at 6 months (subscale S9) the factor loading ranged from 0.6 to 0.7; KR 20 for this brief scale was 0.23.

B. Comparisons over time and descriptive summary

- At 1 month, 81% of respondents answered all three of the 'intent to practice safe behaviors' items correctly. The average score, out of a possible total of 3, was 2.8 (SD = 0.6).

- At 6 months, 51% of respondents answered all three of the 'intent to practice safe behaviors' items correctly (note that these items were different than those asked at 1 month, so no comparison is possible). The average score, again out of a possible total of 3, was 2.4 (SD = 0.8).

- One intention item was asked at 6 and 18 months: the percent who agreed that they let adults know when they don't know how to do a farm task was 91% and 96% for these two timepoints, respectively. There was no difference in the percent who agreed between 6 and 18 months, as demonstrated by a nonsignificant McNemar test.

- One item was asked during the pre- and posttest: 77% at pretest and 87% at posttest responded correctly to the item about asking their Dad a question while he is working on a combine (Question 33: You see your Dad is off the combine and working on it. You want to know why. What should you do? a. Go to where he is standing beside the combine, b. Stay where you are and ask him at supper, or c. Yell at him then run across the field to him). The McNemar test is significant in this case, demonstrating a significant increase in the prevalence of correct responses from pre- to posttest.

VI. Parent responses to questions on intent to practice safe behaviors

A. Descriptive analysis

- When asked at 6 months, 87% of parents either disagreed or strongly disagreed that their child takes more risks when doing farm tasks because of camp. The item was only asked during this survey, so no longitudinal comparison is possible.

- When asked during the 18 month survey, 89% of parents either agreed or strongly agreed that hearing about farm safety from camp makes the child more likely to follow farm safety rules. The item was only asked during this survey, so no longitudinal comparison is possible.

Comparison of Knowledge Scores by Camp

Changes in safety knowledge scores were also analyzed by camp to determine if there were any significant differences by site or demographic variables within the sites. There was no difference among the sites in composition by gender; however, the campers did vary somewhat across sites by age, with averages ranging from 9.1 (Camp F) to 10.8 (Camp A). There were significant differences ($p < .01$) among the camps by farm exposure. The most striking difference was in the Camp F site where 34% did not live on, work on, or visit farms; at other sites, the percentage of children not exposed to farms in any of these ways was more on the order of 4-20%.

There were significant differences in increase in total knowledge score among camps. The greatest gain was in Camp F (5.4 points, on average) and the least in Camp A (3.2 points). The average increase for the other four camps ranged from 3.3 to 3.8. These findings are not surprising given that Camp F had significantly more children who did not live on, work on, or visit farms compared to other camps.

These findings are similar to those found in the separate contents areas. Average increases for tractor, animal and power equipment safety were greater for Camp F than other camps.

Qualitative Report for H_2: Children's Attitude – Perception of Danger

Children's actual reported behavior (as opposed to intent) was reported under hypothesis 1. We did not assess qualitatively either knowledge or intent to practice safe behavior. For hypothesis 2, "danger" was used as a proxy for attitude with children.

To further explore the children's attitudes toward the dangers on farms, we asked the children what farm tasks or activities they and their parents perform that they consider the most dangerous. Coding of data was completed by two research assistants using mutually agreed-upon categories. Nearly 40% of the children at both the 1 and 18-month surveys responded with valid answers to the posed questions (Table 26). Multiple answers supplied by children were treated separately. As a result, 175 responses were coded for children's tasks and 122 were coded for parents' farm work the children consider dangerous. Initial coding agreement exceeded 90% for both questions.

Table 26. Qualitative Responses Relative to Children's Safety Attitudes

Survey	Question	Children Responded	Total Surveys Completed	% Responded	Coded Responses
1-mo Q38	Of all the farm work you do, which one do you think is the most dangerous?	172	438	39.27%	175
18-mo Q3	What do you see your parents doing on the farm that might cause them to get hurt?	113	283	39.93%	122

Children perceived animal-related tasks as the most dangerous farm chore they performed. Thirty-two percent indicated feeding animals (chickens, roosters, pigs, cows, and horses) to be the most dangerous. Another 17% reported grooming, milking, or herding to be the most unsafe. Working around tractors, operating farm equipment, fencing, cleaning the barn, and working in hay were also cited by the children as farm activities they consider dangerous. Figure 15 reflects this distribution.

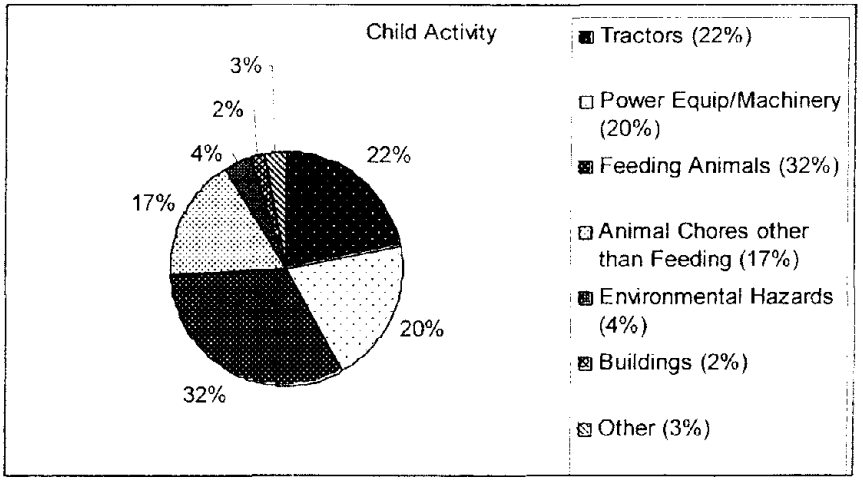


Figure 15. Children's farm activities considered dangerous by children

While children perceived animal-related tasks as the most dangerous for themselves, 30% considered tractor-related activities the most dangerous for their parents (Figure 16). These activities included driving the tractor too fast, not having a ROPS, and having an extra rider on the tractor. Followed closely by the tractor concerns were concerns for parents working around power equipment and machinery (23%). Not wearing the proper clothing (e.g., loose clothing around machinery, sandals when mowing) or protective gear (safety glasses, helmets, seat belts,

earplugs) were also perceived by the children as things they see their parents doing that might cause them to get hurt.

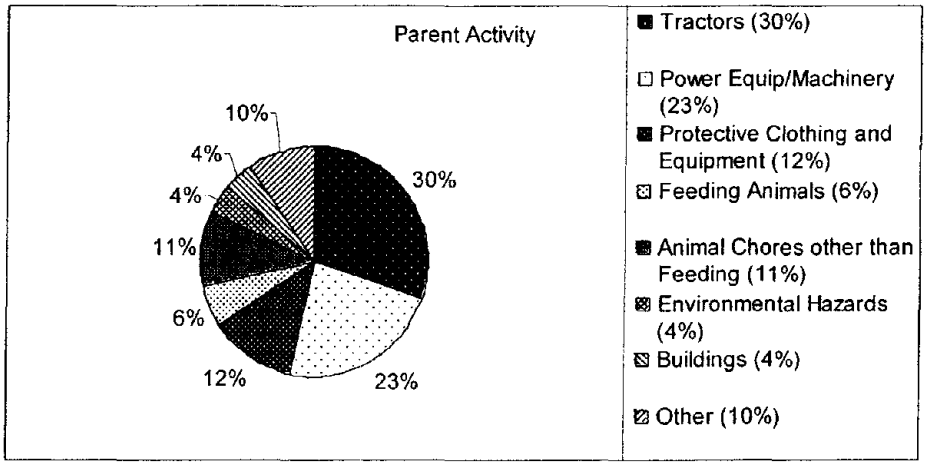


Figure 16. Parent farm activities considered dangerous by children

It is reasonable that children would rate animal-related chores as most dangerous for them since such tasks are generally the first ones assigned to children. Parents may perceive these chores as less risky, yet animals can pose as much, if not greater, danger as machinery (Myers and Hendricks, 2001). It was interesting to note that children identified failure to wear appropriate clothing and protective equipment as a risk for injury to their parents but did not mention it for themselves. Figure 17 compares children's reports of dangerous farm activities between what children do and what their parents do.

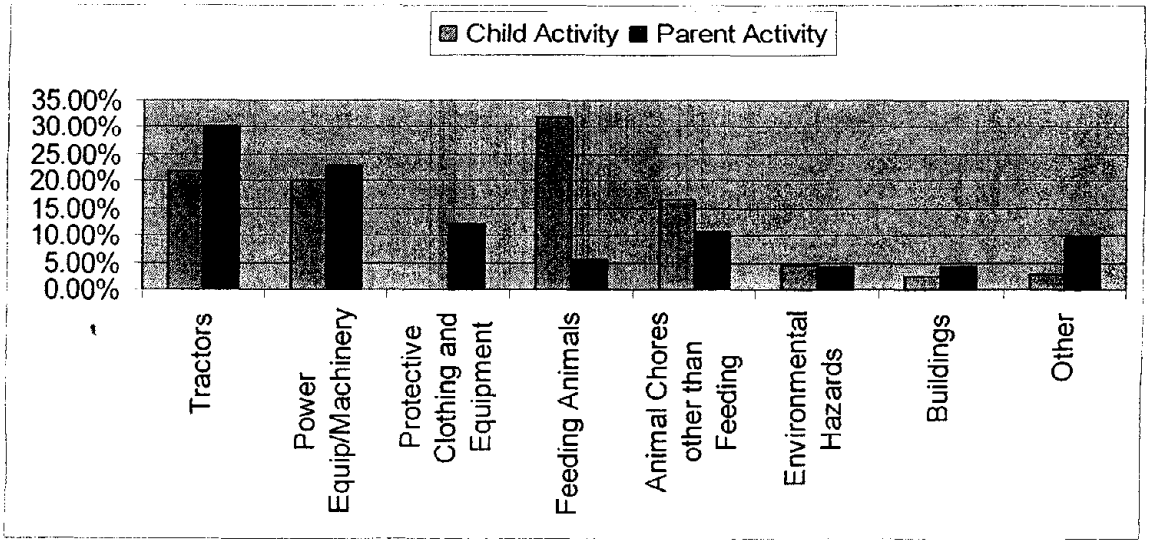


Figure 17. Comparison of dangerous activities reported by children

Summary for H2 Qualitative Analyses

The results of the qualitative analysis support that children recognize risks in the work performed by themselves and others. The ability of the child to correct these risks was not addressed in the qualitative survey items, however, it is an area that should be explored. Children are frequently powerless to effect change, yet other findings in this report suggest children are influential in influencing parent's safety actions on the farm. Research into how children might build on this influence for their own advantage could decrease their risk for injury.

Discussion

Children's knowledge

Children's knowledge of farm safety seemed to be influenced by the camp and this influence seemed to endure somewhat over time. The most significant changes were demonstrated by the change in scores from pretest to posttest. This change endured for the animal and power equipment knowledge for the duration of the study but deteriorated for tractor safety knowledge. This could be due to the low pretest scores on the tractor questions. Children had to capture and retain more new information on tractor safety than on the other two areas. Overall, the knowledge gained at the camp decreased slightly by the 18 month measurement, but was still significantly improved compared to baseline. These results suggest that there is a long term residual effect of the camps but that a "booster" might be indicated in order to maintain the knowledge exhibited at the immediate post-camp time. In order to not overly sensitize the children to the survey questions, we elected to ask parent's about their children's knowledge gains in the six month survey. Parental perception of their child's knowledge gain from camp affirmed the child's responses, and parent's correctly noted the order of gain we observed from the child's responses. Given the difficulty in developing and administering reliable and valid survey questions to children, it may be that parents can serve as proxies on some measures.

Safety attitudes

Children's safety attitude was remarkably positive although their perception of dangerous farm practices tended to be lower than expected. They seemed to grasp the importance of safety and this attitude persisted over time as evidenced. Agreement between parents and children regarding the child's risk taking decision provided support again that the parent may be a trusted proxy.

Intent to practice safety behaviors

The items used to test intent to practice safety behaviors should not be interpreted to be either reliable or valid given the low loadings. The findings are presented to allow the reader to assess this first attempt at testing this concept with young children. From a developmental perspective, children of this age have a much more concrete, present time orientation and do not possess the ability to think in the abstract fashion required for forecasting their behavior in the future (Strausburger et al, 1991). Further work needs to be done to develop instruments that are reliable for testing intent to practice safe behaviors.

H_3: Among children who attend farm safety day camps, those who are not members of farm households will demonstrate a greater increase in knowledge about farm safety than will farm children.

Only quantitative analyses were conducted for this hypothesis. Data from the pre- and posttests completed by the children attending the farm safety day camps were used for the initial analysis. Repeated measures model 1, wherein farm children were defined as working and/or living on a farm, was used for purposes of the pre/post comparisons of knowledge scores.

Quantitative Report for Hypothesis 3 – Increase in Farm Safety Knowledge

Sample

The baseline sample consists of 1233 children who attended day camps at 6 locations and participated in at least one wave of data collection. Of these, 545 (44%) lived and/or worked on a farm, while the remainder either visited farms or were never on farms.

Item coding and subscale creation for farm safety knowledge items

Four of the multi-item subscales created for data analyses of hypotheses 2 were also used for hypothesis 3 (Table 27).

Table 27. Subscales for Hypothesis 3 Analyses

Subscale	Description	# Items
S1	Child tractor knowledge scores	4
S2	Child animal knowledge scores	6
S3	Child power equipment knowledge scores	6
S4	Child summary knowledge scores (S1+S2+S3)	16

Knowledge scores (based on child responses) were formed for each of the content areas of tractor, animal and power equipment safety; each score indicated the total number of correct items within each content area. The tractor score was based on 4 items, while the animal and power equipment scores were each made up of 6 items; a total score, ranging from a possible 0-16 points, was formed by summing the total number of correct responses to the tractor, animal and power equipment safety items. These knowledge items (Table 28) were asked of the children at both pretest, posttest, and 18-months. However, for purposes of these analyses, only comparisons between the pre- and posttest knowledge scores were examined since non-farm children did not participate in the 18 month survey.

Table 28. Children's Farm Safety Knowledge Items

Subscale S1: Tractor Safety Knowledge
It's okay to have an extra rider on a tractor if the tractor has an enclosed cab.
You should use a seatbelt if your tractor has a rollover protective structure.
Dad's lap is a safe place to ride on a tractor.
Which would be the safest way to travel from one end of the field to the other? As a rider in the tractor cab; on the fender of a tractor; walking along beside the tractor; none of these ways are safe
Subscale S2: Animal Safety Knowledge
You should wear hearing protection when working with pigs inside a building.
Farm animals can become scared when someone walks up behind them.
I can outrun a cow if it starts to chase me.
Female animals can be more dangerous when they have babies.
When working around animals it is best to: move quickly (run); wave your arms and shout; be sure the animal can see you; don't know
When feeding livestock which is the safest? Keep a fence between you and the animals; shout and yell at the animals to keep them away; run in the pen, leave the feed, and run back out; don't know
Subscale S3: Power Equipment Safety Knowledge
It is okay if the safety shield is not on power equipment if it saves time or makes the job go easier.
A safety shield makes it safe to step over a power take-off.
It's better to wear loose clothing when doing farm work, especially around power take offs (PTO).
It is better to leave equipment running when you work on it.
It is okay to climb over equipment if it is not running.
Which of the following is important when working around farm equipment? wear a hat; pull long hair back; wear dark clothing; don't know

Data Analysis

The comparison between farm and nonfarm children was made using the two-sample t-test. For each of the content areas (tractor, animal, power equipment, and total 16-item scale), the increase in knowledge was determined by subtracting the pretest score from the corresponding posttest score. A second series of comparisons were considered based on analysis of covariance (ANCOVA) for each of these four knowledge measures; these models used the pretest score as a covariate and determined whether there was a difference between children who lived and/or worked on a farm and those who did not at the posttest, after taking into account the pretest score. An alpha level of .01 was used throughout to control the overall Type I error rate in light of multiple comparisons.

Results

I. Child responses to questions on farm safety knowledge

A. Comparison over time between the farm and nonfarm groups

- The increase in knowledge of tractor safety (a 4-item scale) did not differ between farm and nonfarm children (see Figure 18); both groups increased their knowledge score in this content area by an average of a little over 1 point. The results of the ANCOVA were different: after controlling for pretest tractor safety score, the children who only visited or were never on farms had an average score of 3.3 at posttest compared to a mean adjusted-for-pretest score for the children who lived and/or worked on farms; this comparison was significant at the .01 level. The posttest means, adjusted for the pretest scores, were 3.2 and 3.3 for the farm and nonfarm groups, respectively.

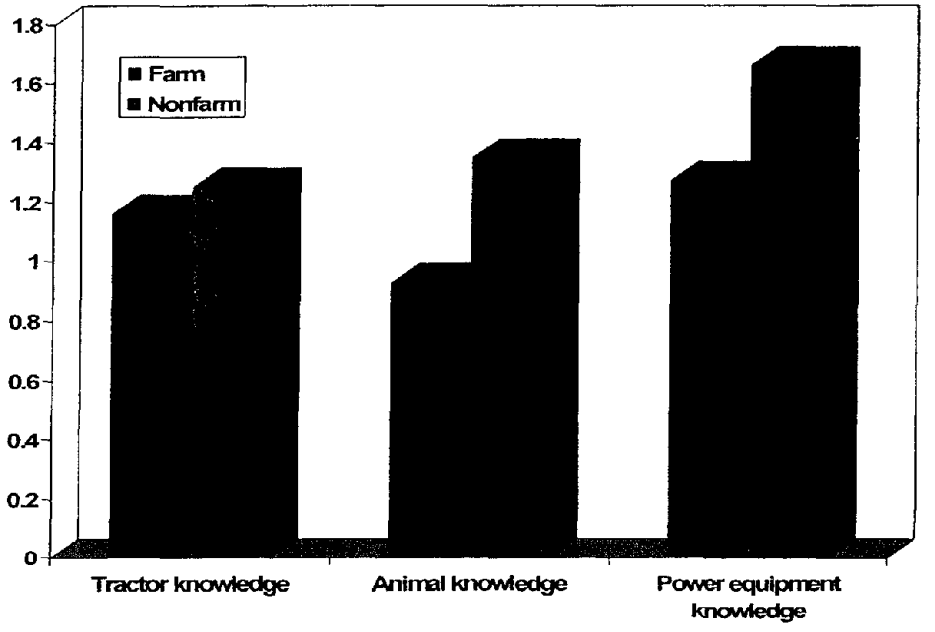


Figure 18. Average increase in knowledge scores between pre- and posttest by farm status (N = 1233)

- The increase in knowledge of animal safety was significantly higher for nonfarm children, compared with those who live and/or work on farms (the average change scores are 1.35 and 0.93 for those two groups, respectively; see Figure 18). The results of the ANCOVA indicated that once the pretest animal safety score was controlled for, there were no differences in the two farm status groups (live/work on farm vs. visit/never on farms) during the posttest. The posttest means, adjusted for the pretest scores, were 5.1 for both the farm and nonfarm groups.

- The increase in knowledge of power equipment safety was significantly higher for nonfarm children (average change was 1.66 in this group), compared with farm children (average change for farm children was 1.27); (see Figure 18). Similar to the above model on animal safety, after controlling for the pretest power equipment safety score, there was not a difference by farm status in posttest scores. The posttest means, adjusted for the pretest scores, were 4.7 for both the farm and nonfarm groups.

- The increase in total knowledge score was significantly higher for nonfarm children (mean increase = 4.26), compared with their counterparts on farms (mean increase = 3.37). The ANCOVA model with posttest total score as the outcome and pretest total score as the adjusting variable indicated no group difference between farm and nonfarm children on this outcome. The posttest means, adjusted for the pretest scores, were 12.9 and 13.1 for the farm and nonfarm groups, respectively.

With regard to the apparent discrepancy between the t-test of difference scores and ANCOVA models, the nonfarm children started with a lower knowledge base in all content areas with the exception of tractor safety – here both groups had about the same level of knowledge at pretest. By the posttest, the largest difference between the two groups of children was in the area of tractor safety, with nonfarm children having higher scores, on average, than those living or working on farms. In short, the differences in average score increase between farm and nonfarm children that are detected for animal, power equipment, and total score are due to the greater degree of knowledge at pretest among farm children (and thus the smaller average increase in knowledge scores for animal, power equipment, and total score for this group). When the analysis adjusts for pretest scores (i.e., the ANCOVA models), the difference between farm and nonfarm children vanishes. For tractor safety the results are slightly different: the farm and nonfarm children were similar at baseline, but the nonfarm children performed slightly better during the posttest (the impact of novelty, perhaps), so that when the pretest scores are adjusted, this slight difference at the posttest is significant. Table 29 summarizes the findings for these analyses, including the cell means and test statistics.

Table 29. Knowledge Scores by Farm Status

		Farm (n=545)		Nonfarm (n=687)		Test statistic	
	Possible Points	Pre	Post	Pre	Post	t (comparing average increase between groups)	ANCOVA F (for group)
Tractor	4	2.0	3.2	2.1	3.3	1.4	10.0*
Animal	6	4.2	5.2	3.7	5.1	5.7**	0.7
Power Equipment	6	3.5	4.8	2.9	4.6	4.4**	<0.1
Total Score	16	9.7	13.1	8.7	13.0	5.6**	3.2

* $p < .01$; ** $p < .0001$

Comparisons Across Camp Sites

Changes in safety knowledge scores were also analyzed by camp to determine if there were any significant differences by site or demographic variables within the sites. There was no difference among the sites in composition by gender; however, the campers did vary somewhat across sites by age, with averages ranging from 9.1 (Camp F) to 10.8 (Camp A). There were significant differences ($p < .01$) among the camps by farm exposure. The most striking difference was in the Camp F site where 34% did not live on, work on, or visit farms; at other sites, the percentage of children not exposed to farms in any of these ways was more on the order of 4-20%.

There were significant differences in increase in total knowledge score among camps. The greatest gain was in Camp F (5.4 points, on average) and the least in Camp A (3.2 points). The average increase for the other four camps ranged from 3.3 to 3.8. These findings are not surprising given that Camp F had significantly more children who did not live on, work on, or visit farms compared to other camps.

These findings are similar to those found in the separate contents areas. As shown in Table 30, average increases for tractor, animal and power equipment safety were greater for Camp F than other camps.

Table 30. Average Increases from Pretest to Posttest by Camp and Content Area.

Camp	Increase in tractor safety	Increase in animal safety	Increase in power equipment safety	Increase in total safety score
Camp A	0.9	1.3	1.0	3.2
Camp B	1.1	0.8	1.4	3.3
Camp C	1.3	1.1	1.4	3.8
Camp D	1.0	.06	1.0	2.6
Camp E	1.1	0.9	1.6	3.5
Camp F	1.5	1.8	2.0	5.4

H3 Contamination

If the child received additional farm safety instruction, survey results could be affected. To assess the exposure to additional instruction about tractors, machinery or animals, children were asked at one and six months if they had received any such instruction. At one month 31% reported some additional instruction; however, this was predominantly from parents and school. This was expected as parents and children discussed the day camp experiences and schools planned to have a follow-up session on safety immediately following the camp. The six month query noted a drop in instruction, with only 20% reporting any additional instruction. No data on the source or extent of that instruction was collected. Since the farm safety day camps in our study locations are held only annually, are school-based and grade dependent, it adds confidence to the data that farm safety knowledge was not affected to any great extent by outside influences

in the first year following the baseline measures. This confidence is bolstered by the records of the CCLs that indicate few farm safety events in their communities focused on children other than day camps.

H_4: Instructional methods that are appropriate for the children's age, developmental and cognitive levels, and reading level will be more effective in increasing safety knowledge, improving attitudes toward farm safety, and increasing intent to practice safe farm behaviors than instructional methods that are not focused appropriately.

Due to overwhelming evidence that instructional methods were focused appropriately, no quantitative comparisons were made. Instead, detailed description is provided to afford the reader insight into the characteristics, preparation, and delivery of these methods and the instructors who participated in the six camps. This section consists of analyses of instructor survey data; video analysis of the content and quality of instructional sessions on tractor, animal, and powered equipment safety; and goodie (resource) bag analysis. Instructor survey analysis and qualitative data from the children regarding the use of goodie bag materials were led by the principal investigator. Two instructional design experts, Drs. Cole and Mazur, conducted the video and goodie bag analyses. Their complete report is provided in Appendix D. The main findings are summarized below. The discussion is divided into three parts: characteristics of the instructors, evaluation of the instructional sessions, and the evaluation of materials in the resource bags (commonly referred to as "goodie bags") distributed to the children at camp. Two articles have been published from these analyses (Mazur, Cole, Reed, & Claunch, 2005; Reed, Claunch, Cole, & Mazur, in press; expected published date of June 2006). A copy of the 2005 article is included in Appendix E.

1) Instructor Survey Data

Despite the fact that farm safety day camps have been held over the last decade and continue to grow in numbers, very little is known about the people who provide the heart of the program: the instructors. A two-page survey instrument was developed by the research team to collect data from the instructors about their reasons for participating in the camp, experience teaching children, preparation for the instructional session, and self-assessments of their instructional techniques. A copy of this two-page questionnaire is found in Appendix A.3. Surveys were completed at the conclusion of the instructional sessions. Data were entered into a computer program and analyzed using statistical software SAS version 8.12. Missing data were set to "missing," rather than imputed. Sixty-nine instructors and instructor assistants (FFA members) completed these forms.

The majority of instructors in the study lived and/or worked on farms and had extensive farm work experience (Table 31). While nearly all of the instructors knew of someone who had experienced a severe farm-related injury, a quarter had sustained such an injury themselves.

Table 31. Instructor Demographics (n = 69)

Characteristic	Frequency	Percentage
Live and/or work on farm	52	75%
Extensive farm work experience	55	80%
Experienced a severe farm-related injury	17	25%
Knew someone who had severe farm-related injury	63	91%

Instructors' knowledge of farm work, hazards associated with such work, and repercussions of unsafe behavior led these individuals to share with children the importance of taking precautions and following safety rules. Over half of the instructors cited the importance of farm safety as their primary reason for participating in the day camps (Figure 19); however, 20% (n = 13) of the instructors indicated they participated because it was part of their paid job or they felt pressured to participate. Other reasons cited for participating in the camps included "like to work with children" (10, 16%), "personal experience with farm injury" (2, 3%), and "other" (6, 10%).

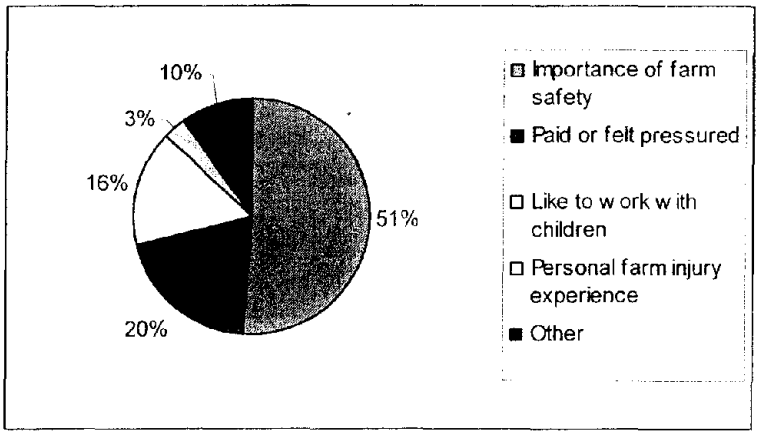


Figure 19. Instructors' reasons for participating in camp

Experience with Presentations

The presentation experience of instructors ranged from little or no experience (20, 31%) to extensive experience (19, 30%). Instructors were as likely to have done their safety presentation fewer than 6 times compared to six or more times prior to this camp (Table 32). Most instructors reported "some" training in children's educational techniques, although 13% (n = 9) reported "no training" and 23% (n = 16) reported "a lot" (Table 33). Nearly all instructors indicated other community places where they provided instruction to children. These places included schools, churches, and group organizations. Only three instructors reported no other instruction to children (Table 34). A third of the instructors reported they had conducted presentations in three

or more different settings. The average prior number of settings in which instructors had taught was 1.93.

Table 32. Instructor Experience with Presentation (n = 64)

Made Presentation	Frequency	Percentage
0-1 time	20	31%
2-5 times	12	19%
6-10 times	13	20%
> 10 times	19	30%

Table 33. Extent of Training in Children's Educational Techniques (n = 69)

Amount of Training	Frequency	Percentage
None	9	13%
Some	44	64%
A lot	16	23%

Table 34. Other Places Instructors Teach Children (n = 69)

Place	Frequency	Percentage
Schools	46	67%
4-H	28	41%
Church	26	38%
Boy/Girl Scouts	12	17%
Other	21	30%
None	3	4%

* multiple answers allowed

Instructors used a variety of sources to prepare their presentations (Table 35). It was not surprising that instructors drew extensively on their own farm experience. The majority of instructors cited "personal experience" as a primary source of information for their presentation topics. Print materials, especially short reference materials like brochures, were used by many of the instructors to prepare their instruction. Internet resource use was less common. Agricultural organizations were tapped frequently. "People-based" information sources, such as agricultural safety specialists or commercial farm equipment dealers, were used infrequently. Overall, instructors relied on multiple sources of information for their topic. The number of sources reported ranged from zero to 8, with an average of 2.64.

Table 35. Source of Topic Information (n = 69)

Source	Frequency	Percentage
Personal experience	41	59%
Brochures/leaflets	31	45%
Agriculture organizations	26	38%
Internet	20	29%
Research articles	18	26%
Farm magazine	17	25%
Agriculture safety specialists	14	20%
Commercial dealers	6	9%
Other	9	13%

Instructors were asked to rate the importance of features of the materials they distributed at the camp. They rated each feature as "not important", "somewhat important", or "very important". Slightly less than half (33, 48%) of the instructors reported that they distributed printed materials to the children at the day camps, typically at the end of the day. For those who distributed materials, the message the material contained was the feature cited by the most number of instructors as being very important in selecting the materials (Table 36). Other features considered very important were reading level, pictures, and color. Price was reported as less important. Only one instructor who was videotaped was observed handing materials to children during their session. CCLs reported that some materials were placed in campers' resource (goodie) bags prior to the camp.

Table 36. Importance of Features in Printed Materials

Feature	n	Not Important	Somewhat Important	Very Important
Message	31	---	10% (3)	90% (28)
Reading level	30	16. 7% (5)	27% (8)	57% (17)
Pictures	31	9.7% (3)	35% (11)	55% (17)
Color	31	19.4% (6)	32% (10)	48% (15)
Price	30	46. 7% (14)	17% (5)	37% (11)

Thirty-one instructors/aids indicated they had made the presentation they were using at the farm safety day camp 6 or more times. Nearly two-thirds of these individuals were adults but 12 were high school agricultural (FFA) students. Of the 31 instructors who had presented 6 or more times, 35% (n = 11) had "never" or "rarely" received any written feedback on their performance as a station instructor. Less than half (13, 42%) reported they "sometimes" received feedback. Only 23% (n = 7) noted they "often" received feedback. The content and quality of the feedback

was not assessed. For the entire sample, the extent of debriefing and follow up with instructors by the chapters was very limited. Most chapters sent a thank you letter to each instructor following the camp, but these letters did not provide evaluation of the camp or instruction. Chapter meetings were conducted post-camp, but unless instructors were chapter members, they were not present. Thus, many instructors had no opportunity to hear the appropriate feedback through this mechanism.

2) Instructional Sessions

Consistent with the goals of the study, the instruction analyses focused only on the three topics of interest: tractor, powered machinery, and animal safety. The instructional sessions that dealt with tractor, powered equipment, and animal safety were videotaped using a SONY handycam with wind microphone at each of the camp locations. All videotaping was done by members of the research team. These members also completed a hard copy checklist to verify that key components were included in session instructions. The hard copy also provided back-up data in case of camera failure and an accurate count of children for the session. All instructors who presented on tractor, powered equipment, and animal sessions were videoed. Two simultaneous videotapes were made of each session. One camera focused on the instructor and his or her activities and dialog. The second camera focused on the students and recorded their dialog and activities. The instructional design analysts observed all 42 videotapes, viewing sections of each tape as many times as necessary. They independently recorded notes on a standard form and then met to compare thoughts. Disagreements were resolved by replaying sections of tapes. The design experts also discussed the teaching methods used by the instructors and the degree of student deportment, interest, attention, engagement, and participation in the session.

The videotape analyses revealed that most instructors presented their topics through instructor-controlled, didactic, fast-paced question and answer sessions. In most cases the instructors' descriptions of hazards included the use of physical objects such as actual dogs, horses, and cattle (animal safety) or actual machinery or scale models of machinery such as tractors and PTO drive lines (tractor and power equipment safety). The instructors usually stated safety rules in conjunction with reference to physical objects. Instructors also used short stories and descriptions of injury events to describe farm hazards and the importance of safety rules for preventing injuries. Most instructors did not encourage students to make verbal statement, though many students repeatedly raised and waved their hands hoping to be acknowledged.

FFA youth who served as instructors usually adopted a team teaching approach. Their presentations were well rehearsed and moved smoothly from one presenter to the next. The FFA student instructors were more prone to elicit and incorporate questions, observations, and short stories from the children than were the majority of the adult instructors.

Across all sessions observed, students paid close attention to the instructor and remained on task even when loud noise and distracting activities from other nearby stations or other sources were close by. There was virtually no disruptive behavior by students in any of the videotaped sessions.

The videotapes of the sessions made it clear that instructors were rushed. Despite this pressure, in all but one or two cases, instructors were effective in presenting their materials in ways that maintained student interest and attention. Yet it was also clear that many and perhaps most students wanted more opportunity to be actively engaged, to make their comments and observations, and to ask their questions as part of the instructional activity.

3) Goodie Bags (resource bags)

Goodie bags (also known as resource bags) are tote bags distributed to the children who attend the camp. Camp leaders, instructors, and other volunteers provide print media and other tokens (pencils, magnets, etc) for the bag. Usually, the camper is given the bag at the end of the camp day with instructions to share the content with family members. The intent is to reinforce safety messages to the child and to provide safety content to adults living in the household. The research team requested that item "It Can't Happen on My Farm" be added to each bag to provide at least one item common across all camps. This item was designed by the research team and used to quantitatively assess if the child remembered its content. It contained puzzles, a list of farm safety websites, search and find pictures, and a unique rhyming item that the children were to complete. Recall of the rhyming item was used in post-camp surveys to test the effectiveness of this item.

The total number of handouts varied widely across camps and only 28% of the items collected related to the three targeted safety topics. Detailed analyses of the reading difficulty and instructional properties of the goodie bag materials containing text materials and graphic messages about tractor, machinery, or animal safety were conducted. Text materials and graphic materials with text messages were separated from the other items. For short items the full text passages and text captions that accompanied graphic illustrations were typed verbatim into a Microsoft Word file. For large documents multiple samples of the text passages and graphic captions were randomly selected and typed verbatim. In each case the reading difficulty level of the text materials was analyzed using the Microsoft Word spelling and grammar checker program. The analyses provided two estimates of reading difficulty and the percent of passive voice sentences for each passage. The two standard readability-scoring methods used were the Flesch Reading Ease and the Flesch-Kincaid Grade Level methods.

Each selected item was also analyzed in terms of its instructional characteristics and its utility for teaching children the intended farm safety attitudes, knowledge, and behaviors. This logical analysis was facilitated by the videotape analyses which provided information about how frequently and in what ways the instructor made use of, referred to, or addressed concepts included in the printed materials.

Inspection of the materials revealed that many documents included in the goodie bags were written targeted for adults although they were not packaged for adults to retrieve separately. Few of these adult-oriented materials would be effective for teaching children without adult assistance in selecting, simplifying, and presenting the material to children in a way matched to their interests and capabilities. When such items are simply one of 30 to 50 items placed in a child's goodie bag and never incorporated into instructors' awareness or training, or even mentioned to

children and their parents, it is questionable if the materials will reach the child's home. If they do reach the home it is questionable if the materials will be discussed with the child by his or her parents. Thus, it is likely that the materials will have little impact upon the child.

Goodie bags frequently contained materials and objects unrelated to or only marginally related to farm safety. These items included such things as pencils, pens, erasers, rulers and an occasional product advertisement or election campaign refrigerator magnet or button. However, the goodie bags often included excellent and well-designed farm safety education print and graphic materials. These materials have great potential for use in farm safety day camps and in other settings including public schools. If used as the designers intended, the materials and activities can become powerful tools for teaching hazard recognition and proactive safety attitudes, knowledge, and behavior to children and adults to reduce the risk of injury events.

Most of the instructors included in their presentations the concepts addressed in the tractor, powered equipment, and animal safety print materials in the goodie bags. Yet, virtually none of the instructors were observed either using or referring to the goodie bag materials relevant to their topics.

Child Surveys

A limited attempt was made to assess actual usage of goodie bag material by the child. Four survey questions were included in the 1-month survey to assist with this assessment (Table 37).

Table 37. Child Survey Questions Related To Use Of Goodie Bag Material

1-Month Survey Questions
Finish as many of the safety rules below as you can: If it dangles, it _____ One seat, one _____ Where animals play, stay _____ Don't play where danger _____
Have you or your parents used any of the things in the goodie bag you received at camp?
If yes, what items have you used?
How did you use these items?

The first question utilized the item "It Can't Happen on My Farm". Four short safety messages were purposely incorporated in the booklet to provide one means of assessing if children read what was in their goodie bag. A high percentage of children correctly completed the rule for animals but fewer were able to correctly respond to the remaining questions (Table 38).

Table 38. Percent of Children Correctly Completing Safety Rules (N = 438)

Safety Rule	Children Correct	%
If it dangles, it (tangles).	86	**19.63%**
One seat, one (rider).	93	**21.23%**
Where animals play, stay (away).	344	**78.54%**
Don't play where danger (lays).	22	**5.02%**

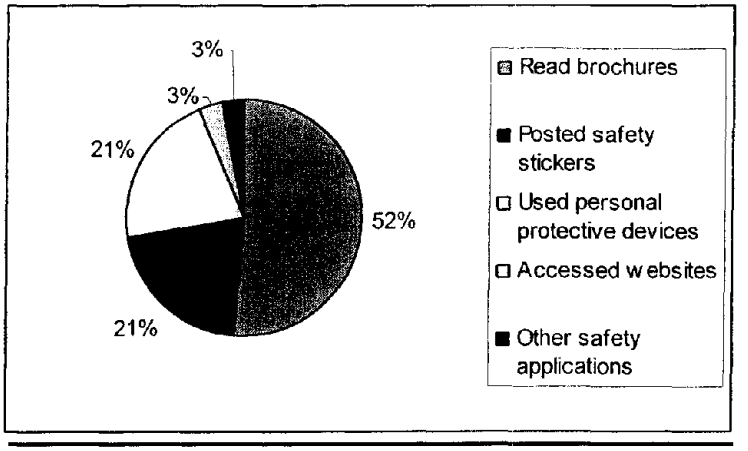
The intent of the booklet was to enlist safety messages in the goodie bag that would only be available by accessing the goodie bag. None of the instructors were made aware of the selected safety messages. However, some of the instructors used similar messages that may have been a factor in the child giving a correct response. Whether the correct responses stemmed from actually reading the booklet, from something they heard at the farm safety day camp, or merely lucky guesses prevents any conclusion that materials in the goodie bag were actually read by the children.

Direct questions to children about the use of materials in the goodie bags provide evidence that resources were used and used appropriately. Over half (64%) of the children completing the 1-month survey (278/438) indicated they or their parents had used at least one thing in the goodie bag they received at camp. Children were also asked to describe what items were used and how they were used. Each item cited was considered separately resulting in 465 different coded responses. Sixty percent of the responses (277/465) did not make any reference to safety applications for the items used. This consisted of items/reasons such as "pencils to write", "rulers to measure", "coloring books to color" and the general use of stickers. Band-aids were also grouped in this category because uses cited were generic (e.g. used on cut) and predictable.

The remaining 188 coded responses were grouped into 5 specific categories. Figure 20 reflects the number of responses within each category.

The largest percentage of children reported reading the written materials that were in the goodie bags. Within this group, 14 children indicated the materials were read to learn or discuss safety issues; 8 stipulated they had talked about or shared the information with an adult; and 2 cited specific actions they had taken because of what they had read (use of bike helmet and ATV safety gear). The remaining 72 children merely stated they had read the material.

Stickers bearing safety messages were also appropriately used by the children. These stickers included emergency numbers, poison control centers, and danger awareness messages. Children reported posting the stickers near the phone, on the refrigerator, on machinery and dangerous places on the farm such as in the barn or near chemicals.



Category	Coded Responses	%
Read brochures	96	51.06%
Posted safety stickers	40	21.28%
Used personal protective devices	40	21.28%
Accessed websites	6	3.19%
Other safety applications	6	3.19%
TOTAL	188	100%

Figure 20. Use of goodie bag items as reported by children

The use of earplugs and gloves were listed by over 20% of the children. Most responses within this group (32/40) involved personal usage of earplugs by the children. Circumstances where they used ear plugs included around animals, near loud machinery, on lawn mowers, and during target practice. Three children reported giving the ear plugs to their Dad to use when he was working on the farm or mowing grass.

Six children reported that they or a member of their family accessed farm safety websites. The remaining category "other" included writing farm safety rules with their pencils, doing activities in the farm safety activity books, or just going through the bag with their parents.

These reports reflect the significance of the take-home resources and the consideration that should be placed on deciding what goes in the bag. The goodie bag can serve to reinforce the messages heard at camp and offers a second opportunity for children to "carry" safety messages home.

Hypothesis 4 Summary

Community volunteer instructors who gave of their time and expertise to instruct children in farm safety exhibited remarkable teaching skills and talents even though formal preparation for instructing children was minimal. Personal interest in farm safety and their own farm experience formed the primary basis for their instruction. Very little pre- or post-camp guidance was provided to the instructors. Time constraints and environmental obstacles created further barriers for effective instruction. Despite these challenges the instructors remained on task and in all but a few instances were able to provide appropriate instruction to the children. Children remained attentive, evidence of their interest in the topic and the interaction. The increase in farm safety knowledge supported by previous analyses further supports that instructors and their techniques were effective and appropriate. If the limitations noted in this analysis were alleviated the changes in knowledge, attitude and behaviors of the children might be even greater. This is especially salient for the severe time constraints. Perhaps covering fewer topics in greater depth would enhance the effectiveness of the outcomes. Future research should be conducted that focuses on facilitation of better methods of providing guidance to instructors and a more standardized instruction that incorporates the design of the camp day. Many of the goodie bag contents included well designed instructional materials that could be used in the camp presentations. Inclusion of these items in the goodie bag would then serve as appropriate reinforcement of the instruction. Since instructors gave no indication they knew about the contents of the bags a potentially valuable mechanism to enhance learning was missed.

The goodie bags are ubiquitous at farm safety day camps and the ones in this study contained a plethora of items. While some of the items were appropriate for children, there was also a substantial amount of hard copy designed for adults. The intent of the bag is to facilitate discussion between child and parent after the camp, thus inclusion of some of these materials is meaningful, however, packaging of the contents of the bag should be considered and adult material should be packaged separately from materials intended for the children. Guidance to day camp leaders for bag content should be part of the camp preparation. Instructors should be advised about the content in the bag and encouraged to incorporate the appropriate content in their presentations. A substantial number of children provided evidence that the bag was used as intended and that they used the contents appropriately.

Findings from this analysis can be used by organizations that provide community-based injury prevention programs as a planning tool for selecting instructors and take-home resources that can optimize the experience for children.

H_5: Camp attendance by children will positively influence their parents' attitudes and behavior toward children's farm safety behaviors.

This hypothesis was examined primarily from a descriptive perspective. Because no pre-camp data were collected from the parents the examination of farm safety behavior changes were confined to post camp attitudes and decisions. Changes were tracked both from a cross sectional aspect and across time for selected items to look for trends and consistency. Some queries were framed within the camp context, while other questions were more general in nature. In addition to the quantitative data, narrative data enriched our understanding of parental behaviors about farm safety for children. Data were collected from the parents at 1, 6, 12 and 18 months using a variety of questions. A detailed chart showing the questions and response frequencies across time is provided in Appendix G. A synopsis of the findings is presented in the paragraphs that follow.

In general, the parents reported increases in safety attitudes and behaviors, many of which were linked to their child's participation in camp. The increases in safety behaviors included not only prohibiting their children from certain farm tasks or areas of the farm, but also a slight increase over time in what they allowed their children to do on the farm. This latter result could be due either to an increase in the parent's confidence in their child's ability due to the camp or other instruction, and/or to the fact that the child was physically and developmentally more mature over the course of the follow-up period. Parents reported giving their child both farm task instruction and increased supervision following the day camp.

Attitude

Six months after the day camp most parents (74%) indicated that as a result of the camp they (the parents) had 'a little more' or 'a lot more' knowledge about children's farm safety behaviors. Nearly all parents (92%) disagreed with asking a child to do a job if you are in a hurry and can't wait for someone with experience to do it. At the 18-month period, most parents disagreed with the items suggesting that: 'be careful' is the only necessary rule on a farm; a child who grew up on a farm doesn't need to be told about dangers; and the FS4JK day camps would only have value for someone who lives on a farm.

Attitude toward value of camp (1, 18 months)

Respondents were very supportive of the camp's effect on contributing to their own farm safety knowledge. One month after the camp only 23% felt the camp was not effective at increasing their own knowledge (Table 39). This waned to 5% at the 18 month follow up. While the comparison between time 1 and time 2 is significant, with more positive responses at time 2, it is possible that the 18 month sample consisted of more safety conscious respondents. However, the baseline results are encouraging and are supported by actions reported in other data.

Table 39. Parent Respondents' Attitude Toward Value of Camp

How effective do you feel the camp was for increasing your knowledge of farm safety and safety behavior on the farm?	One month Q8	18 month Q2a
Very effective	98 (24%)	121 (43%)
Somewhat Effective	220 (53%)	146 (52%)
Not effective	99 (23%)	15 (5%)

Attitude toward task assignment

1 month: Over half (59%) of the parents reported that the mental maturity of the child most influenced their decisions about assigning the child a farm task. This was followed by the child's request to do the task (22%), strength/size of the child (14%), lack of other help (4%) and time pressures (1%).

Attitude toward camp instruction and task assignment

A single item question on the18 month survey: "I can give my child additional farm tasks if s/he has been to a farm safety day camp," provided data about attitudes related to the child's exposure to safety messages and task assignment. The respondents leaned toward including instruction as part of their criteria for task assignment. While 27% disagreed (strongly, somewhat) with the statement, 57% of the respondents did agree (strongly, somewhat) that they considered the day camp experience in task assignment. The remainder of the respondents were unsure. The majority (89%) disagreed (strongly/somewhat) that if a child has done a farm task several times the parent would expect the child to be able to do that task without the parent providing step by step instructions.

Behavior

The parents' behavior items indicated that some changes in safety behaviors specific to their children were made as a result of the child's camp participation. About half reported at 12 months they had made safety rules for children (49%) and/or safety rules for children that were specific to work on the farm (46%).

At one month we asked one general question, "Is there anything on the farm you have permitted [prohibited] your child from doing or being around since the farm safety day camp? (Q 16, 14). There was a significant difference between the categories: only 5% increased permission, while 15% increased prohibited activities. Qualitative data supported that the changes were in concert with day camp instruction that the child received. In the follow up surveys the level of detail increased to provide better insight into the nature of changes made in each 6 month interval. This is discussed more fully later in this report.

Because many agricultural exposures are seasonal the most intensive query regarding exposure was placed in the12 month survey by including two questions that assessed the direct impact of the day camp across all seasons of the year. Supportive evidence was revealed in these 2 questions (Q13-14) which asked: Have you made any safety rules or decisions for any of your

children as a result of what the child who attended camp learned at the farm safety day camp? Do these rules apply to the child who attended the camp? Almost half (49%) of the parents answered "yes" to the former and 46% indicated the rule applied to the child who attended the camp. Included in these changes were farm hazard exposure restrictions, increased supervision, and changes in permitted and prohibited farm tasks and proximity to tasks. These changes were sustained at 18 months indicating that parents continued to attend to potential safety risks for their children.

At the 1-month survey, 5% of parents indicated they permitted their child to do additional farm tasks or be in additional areas following the day camp. Parents answered very consistently between 12- and 18-months about the influences on their decision as to what their child does on the farm. Parents indicated feeling most influenced by what the child learned at camp, followed by statistics they had heard about farm injuries (Table 40). After this, knowing of a child who was injured was next most influential, followed by an injury in the family. Parents were least influenced by what other families allowed children to do. Between 6- and 18-months, there was a slight increase in the percentage of parents who said that because of their child's camp experience, they based what they allowed their child to do more on age. Parents also indicated at 18-months that they were more likely to allow their child to do things that were previously not allowed (Table 41) than what they allowed at 12-months (this may be a result of the child being 6 months older). Whether the camp's influence resulted in positive or negative actions and decisions by the parents is analyzed in the qualitative section of hypothesis 5.

Table 40. Events Influencing Parents' Decisions (12-Month, Q5)

Event	Frequency	%	A Little	Some	A Lot
What child learned at camp	276	90.49%	12.03%	42.11%	45.86%
Statistics about farm injury	247	80.98%	16.46%	40.08%	43.46%
Know of child injured	203	67.00%	7.46%	24.38%	68.16%
Had injury in family	177	58.42%	8.67%	23.70%	67.63%
What other families allow	114	37.62%	28.32%	38.05%	33.63%

Table 41. Events Influencing Parents' Decisions (18-month, Q12)

Event	Frequency	%	A Little	Some	A Lot
What child learned at camp	258	91.81%	8.98%	48.57%	42.45%
Statistics about farm injury	223	79.08%	8.92%	50.23%	40.85%
Know of child injured	204	72.86%	5.67%	21.13%	73.20%
Had injury in family	162	57.86%	2.6%	16.23%	81.17%
What other families allow	98	34.88%	25.56%	43.33%	31.11%

At 6 months, 40% of the parents indicated their child had received some instruction on farm work since the day camp. Ninety-five percent of the parents indicated that this instruction was provided by a family member.

Even though the majority of parents reported that the camp influenced their decision to expand their child's work on the farm, they also indicated that they provided more supervision for the child during this work. At 6, 12, and 18 months increased supervision during child farm work was reported by 41%, 27%, and 67% of the parental respondents, respectively. Eighty-two percent of the 18 month participants noted that the camp influenced their decision to provide increased supervision when the child performed farm work. The intensity and frequency of this supervision varied. The majority of parents (75.7%) reported that they usually provided direct supervision; an additional 22.6% indicated they checked periodically on the child during the task. However, these data are counter to the responses on the subsequent (12 month) survey. That slightly different question asked "How often do you supervise your child's farm activities?" Nearly half (47%) reported they "sometimes" supervised the child. Only 46% reported they frequently or always provided supervision, and 6% reported they never supervised their child's farm activities.

Some of the 18-month items contained response options of 'N/A' and 'Refused'; for the purpose of this analysis, these responses have been recoded to missing. This may have impacted the percent of 'Yes' responses since in previous surveys only 'Yes' and 'No' were given as possible answers (thus, some of the 'No' responses in prior surveys may have chosen N/A or refused at 18 months).

Qualitative Report for Hypothesis 5
Parents' Attitudes & Behavior toward Children on Farms

Parents completed several open-ended questions in the post-camp surveys to address the hypothesis that day camps would positively influence parents' attitudes and behavior toward children's farm safety behavior. In an effort to measure the impact of the day camps on the parents, we asked them what changes they had made and why they had made the changes. These analyses provided the means to determine if the changes made by parents following the camps were positive changes that would safeguard the child.

Data from these questions were grouped into four basic categories for analyses: types of changes, reasons for changes, activities prohibited, and activities permitted.

Types of Changes

Parents were asked to describe the types of changes they had made related to farm safety at the 1 and 18-month survey waves. Two coders conducted the analysis using pre-established codes. For each wave, responses were coded as animal-related, machine-related, tractor-related, or other to determine if changes were more concentrated in any specific area. The machine category encompassed all power equipment other than tractors. The machine category also included lawn

mowers and ATVs. The "other" category included responses that did not relate specifically to one of the three focused areas or that only mentioned a general statement to pay more attention to safety. If a parent reported more than one change, each change was coded separately. Initial inter-rater agreement was 100%.

At the 1-month level 50 people (11%) reported changes had been made. Of those, 48 provided descriptions of those changes and 60 responses were coded in the four categories. While the majority of the parents reporting changes were farm families (67%), camps also influenced nonfarm families. The remaining one-third of the parents reporting changes were from families whose children only visit farms (23%) and those who are never on a farm (10%). For the 18-month wave, 56 parents reported changes (20%) with 55 of them (39 live/work on farms; 16 visit farms) providing descriptions of the changes. Sixty-four responses were coded. As illustrated in Figure 21, tractors and machinery were the primary areas in which changes were made.

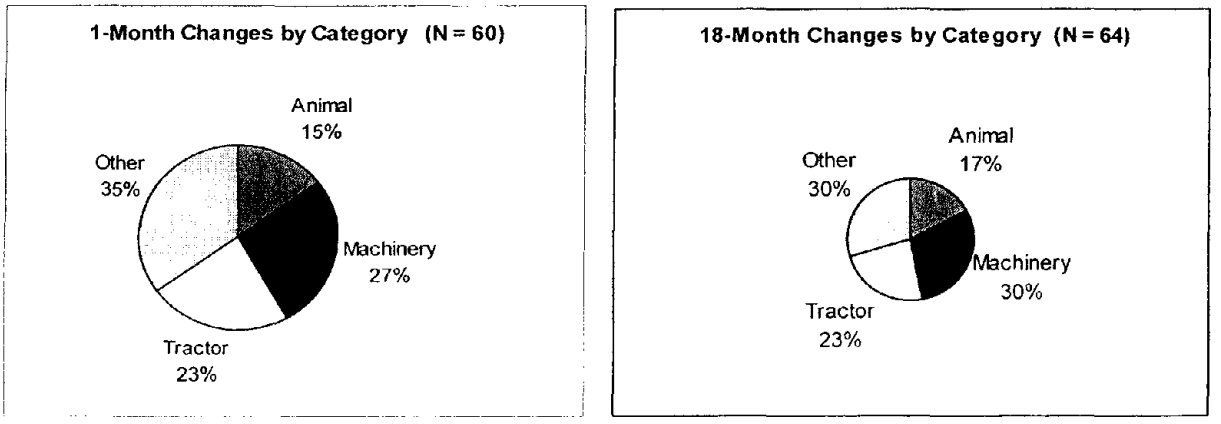


Figure 21. Changes by category (per parent surveys)

Within the broad categories, changes were analyzed by the characteristics of the changes. Initial inter-rater agreement rates for this coding process were 96.7% and 95.59% for the 1 and 18-month surveys, respectively. Overall, the leading changes involved parents instructing their children to stay away from specific things. Within the tractor category, half of the changes was the adoption of a no extra rider rule. This change was also cited in the machinery category for lawn mowers and ATVs. Increased supervision of children on farms, wearing appropriate clothing for farm work, the use of personal protective equipment, and reinforcement of safety rules were other specific changes reported by the parents. Other types of changes included broad responses that did not specifically describe the change such as, "to be extremely careful around machinery" or "being cognizant of inherent dangers" and descriptions that involved areas on the farm other than animals, tractors or machinery. Tables 42 and 43 reflect the parent responses by characteristics of the changes.

Table 42. Characteristics of Changes Reported by Parents (1-Month) N=48 Parents

	Animals	Tractors	Machinery	Other	**Total**
Stay away from specific things	3	2	8	3	**16**
No extra rider		7	2		**9**
Appropriate clothing/protective gear			2	4	**6**
Reinforcement of safety rules	1	1	1	3	**6**
Increased supervision	2			3	**5**
Other types of changes	4	4	5	11	**24**
Total Changes	**10**	**14**	**18**	**24**	**60**

Table 43. Characteristics of Changes Reported by Parents (18-Month) N=55 Parents

	Animals	Tractors	Machinery	Other	**Total**
Stay away from specific things	5	1	5	1	**12**
No extra rider		8	5		**13**
Increased supervision			2	4	**6**
Appropriate clothing/protective gear			3		**3**
Reinforcement of safety rules				2	**2**
Other types of changes	6	6	8	12	**32**
Total Changes	**11**	**15**	**23**	**19**	**68**

In the 12-month survey, changes were listed in a grid check-off rather than the open-ended response used at one month. Parents reported they had adopted new farm safety rules (20.86%), increased supervision for children doing farm work (26.77%), installed roll bars on tractors (3.68%), adopted a "no extra rider" rule related to tractors (23.69%), improved animal confinement areas for safety reasons (17.85%), and repaired or replaced safety shields (17.85%). A more detailed explanation of the reasons parents made these changes can be found beginning on page 92.

Changes in Parents' Behavior

At 6-months post camp parents were asked to describe specific changes they had made in their *own* farm safety behavior. Of the 369 adults who completed the survey, 58 (15.72%) reported they had made changes and 57 of them provided descriptions. These descriptions were independently coded by two research assistants using 6 codes developed by the project manager and principal investigator. Initial inter-rater agreement achieved was 95.16%. Table 44 reflects the changes reported by the parents in their own behavior.

Table 44. Changes in Parents' Behavior (6-month survey)

Code	Description	Frequency	%
S	Specific action described other than PPE	7	11.29%
P	Increased use or improvement of PPE	6	9.68%
C	Increased rules/supervision of children	17	27.42%
G	General statements (more careful, more aware)	28	45.16%
O	Other (less farm work, watch for spiders)	3	4.84%
X	Not relevant (haven't been on farm)	1	1.61%
	TOTALS	**62**	**100.00%**

While 45.16% of the parents only reported general statements about being more careful or more aware of the dangers and safety rules, 53.23% were more descriptive and cited distinct examples of behavior changes. The majority of these changes were directed toward safety rules and supervision for their children. However, parents also reported increased use of personal protective equipment, and specific actions which included using seat belts on tractors, securing work areas and chemicals, distancing self from farm machinery in use, and not riding as extra rider on tractors.

At 12-months post camp 28.22% of the parents reported they had changed their own safety behavior related to safety on the farm. The parents were not asked to describe the changes.

Activities Prohibited by Parents

Changes instituted by parents to restrict their children from dangerous areas and/or activities could reduce children's exposure to farm hazards and subsequently reduce their risk for injury. Therefore, parents' decisions to prohibit their children from performing certain tasks or being around certain places on the farm that were previously allowed were used to measure the positive influence the camps may have had on parents' attitudes and behaviors related to farm safety. Parents were queried about their decisions at the 1, 6, and 12-month survey waves.

1-Month

At 1-month post camp parents were asked to describe the activities they had prohibited their children from doing or being around since the camp. A total of 82 responses from 63 parents (14.38% of the 438 parents completing the 1-month survey) were coded and grouped into the following categories: animals, power equipment/machinery, tractors, and other. Slightly over half (52%) of the parents who reported they had placed restrictions upon their children were parents of children that lived or worked on farms (Table 45). An initial inter-rater agreement of 92.6% was reached in the coding process. The primary prohibited activities reported by the parents involved power equipment and machinery. This was followed by restrictions around

tractors and animals. Other areas parents placed off-limits included ponds, chemicals, and bins/silos.

Table 45. Farm Status Breakdown of Parents Making Restrictions on Farms for Children

Child's Farm Status	**# of Parents**	**% of Parents**
Live or work on farm	33	52.38%
Visit farms	23	36.51%
Never on a farm	7	11.11%
Total	63	100%

Further analysis was conducted to identify the nature or characteristics of the activities that were prohibited. Activities were grouped into four basic characteristics plus an "other" category which yielded 84 total coded responses. The restrictions reported included keeping children away from animals and machinery, requiring child to be with an adult when around certain things, or prohibiting child from performing certain farm tasks. Distancing from the hazard was the major form of restriction placed on the children following the day camps as reflected in Table 46. However, increased supervision and the adoption of no extra rider rules were also positive changes implemented by the parents to protect their children.

Table 46. Restrictions Placed on Children by Parents (1-month)

Restrictions	Animals	Machinery	Tractors	Other	**Total (%)**
Distancing/stay away	7	23	6	3	**39 (46.43%)**
Increased supervision	4	7	3	2	**16 (19.05%)**
Specific tasks prohibited		5	3	2	**10 (11.90%)**
No extra rider		1	10		**11 (13.10%)**
Other				8	**8 (9.52%)**
	11 13.09%	**36 42.86%**	**22 26.19%**	**15 17.86%**	**84 (100%)**

6-Months

At six months post camp parents were asked again what specific farm tasks they prevented the child from doing and places on the farm or people doing farm work they had prohibited their children from being around in the last 6 months. Three separate questions were included on the survey and the parents were asked to supply a description for each item for which they indicated a change had been made. Twenty-seven percent of the parents completing the 6-month survey indicated they had placed at least one restriction upon their child since the last survey related to doing certain farm tasks, being around certain places on the farm, or being around others doing farm work. The responses provided to describe the restrictions were analyzed and coded independently by two research assistants with codes developed by the project manager. Initial

agreement rates exceeded 90% for each of the questions and differences were resolved to reach 100% agreement. If parents reported more than one activity, each activity was coded separately. Table 47 summarizes the number of parents who responded and the number of individual responses coded.

Table 47. Prohibited Activities

	Farm Tasks	**Places**	**People**
Number of parents who prohibited children	33	73	55
% of parents completing survey (N=369)	*8.94%*	*19.78%*	*14.91%*
Number of parents who described prohibited activity	22	51	35
Number of coded responses	25	59	39

The majority of farm tasks prohibited involved machinery, equipment, and tractors (80%). Further analyses of the tasks revealed that parents chose to prohibit their children from riding or being near tractors, augers, lawn mowers, and ATVs. In the animal category, feeding animals was the prohibited task reported by all respondents (Table 48).

Table 48. Farm Tasks Prohibited

Area Impacted	*Frequency*	*%*	*Leading Tasks*
Animals	3	12.0%	Not allowed to feed animals
Machinery/equipment	10	40.0%	Lawn mowers/augers/ATVs off limits
Tractors	10	40.0%	No riding most dominant
Other	2	8.0%	Not task-specific
	25	100%	

A greater number of parents reported they had prohibited their child from being around certain places on the farm. Seventy-three parents (19.78%) indicated this change. Prohibiting children from being around machinery and equipment (28.81%) was cited slightly more than animals (22.03%). Other places prohibited included buildings and structures, ponds, tractors, and fields. Table 49 outlines the restricted areas parents cited.

Table 49. Places Prohibited

Places	*Frequency*	*%*	*Description*
Machinery/equipment	17	28.81%	Auger, PTOs, machinery in general
Animals	13	22.03%	Horses, cows/bulls, sheep, pens
Buildings/structures	10	16.95%	Barns, silos, grain bins, hay lofts
Ponds/water	7	11.86%	
Other	6	10.17%	Burn holes, fields, manure pit, feed lots
Tractors	5	8.48%	
Not relevant	1	1.70%	Not specific
	59	100%	

Fifty-five parents that completed the 6-month survey (14.9%) reported prohibiting their children from being around others doing farm work. Thirty-five of them gave specific examples of the changes made. The leading restriction was being near someone operating machinery or equipment. This was cited by nearly 40% of the parents (Table 50). Another 28% prohibited their children from being near tractors in use or from riding on the tractor with someone else. Only 2 parents reported restriction from animal-related work activities. Other examples cited included constraints from chemical areas, grain bins, and anywhere people were working.

Table 50. Prohibition from Others Doing Farm Work

Area Impacted	*Frequency*	*%*	*Examples*
Machinery/equipment	15	38.46%	Someone mowing, operating machinery
Tractors	11	28.21%	No riding or near tractor in use
Animals	2	5.13%	Someone feeding cows
Other	7	17.95%	Chemicals/grain bins/fields; people working
Not relevant	4	10.25%	Response didn't address question
	39	100%	

Reasons given by the parents for restricting their children from performing certain farm tasks, playing around certain areas, or being around others doing farm work were also examined. These reasons are discussed in the following section of the report.

12-Months

At the 12-month level parents were again asked if they had prohibited their children from doing or being around certain places and activities. Three items queried parents on restrictions in the 12 month survey:

1) In the last 6 months have you prohibited your child from doing certain farm tasks?
2) In the last 6 months have you prohibited your child from being around certain places on the farm?

3) In the last 6 months have you prohibited your child from being around others doing farm work?

Nearly one-fourth (24%) reported they had prohibited their children from doing certain farm tasks, 32.62% prohibited their children from being around certain places on the farm, and 21.47% prohibited their children from being around others doing farm work. Parents were not asked to describe the places or activities.

Since the questions on the 6-month survey mirrored the 12-month survey questions, a comparison between the two time periods was made. This quantitative analysis revealed a significant increase over time in all three areas in the percent of parents reporting that they had instituted restrictions. Figure 22 illustrates the percent of parents reporting they had placed restrictions upon their child for farm activities between the 6 month and 12-month time periods.

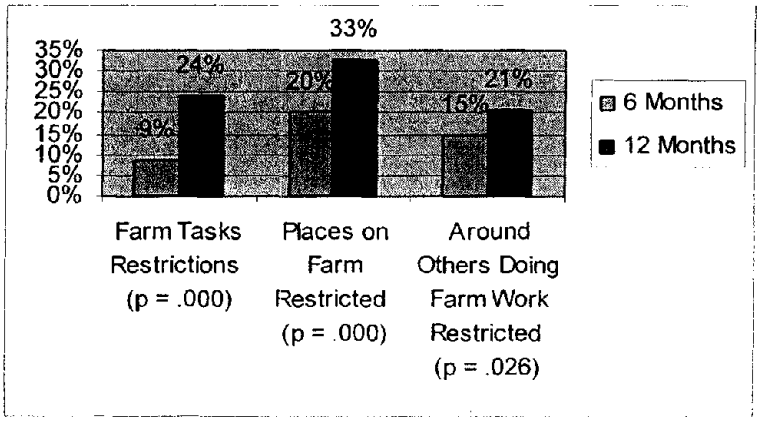


Figure 22. Comparison over time of % of parents placing restrictions on children (6-12 months)

This trend continued for the percent of parents restricting their children from performing certain farm tasks. The only question asked in the 18 month parent survey was "*Since last survey, have you prohibited your child from doing certain farm tasks?*" For this question, 37% of the parent respondents reported this restriction had been implemented. Figure 23 shows the increase over time for restrictions of farm tasks.

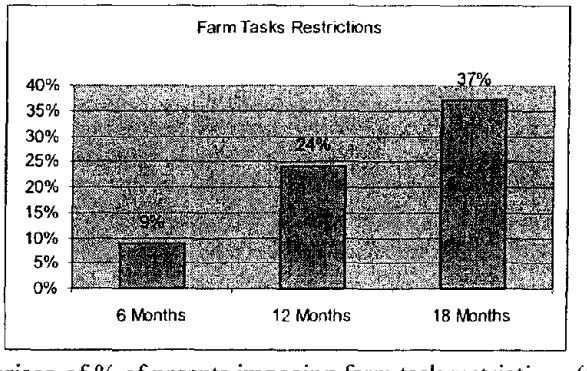


Figure 23. Comparison of % of parents imposing farm task restrictions (6-12-18 months)

Reasons for Changes

Parents were asked to describe the reason(s) they had made the farm safety changes at the 6-month and 12-month survey waves. At the 6-month level, parents were only asked to provide reasons for prohibiting their children from doing or being around certain farm activities or areas. Overall, other than general safety concerns, the reasons given for most changes made by parents consisted of actual injury occurrences and increased awareness and knowledge of farm safety.

Reasons for Prohibited Activities (6-month survey)

For each change reported by a parent at the 6-month level, wherein the child was prohibited from a place or activity, parents were asked why they had implemented the restriction. Text data were solicited, rather than a check-off list, to capture the full realm of reasons. Ninety-five reasons were supplied and coded for this analysis (95/101 = 94.06% of parents reporting restrictions had been instituted). The most common reason cited for the prohibitions was injury concerns (41.05%). These concerns stemmed from actual incidents that had occurred to the parent or someone the parent knew (30.77%) and from a general recognition of the potential for an injury (69.23%). A third of the responses (34.74%) reported only general safety statements such as "because it's unsafe" or "dangerous". Other reasons provided by the parents included increased awareness of the dangers on the farm, child's age or maturity level, and conditions of building structures or equipment. None of the parents referenced the farm safety day camps as a reason for making the changes at the 6-month wave. Tables 51 and 52 illustrate the breakdown of the reasons cited by parent respondents for prohibited activities.

Table 51. Reasons Parents Prohibited Children's Activities (6-month survey)

Reasons	*Tasks*	*Places*	*People*	*Total*	*%*
Injury concerns (actual incidents and potential)	9	20	10	39	41.05%
General safety statement (unsafe/dangerous)	7	12	14	33	34.74%
More aware of dangers	2	0	0	2	2.11%
Other	1	8	4	13	13.68%
Not relevant	0	6	2	8	8.42%
	19	46	30	95	100%
Initial agreement rates	94.74%	91.30%	86.67%		

Table 52. Breakdown of Injury Concerns (6-month survey)

Injury Concerns	*Tasks*	*Places*	*People*	*Total*	*%*
Actual incident	2	6	4	12	30.77%
Potential recognition	7	14	6	27	69.23%
	9	20	10	39	100%

Reasons for Other Changes (12-month survey)

In addition to changes made relative to prohibiting their children from certain farm tasks or places on the farm, parents were asked if they had made certain other changes related to farm safety at 12-months post camp. Seven specific changes that were identified in earlier surveys were targeted as reflected in Table 53.

For four of those changes, more than 20% of the parents completing the 12-month survey reported the change had been made. These changes included adopting new farm safety rules (21%); increasing supervision while their child does farm work (27%); changing their own behavior while doing farm work (28%); and adopting a "no extra rider" rule related to tractors (24%). Of the 327 parents who completed the 12-month survey, 181 parents (55%) reported making at least one of these changes. In a possible range of 1-7, the mean number of changes per parent was 2.35 with a standard deviation of 1.35.

Table 53. Farm Safety Changes Reported by Parents at 12-Months Post Camp (N=327)

Q17	Changes	Made Change	% of N	C	S	R	x	r
a	Adopted new farm safety rules re: to tractors/animals/power equip?	68	20.80	61	2	63	12	51
b	Increased supervision while child does farm work?	87	26.61	69	0	69	9	60
i	Changed your own behavior related to safety on the farm?	92	28.13	73	1	74	19	55
j	Installed roll bars on tractor(s)?	12	3.67	7	0	7	5	2
k	Adopted a "no extra rider" rule related to tractor riding?	77	23.55	48	0	48	12	36
l	Improved animal confinement areas for safety reasons?	58	17.74	41	0	41	16	25
m	Repaired or replaced safety shields?	31	9.48	22	0	22	9	13
	TOTALS							**242**

C=Adults who responded they had made the change and provided reason why
S=Number of split responses (parents who gave more than one reason)
R=Number of individual responses examined
x=responses not relevant to question
r = relevant responses coded for analysis

For the changes reported, parents were asked why they had made these changes. Responses were provided by the parents through open-ended questions to explain the reason(s) they had made the various farm safety changes. Based on 242 responses, seven categories of reasons were identified.

Nearly half of the responses (46.77%) simply stated general safety concerns (e.g. "it's dangerous", "safety reasons", and "keep from getting hurt") as the basis for making the changes. Additional reasons cited were increased awareness or knowledge of farm safety (10.85%):

information learned from camp (8.79%); age, size, or mental maturity of child (5.94%); actual injury occurrences – either personal experience or personal knowledge of (5.43%): and new work environments such as the purchase of additional animals or new equipment and new task assignments (7.49%). Reasons categorized as "other" consisted primarily of general maintenance or repairs but also included setting a good example and concern for increase in number of spiders, snakes, and other wild animals on the farm. Figure 24 illustrates the breakdown of reasons cited by parents for changes made at the 12-month level.

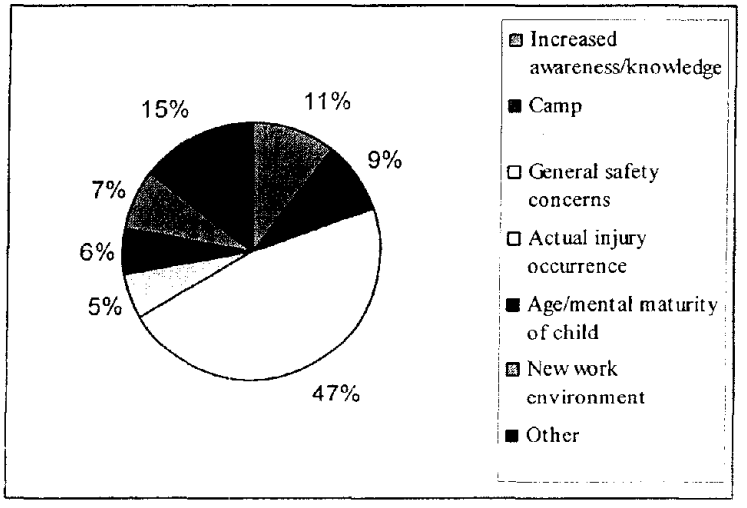


Figure 24. Parents' reasons for changes in farm safety (12-month survey)

Significant Events

Only eleven parents (3.36% of the 327 parents completing the 12-month survey) reported any significant events at 12-month post camp that had caused them to make a change related to farm safety. The eleven responses were coded within the following categories: animal event, injury event, and new farm task assignments. Seven of the responses (63.6%) reported an injury or accident had occurred either in the family or community that had caused them to make a change. Of these responses, five described incidents involving ATVs. Animal related events, such as the purchase of new livestock or the selling of previously owned livestock due to increased agitation in the animal was given as a response by three individuals (27.3%). One parent believed that the child's new tasks on the farm warranted changes in farm safety. All of these events directed parents to establish stronger safety rules or restrict their children from certain activities.

Influence on Camps to Permit Children to Do More on Farm

Parental knowledge, attitude and beliefs are important variables to consider in community-based interventions to prevent child agricultural injuries. One concern of some children's safety

advocates has been that a child's attendance at a farm safety day camp may foster potential for greater injury risks. Parents may perceive the camps as training for farm tasks and feel more confident in the child's ability to work safely despite risky situations. To explore this concern, we asked parents the extent to which they had allowed their children to do additional farm tasks or be around places that were previously prohibited on the farm and whether the camps had influenced them in such decisions. The results indicate the concerns for parents' misconceptions of the day camps may have some validity.

Findings from the final survey revealed that a considerable percentage of parents reported the camps were a factor in making decisions for what they permit their children to do on the farm. Nearly 43% reported their child's camp attendance influenced them "some" or "a lot" to allow their children to be around places they were previously prohibited and over 53% stated it influenced them in giving their child additional farm tasks. However, the magnitude of influence was tempered in most cases. Only 14.60% were influenced "a lot" by the camp to permit child to be around certain places and 10.04% were influenced "a lot" to give their child additional farm tasks (Table 54).

Table 54. Influence of Camp on Parents' Decisions (18-Month Survey)

Q#	How much did camp attendance influence your decision to:	None	Some	A Lot	N
16a	Allow child to be around certain places?	57.3% (157)	28.10% (77)	14.60% (40)	100% (274)
16b	Give child additional farm tasks?	46.24% (129)	43.73% (122)	10.04% (28)	100% (279)

Reponses by parents to similar questions during the course of the study substantiate these findings. On the 6-month survey over 30% of parents reported they allowed their child to do additional farm tasks because of the child's camp attendance; however, nearly all of those allowed only "a little more" (Table 55). In the 18-month survey 56.74% agreed at some level they could give their child additional farm tasks if he/she's been to a farm safety day camp, 11.70% strongly agreed with that statement, while only 26.95% disagreed (Table 56).

Table 55. Extent of Additional Work Given Because of Camp (6-Month Survey)

Q19 – I allow my child to do additional farm tasks because my child attended the day camp.	Frequency	%
Less	24	7.08%
Same	210	61.95%
A little more	95	28.02%
A lot more	10	2.95%
Total	**339**	**100%**

Table 56. Parent Agreement with Camps Positive Factor for Additional Farm Tasks (18-month)

Q11b – I can give by child additional farm tasks if he/she's been to a FS4JK farm safety day camp.	Frequency	%
Strongly disagree	27	9.57%
Somewhat disagree	49	17.38%
Not sure	46	16.31%
Somewhat agree	127	45.04%
Strongly agree	33	11.70%
Total	**282**	**100%**

At 12-month post camp, parents were asked to specify the main reason they permitted their child to do more or be around more on the farm. Age was the primary reason (82.9%), followed by increased level of supervision (14.5%). The farm safety day camps were only mentioned by one parent and only in response to permitting their child to be around others doing farm work more than they previously did (Table 57).

Table 57. Reasons for Permitting Child to Do More on Farm (12-Month)

	Child's Age	Child's Request	Supervision	Camp	Total
Why additional farm tasks?	33	1	8		42
Why more places allowed?	10		1		11
Why around others more?	20		2	1	23
Total	63	1	11	1	76
% of Overall Total	82.89%	1.32%	14.47%	1.32%	100%

Increased age and maturity brings more responsibility for the child on the farm. A comparison of the 12 and 18-month surveys reflected a larger percentage of parents who allowed their children to do additional farm tasks or be around places on the farm that were previously prohibited (Figure 25).

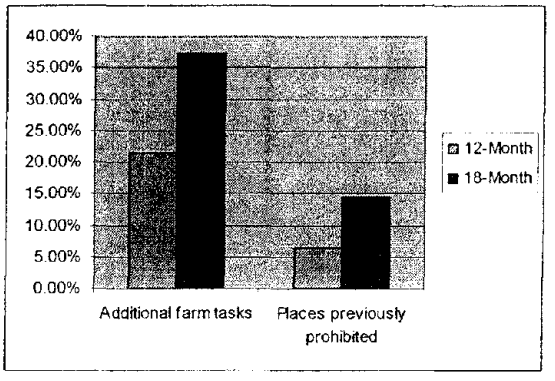


Figure 25. Comparison of increased permission from 12- to 18-month

Hypothesis 5 Discussion

There is some evidence that the camps influenced parents' own safety behaviors. Increased use of PPE and other actions were noted that could decrease risks of injury. Changes in safety behavior persisted over time. Parent's did not attend camp with their children, limiting their exposure to the safety messages. Behavior change may increase if both child and parent attended the camp.

Child safety advocates advise that children be physically removed from the work site when possible. In this study, over 10% of the parents indicated they had taken steps to decrease exposure by prohibiting their child from performing tasks or being around certain work activities. Most of these restrictions involved machinery, including tractors, lawn mowers and ATVs, although considerable attention was given to large animals and physical sites and structures. This attention and restrictions persisted and even increased over time. This finding is encouraging as children age and new tasks are assigned. However, contradictory evidence was also found. There was a distinct trend toward increased work and exposure across time. This may be explained by the chronological sequence. As children mature, parents would be expected to add additional tasks. Nearly half the parents also responded that the child's camp attendance influenced parents' decisions to allow the child to be around places previously prohibited and that camp had some influence (although minimal) on assignment of additional tasks. It is impossible to provide clear, conclusive statements as to whether the camps place children at increased risk. This phenomena needs to be explored further. It could be that the parents were confused by the set of questions or there could be some other explanation for their responses. This could be explored much better in focus groups or personal interviews with parents as these types of queries do not lend themselves well to survey research.

At the 12 month interval, of the reasons given for parental safety changes, nearly 10% were attributed to the camp. This was an open ended query and the percentage may have been higher in a close ended response set. While most respondents indicated changes were made because they were concerned about injury or because of general safety concerns it could also be that the camp had heightened awareness of the risks associated with farm exposure, thus masking the underlying effect of the camp.

Parents' responses are contradictory and leave room for debate on how much the camps influence parents' decision about their child's work, supervision, and by-stander exposure. On the one hand data suggest age is the primary influence; yet, camp attendance is reflected as a factor in influencing their decisions.

H_6: Communities that have farm safety day camps will demonstrate an increase in community awareness and in the number of educational programs about farm safety.

The final focus of the project examined the influence of farm safety day camps on the surrounding community. Community-level indicators monitored during the study included farm-related injuries, farm safety events in the community, media coverage of farm issues, and the development of inter-organizational networks.

Chapter camp leaders served as the "eyes and ears" of the research team to track the natural history of farm safety in their community. Natural history was defined as the usual occurrence of safety-related events in the community that occur without intervention by the research team. Monetary incentives were given to each chapter and chapter leader participating in the project. The incentives were based on the number of children attending each camp with a maximum of $300 for the chapter and $500 for the chapter leader. The chapter incentive was awarded in the first year only; chapter leader incentives were awarded each year of the grant in which the chapter leader actively participated.

Initial CCL Orientation and Training

At the beginning of the project, a 2-day meeting was held in Ames, Iowa, in conjunction with the National FS4JK conference. The purpose of the meeting was three-fold: to allow team members to meet each other, to develop objectives for each of the camps, and to train the chapter leaders for their role in the project. Chapter leaders or chapter representatives from each of the camps selected for the study, FS4JK personnel, the project manager, and the principal investigator attended the meeting.

An outside consultant was recruited for the project to lead the group in articulating the framework and objectives of the camps to be evaluated. The entire first day was devoted to identifying the camp objectives. The consultant's limited knowledge of farm safety day camps coupled with the chapter leaders' lack of familiarity with research techniques created substantial obstacles.

As a result of their frustration, it was difficult to develop rapport with the CCLs and much of the remaining time was spent gaining the trust and support of the chapter leaders. The second day was directed toward specific functions and responsibilities of the chapter leaders for the project. A training manual was given to each chapter leader or representative. The manual provided a description of each team member's role, the methods and procedures anticipated, and the forms developed to assist them in completing their responsibilities. Each section of the manual was discussed in detail during the training session. A debriefing session followed for the CCLs to discuss the 2-day meeting and provide a forum for open discussion about project direction. Both the UK- and FS4JK-based research team members provided follow-up immediately after the meeting and across the study period to clarify role, responsibility, and answer questions.

The primary method used to identify and measure community indicators involved quarterly reports from the chapter leaders. Questions on the parent surveys relative to requests for farm safety information and media coverage of farm safety events and issues were also used in

measuring the impact of the day camps on the community. Three instruments were initially developed by the research team to assist the chapter leaders in recording the information needed for assessment:

- Log book
- Community Farm Safety Event Record
- Child Injury Record

The log book (Appendix A.17) was designed to be the chapter leader's primary tool for tracking farm safety issues in their communities. Items to be tracked included farm-related injuries and deaths, close calls, comments received from the community about the day camps or other safety events, farm safety awareness programs, and anything else the chapter leader considered significant to the study. Log book entries reflected date, topic, source, summary comments, and perceived effects on the community.

The remaining two forms allowed the chapter leaders to record greater detail about farm safety events and child injuries in the community. The Community Farm Safety Event Record (Appendix A.15) contained the following information:

- Name of the event
- Date of the event
- Who sponsored the event
- Event target audience (age groups, gender, members of a certain group)
- Safety areas covered by the event
- Which media types advertised the event
- Which media types covered the event

When possible, any materials related to the event were also gathered and attached to the form. Examples of event materials included newspaper clippings, brochures, advertising flyers, and photographs.

The Child Injury Record (Appendix A.16) was used to track farm-related injuries to children and contained the following information:

- Date of injury
- Age of injured child
- Gender of injured child
- If the child attended the 2002 FS4JK day camp
- The primary cause of the injury

The form also allowed the chapter leaders to report the type of injury sustained, how the injury occurred, whether the child was working or playing when the injury occurred, and a host of other information. In most cases the chapter leaders attached a newspaper article providing all the information that was known. Due to HIPPA regulations, no attempt to access any medical records or emergency transport records were made. This greatly hindered the ability of the evaluation to assess injury rates.

Community data were compiled on a quarterly basis and submitted to the research team. Quarterly reports were expected to contain all logbook entries made, newspaper clippings collected, community farm safety event record forms, and child injury record forms. A training manual describing the type of information to be documented on each form was provided to each chapter leader and the guidelines were discussed at length during the initial project meeting. Practice scenarios were used to familiarize the CCL's with the documentation process. However, despite these instructional efforts, chapter leaders had difficulty comprehending what was needed. Some confusion stemmed from discerning what constituted "local" events and occurrences that would have an impact on the community. In the first reports, chapter leaders accessed websites and reported farm-related occurrences that most people in the community would not have heard about. On the other hand, Chapter 2 could report events from a broader catchment area because of the location of a large agricultural health center in their community. A "*Quarterly Report Summary Sheet*" and a guide entitled "*What Should I Include in My Quarterly Report?*" (Appendix H) were developed after the first quarterly reports were submitted. These additional materials were developed to clarify the reporting process and to achieve some consistency in the data base. CCLs were encouraged to maintain communications with the project manager or the FS4JK chapter liaison to answer questions and make suggestions for improvement. Instruction was provided on an on-going basis during the entire project period. Reminders and tips on preparing the reports were conveyed to the chapter leaders during conference calls and through electronic communications.

In addition to the initial training meeting, two meetings and four conference calls with the chapter leaders were conducted during the course of the project. At the meetings CCLs were encouraged to share narrative accounts of community safety efforts, networking, their perceptions of community attitude toward safety, possible influences (policy changes, economic and crop issues, schools not being willing or harder to convince to participate, etc.). Conference calls, which generally lasted about an hour each, were also used to clarify problems and questions. The outside consultant participated in the conference calls but did not attend any subsequent meeting following the initial training meeting and did not participate in the final sessions of discussions with the CCLs as the CCLs had voiced they would rather not have the consultant present.

Data received from the chapter leaders on the summary sheets were often sparse. Chapter leaders reported difficulty in gathering/tracking community data. The primary reasons cited were lack of resources, not being in the right place at the right time, and trying to relate an occurrence directly to the day camp. Although the chapter leaders had difficulty capturing information on forms, they were able to relay relevant information and beneficial insight during conference calls and face-to-face meetings. After a closer examination of their logbook entries and newspaper clippings submitted with the summary sheets, coupled with data from the direct conversations with the CCLs, the written data became more meaningful. Thus, it was decided that the difficulty arose more from the analysis/sorting of the information and the novice research status of the CCLs than from the actual data collection.

Community data were collected for the entire time across the 18-months post camp from three of the five chapter leaders. Two leaders dropped out of the study early due to personal

circumstances and job changes that affected their ability to continue. Only 2 quarterly reports were received from Chapter 5 and four reports were received from Chapter 3.

While information was limited, data collected by the chapter leaders reflected an increase in linkages between FS4JK chapters and other organizations within the community and a number of farm safety activities and interventions. However, data could not support a change in the number of farm-related injuries to children. Injury measurement was limited by the lack of access to medical records and the small sample size in the communities; thus, injuries reported are only case counts. There was also tremendous difficulty in identifying cases of minor injuries. The study variables included in this phase of the evaluation and the findings for each variable are presented below.

Results

Process Variable:

Describe the number and type of other farm safety interventions implemented in the community.

During the 18-month period post camp, 30 interventions were reported by the chapter leaders, varying from 2 to 10 per community. Farm safety day camps were the primary type of intervention (53%). A review of the 16 day camps reported indicated that most camps were annual recurring events. Only three of the 16 camps were conducted by chapters participating in this study. However, the chapters were involved in planning, guiding or participating in the other camp events. Farm safety presentations to school children, tractor safety programs, pesticide education training, agriculture field days, and health and safety fairs were also commonly reported with each comprising 7% of the total community farm safety events in the study period. Interventions included in the "Other" category consisted of customer appreciation days, farmers' co-op meetings, animal fairs, and seatbelt safety programs. The interventions reported were conducted by Cooperative Extension offices, high school agriculture students, and multiple FS4JK chapters. The number of farm safety camps conducted and the increase in their popularity are indications of the significance and acceptance of such programs in local communities. Figure 26 illustrates the breakdown of farm safety interventions reported and Figure 27 illustrates the steady number of day camps over the course of our study. Camp numbers normally decrease in fall and winter.

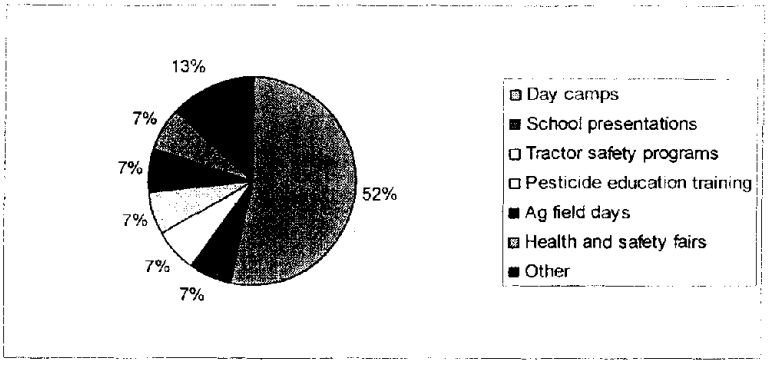
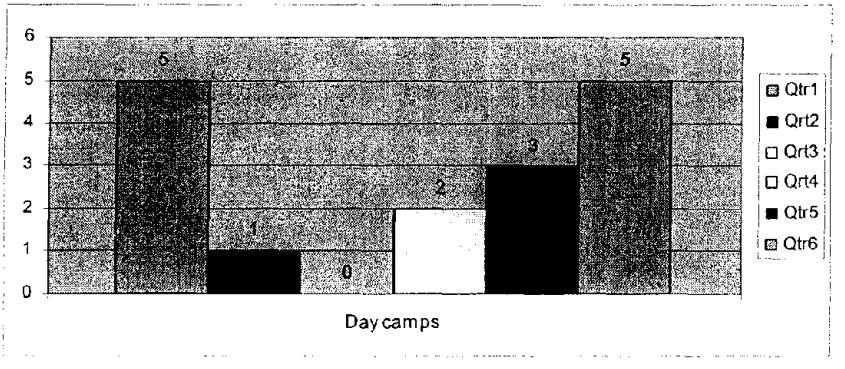


Figure 26. Farm safety interventions in the communities



Months in Each Quarter

Qtr	Months in Qtr
1	May-July
2	Aug-Oct
3	Nov-Jan
4	Feb-April
5	May-July
6	Aug-Oct

Figure 27. Number of day camps reported by quarter

Impact Variables:

Determine the number of farm-related injuries among the children.

A total of thirty sentinel farm-related events that resulted in injuries to 41 people were reported by the chapter leaders during the 18-months post camp. Most of the injuries (87%) occurred in the first 3 quarters which covered May through October, the peak times of agricultural activity. Of the 41 people injured, 17 (41.5%) were children and adolescents under the age of 18. Eleven children were killed and the other 6 children sustained nonfatal, but serious, injuries from these events. The majority (76%) of the events were reported by the chapter leaders in the midwest. Sources of injuries included drowning, machinery, ATVs and other recreational vehicles, motor vehicles, building structures, and tractors. While an alarming number of injuries were reported by some of the chapters, one chapter leader stated that through a conversational report with medical records personnel in her community, fewer farm-related injuries were being reported. With regard to the number of injuries reported by Chapter 2, it is difficult to discern if the number of injuries is excessive for the region or if it is a reflection of intense media coverage in this area. With a regional agricultural health clinic being so much a part of that community and the intense campaign to decrease farm injuries, one would think many of the causes of farm-related injuries would have been addressed and the number of injuries would be less. At the same time, however, the community has a heightened awareness of farm injuries because of the

outreach of the clinic. Media coverage may be more likely to occur in this area; thus, it may have been easier for the CCLs to identify cases. The significance in looking at farm-related injuries is that such sentinel events act as a trigger for raising awareness and subsequent changes in safety behavior that would not necessarily be associated with the day camp; rather, a part of the natural history of what occurs in the community.

As stated earlier, measuring the community impact of the farm safety day camps through injury analyses was limited by the lack of access to medical records, the difficulty in identifying minor injuries, and not having baseline data. Generally, only very serious events attract media coverage. Unless the chapter leaders happened to be "in the right place at the right time" to overhear stories about farm-related injury events, minor injuries and close calls were missed (as evidenced by child and parent survey data in this study). Furthermore, linking the injury event to a day camp was limited because we were unable to determine if any of the children injured had attended a farm safety day camp.

Identify the number of close calls for farm-related injuries.
Only four close calls were reported on the quarterly reports. Chapter leaders suggested that "close calls" were part of a farmer's everyday life and farmers did not think them worthy of discussion. The chapter leaders also expressed that even if stories were told, such information would be hard to gather unless "you were in the right grocery aisle at the right time" to overhear the story. Close calls for children attending the camp were monitored through the post-camp surveys completed by the children. See page 107 of this report for further discussion of children's reports.

Community awareness about farm safety. (# of farm safety activities).
Three of the five chapters reported additional community farm safety activities with a total of 29 being reported. The majority of these involved their chapter's own participation in health and safety fairs, annual farm organizational meetings, agricultural field days, and county fairs. National Farm Safety week also yielded activities by the chapters to enhance the community's awareness for farm safety. Farm safety "activities" differ from the farm safety "events" described earlier in that the events reflect programs designed specifically to enhance the knowledge of farm safety while the activities are more reflective of participation in local events where farm safety was not the primary focus to increase the community's awareness of the need for farm safety.

Educational programs about farm safety. (# of farm safety educational programs); linkages between FS4JK and other organizations. (# and type)
Reports from the camp leaders disclosed that local chapters of FS4JK were involved in the community beyond the day camp, although the intensity of this involvement varied widely. The chapter's presence was made known through presentations and displays at a variety of places such as local fairs, school health and safety events, annual farm organizational meetings, local farm businesses, and community clubs. Their participation in various community settings introduced more people to the FS4JK organization and resulted in greater participation by the community in farm safety events as evidenced by the number of requests received by the chapter.

During the 18 months following the day camps, chapter leaders reported 28 contacts from local organizations. The majority of these were requests for safety presentations by the chapter. Four contacts came from organizations that had not previously been involved with the chapter. These contacts either offered to help in future camps or requested the chapter assist them in setting up a farm safety day camp in their community. Thus, the presence of the chapter in the community after the day camp provided easy access for resources and assistance for other community groups that wished to address farm safety.

Obtaining the support of respected individuals in the community can also enhance promotion of farm safety events in the community. One newspaper article describing the farm safety day camp illustrates the partnership between FS4JK and local organizations that can be attained:

> "*You are providing a valuable service to the children in our area.*"
> - Local Weather Meteorologist
>
> "*Farm Safety Day is a valuable asset to our youth in teaching safety both on the farm and off.*"
> - Mayor
>
> "*The entire day was exceptionally well organized and an overall positive experience for the students of our area schools and the presenters alike.*"
> - Public Health Nurse
>
> "*I hope that you will continue to support this effort as I feel that it was a huge success.*"
> - Elementary School Principal

Summary

Farm safety day camps bring together a wide variety of community leaders and groups for the day. What is the impact of the camp on the larger rural community? Does this interaction result in more collaborative work after the camp or more emphasis on farm safety by individual organizations? Results from this study indicate communities in which camps are held experience some increase in farm safety awareness and the number of educational programs and activities as evidenced by the number of contacts received by the FS4JK chapters for presentations at local events, requests for guidance on setting up new day camps, and offers to assist in future camps. However, distinguishing that the impact was the direct result of one specific day camp cannot be readily determined. FS4JK chapters are actively involved in many facets of the community and the chapters in this study had been conducting day camps for several years prior to this evaluation. It is more likely that the impact seen was a culmination of all the farm safety efforts conducted in the community over time. A better way would be to track this with first or second year camps when the intervention is novel. One may also argue that the communities in the study value the camps and provide support to sustain them, even though no empirical evidence of their outcomes had been documented. A recent evaluation of the D.A.R.E. drug prevention program is

an example of such institutionalization (Zagumny and Thompson, 2001; Hansen and McNeal, 1997).

Even with the increase in the number of farm safety activities and programs in these communities, farm-related injuries to children continued to occur. The number of child injuries and fatalities reported from communities in the scope of this study was alarming. However, there was no indication that any of these individuals had attended one of the farm safety day camps and personal testimonies from the parents of children who had attended provided evidence that the camps were successful in preventing some children from sustaining a serious injury. Given the short time of the data collection, it is impossible to draw conclusions about injury trends. The sheer number of serious injuries reported in the limited time highlights the sustained nature of this problem. Future research needs to include reports from EMTs and local health facilities to enumerate better case reports.

The community portion of the evaluation was the most difficult to conduct and measure. None of the chapter leaders were experienced with research techniques and a consistent reporting process was never achieved. The loss of two chapter leaders during the study also contributed to the difficulty in evaluating the influence of the day camps on the community. Analyses could be skewed based on the limited amount of data collected and should be read and interpreted within the context of the limitations. The impact could be greater or less depending on the nature of events that were not reported. Yet, it provides a description of the community "pulse" of farm safety attention after a major educational intervention targeted to school children. This type of description has not been conducted before and adds to our understanding of community attentiveness to farm safety. Ways to maximize that attentiveness should be explored. Community organization event planners can use this report to frame their own strategies.

Some CCLs were more active than others in their pursurence of data. Verbal reports during conference calls, interaction, and integration in the community varied by CCL and by time. Major life events (family, personal changes) severely hampered the quality and quantity of data. In the instance of FFA chapter group, we had hoped the CCL would use students to assist in reporting. This did not happen despite our encouragement and the CCL's verbal endorsement to try that method. Competing demands tempered the enthusiasm and best intentions of the CCLs. For future studies that examine community impact it is strongly recommended that key stakeholders in the community and camp station instructors be interviewed periodically after the camp. This would provide increased capture of data about the influence of the camp and for documentation of additional farm safety events.

Three CCLs who completed the study agreed their participation resulted in valuable information for their camps and for themselves. These CCLs used the data from the study to share with camp instructors and with local community leaders as evidence of the effects of the camp. One CCL purchased a video camera with her stipend. She uses the camera to tape sessions as was done by the research team. Videos are then reviewed and used as teaching tools to improve instructional techniques. The meetings and discussions between the CCLs, FS4JK, and UK researchers fostered opportunities to openly discuss areas for improvement and "best practices" of the camps. The training manual subsequently produced by FS4JK is an outcome of these discussions.

Farm safety day camps have become a popular and accepted method of delivering farm safety messages and will probably remain in most communities. The recurrence of camps and the increase in the number of camps indicate the role day camps play in a community. One chapter leader stated, "While you can't pinpoint the camps' direct impact, you know the camps would be missed if they should stop doing them." Although this statement is probably correct, we must determine the effectiveness of these events and explore ways to increase the positive outcomes of the camps on the children, families, and organizations that are involved in the camps. A brief summary of community impact is provided in Figure 28.

Findings
- Some increase in farm safety awareness
- Some increase in educational programs and activities
- Chapters contacted more by local organizations
- Continued number of farm-related injuries to children

Challenges
- Attrition of CCLs
- Limited understanding of the research process by CCLs
- Limited access to data (i.e. child injury)

Suggestions
- CES ag agent or 4-H agent involvement (other safety interventions)
- Add FFA and station instructors for data reporting (events, injuries)
- Add EMS/hospital partner for tracking injuries
- Add video or photo component for data documentation by CCL

Figure 28. Summary of community impact evaluation

Report on Child Injuries and Close Calls

Shutske (1994) noted evaluations have shown that educational programs have little or no effect on subsequent injury rates. For this study, chapter leaders were to be the conduits for tracking injuries to farm children through their many community-based contacts. In addition, children who attended the camps were asked about injuries and close calls during the course of the study.

Injury Analyses – Quantitative Report

Six survey questions were asked (4 in the child survey and 2 in the parent) at 6, 12, and 18 months which were deemed appropriate for comparisons over time. The responses at 1 month were not used since such a short amount of time had elapsed over which the injuries could have occurred (while the spacing for the remainder of the items was about the same).

The overall injury prevalence rate based on reports from children was 5.42% while the prevalence rate for close calls was 11.5%. The combined prevalence rate for injuries and close calls as reported by children was 16.9%. This rate is four times higher than the prevalence rate reported by parents (4.3%). Table 58 illustrates the response frequencies for each question asked regarding injuries and close calls to the child who attended the camp.

Table 58. Percent of 'yes' Responses to Injury Questions Compared Over Time

	6 Months			12 Months			18 Months		
	N	Yes	%	N	Yes	%	N	Yes	%
Child: injured on farm since last survey	367 (q22)	13	3.5%	327 (q24)	18 (q28)	5.5%	283 (q27)	22 (q31)	7.8%
Child: missed school b/c of getting hurt on farm	13 (q23)	2	15.4%	18 (q29)	0	0%	not asked		
Child: go to hosp/dr b/c of getting hurt on farm	13 (q24)	3	23.1%	18 (q30)	0	0%	21 (q32)	2	9.5%
Child: almost got hurt on farm since last survey	366 (q27)	38	10.4%	326 (q32)	35	10.7%	282 (q34)	39	13.8%
Parent: any close calls for farm injury	367 (q34)	23	6.3%	326 (q21)	25	7.7%	283 (q21)	21	7.4%
Parent: injuries or close calls for child	368 (q36)	7	1.9%	327 (q23)	25	7.7%	239 (q23)	8	3.4%

N = how many responded to question; Yes = how many answered "yes" to question; % = yes/N

Overall prevalence rates were computed by adding number of respondents reporting an injury or close call and dividing the result by the total number of respondents to the question.

Longitudinal analysis: A generalized estimating equation (GEE) model was used to determine whether the frequencies of 'yes' responses changed over time (using the GENMOD procedure in SAS). This analysis, similar to the repeated measures analysis of variance, accounts for the fact that there are multiple responses from the same individual over time. Further, the model is able to estimate effects at each timepoint even though there are dropouts over time.

Findings from the GEE analysis:

- For the child item 'got hurt on the farm since last survey,' p-value for the comparison over time was above the alpha level ($\chi^2 = 5.9$, $p = .053$). Since this was so close to being significant (assuming an alpha level of .05), the post-hoc contrast analysis was considered: the prevalence at 6 months was less than that at 18 months ($p = .01$); other contrasts were not significant.

- For the child items 'missed school b/c of farm injury' and 'had to go to hospital or doctor b/c of farm injury' there were too few responses to allow the estimation of changes over time.

- For the child item 'almost got hurt on the farm since last survey,' the comparison of prevalence rates over time was not significant ($\chi^2 = 2.7$, $p = .3$).

- For the parent item 'close calls for farm related injuries,' the comparison of prevalence rates over time was not significant ($\chi^2 = 0.5$, $p = .8$).

- For the parent item 'injuries or close calls for child,' there was a significant change over time ($\chi^2 = 12.5$, $p = .002$). The post-hoc contrast analysis indicated that the prevalence rate at 12 months was greater than at 6 months ($p = .0004$); further, the 12-month rate was greater than at 18 months ($p = .01$). The difference in rates between 6 and 18 months was not significant. This result may be more reliable than the similar item answered by the children, if only because nearly all the parents answered it so the frequency of 'yes' responses is based on a more complete sample (from among those parents who participated at each timepoint).

Injury Analyses – Qualitative Report

Farm injuries were reported by 69 children over the course of the 18 months post-camp surveys. Children were asked to describe what they were doing at the time the injury occurred. Fifty-three farm activities were described with 47% of them involving animals. Horses were the most cited and feeding/petting animals was the primary activity. Machinery, fences, tractors, and barns and fields were also reported by children as areas on the farm where injuries occurred. The "other" category included garden tools and large work boots that led to their injuries. Table 59 reflects the breakdown of injury events by agent of injury and survey wave.

Table 59. Child-Reported Injury Events by Agent of Injury

	Animals	*Machinery*	*Tractor*	*Barn/Fields*	*Fences*	*Other*	*Total*
1-mo	4	1		2		1	8
6-mo	2	1	1	2	3		9
12-mo	8	2	2	1	2		15
18-mo	11	5	1	2	1	1	21
Totals	**25**	**9**	**4**	**7**	**6**	**2**	**53**
% of Total	*47%*	*17%*	*8%*	*13%*	*11%*	*4%*	*100%*

The months covered in each survey wave (Table 60) were analyzed to determine if the time of year had any impact on the number of injuries reported. For 4 of the 6 camps, the analyses revealed that the combined time periods for the 1 and 6-month surveys along with the 18-month time period reflected the summer months, times when farm activity is at its peak. For the remaining 2 camps, the 1-month and 12-month waves contained the months when most farm activity occurs. Since the last 2 camps were the largest in the study and comprised 50% of the campers in our study, the impact of peak seasons is offset between the different time frames within the survey waves. This "smoothes" the potential effect of seasonal variation of injury.

Table 60. Months Covered in Each Survey Wave

Chapter/Camp	*Camp Date*	*1-Month*	*6-Months*	*12-Months*	*18-Months*
1A	4/17/02	May	June-Oct	Nov-April	May-Sept
2B	4/25/02	May	June-Oct	Nov-April	May-Sept
3C	4/29/02	May	June-Oct	Nov-April	May-Sept
4D	5/02/02	May	June-Oct	Nov-April	May-Sept
4E	9/19-20/02	Sept-Oct	Oct-Feb	March-Sept	Oct-Feb
5F	9/11-12/02	Sept-Oct	Oct-Feb	March-Sept	Oct-Feb

In addition to injuries, children were also asked if they had experienced any close calls, defined as an event that occurred on the farm in which the child could have potentially been hurt but was not. Over 10% of the children in each survey wave indicated they had experienced a close call. Consistent with the injury descriptions, the majority (36%) of close calls involved animals. Tractors and all-terrain vehicles (ATVs) accounted for another 22% of the close calls reported. Children also cited fences, machinery, ponds or creeks, machinery, and barns as areas where they almost sustained an injury. A few children reported nonfarm activities such as riding bikes and jumping on trampolines while others merely mentioned the type of injury they avoided without

describing what they were doing. Table 61 illustrates the number of children reporting close calls at each wave and the analysis of exposure when the close call occurred. The "other" category includes falling, slipping, and tripping.

Table 61. Child-Reported Close Calls

	6-Month *(N = 366)*	12-Months *(N = 326)*	18-Months *(N = 282)*	Total
Yes - Almost hurt on farm	38 (10.4%)	35 (10.7%)	39 (13.8%)	112
How? Animals	15	13	12	40 (35.7%)
Tractor	4	4	5	13 (11.6%)
ATV	1	3	8	12 (10.7%)
Fence	3	2	1	6 (5.3%)
Machinery	1	2	2	5 (4.5%)
Pond/creek	3	1	0	4 (3.6%)
Barn/building	1	1	2	4 (3.6%)
Other	6	3	5	14 (12.5%)
Non-farm activity	3	4	2	9 (8.0%)
No description	1	2	2	5 (4.5%)
	38	35	39	112

In contrast to the reports from children, fewer parents reported injuries and close calls to their children. In the 6, 12, and 18-month surveys, parents were asked to report any injuries or close calls to the child within the same question. Table 62 shows the large disparity between the instances reported by the child verses the parent. Figure 29 also illustrates the difference in reporting between children and their parents.

Table 62. Comparison of Child Injuries and Close Calls by Children and Parents

	Children Reporting Injuries	Children Reporting Close Calls	Total Child Reports	**Parents Reporting Injuries/Close Calls to Child**
1-month	16	*	16	**3**
6-months	13	38	51	**7**
12-months	18	35	53	**25**
18-months	22	39	61	**8**
	69	***112***	***181***	***43***

* not asked on survey

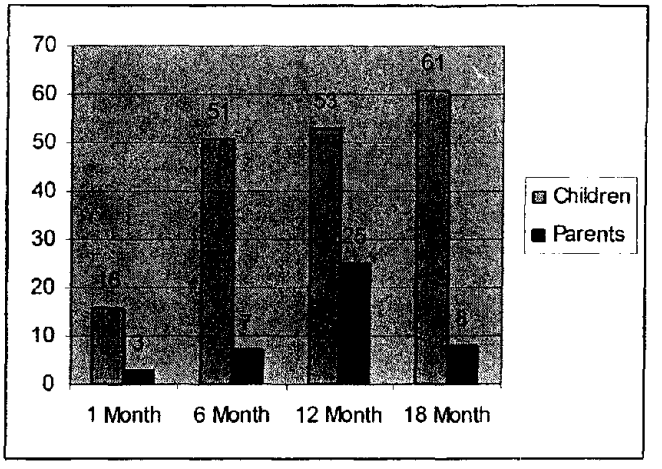


Figure 29. Differences between child and parent reporting of child injuries/close calls.

Even from the parents who reported injuries or close calls experienced by their children these events were most often not related to farm activities. On the 6, 12, and 18 month surveys, the parents were asked to describe what the child was doing when the injury or close call occurred. Of the 38 descriptions provided, over a third involved nonfarm activities (see Table 63).

Table 63. Parent-Reported Injuries and Close Calls to Child who Attended Camp

	6-Months (N = 369)	12-Months (N = 327)	18-Months (N = 239)	Total
Injuries or close calls for child	7	25	8	40
Description of what child was doing provided	7	23	8	38
Descriptions by type				
Nonfarm activities	4	7	2	13
Farm activities:				
Animals	1	5	4	10
ATV	0	0	2	2
Machinery	1	6	0	7
Pond	1	3	0	4
Other	0	2	0	2
	(q36-37)	*(q23-24)*	*(q23-24)*	

The differences between child and parent reports of injuries and close calls may stem from the parent responding to the survey not being the one who generally supervises the child on the farm, the differences may indicate the lack of supervision, or it could be that children conceptualize injury in a different way from their parents.

Summary

The prevalence of reported injury and close calls did not decrease over time for children in this sample. While the severity of injury overall appears to be rather benign, the sustained prevalence deserves continued surveillance. Disparities in reporting by the child and parent are troubling and cause both data sets to be suspect. No pre-camp injury data were available so change due to camp experience could not be determined. The sustained prevalence supports Shutske's (1994) report.

Unanticipated Outcomes

Three unanticipated outcomes emerged from this study which proved beneficial to the FS4JK organization: 1) changes made by chapter leaders, 2) a day camp manual for all FS4JK chapters, and 3) a checklist for camp "goodie bags". All three outcomes reflect the translation of research to practice. Discussion on each outcome appears in the paragraphs below.

1) Changes made by chapter leaders

Although the camps in this study were selected based on their excellent working relationships with the North American FS4JK office, FS4JK staff noted that as a result of participation in the study, the chapter leaders from these camps became even more involved, have taken a greater interest in the organization, and became more attuned to details and reporting requirements. One chapter leader adopted many of the evaluation methods used in this study for her individual chapter. With her incentive money, the leader purchased a video camera. The chapter now films each camp session, physically monitors the stations, and completes a written checklist to evaluate the instructors. Evaluation results are discussed with the instructors in a positive manner to improve future camps. Even though we did not intervene in the conduct or structure of the camp, our presence and the chapter leaders' work in the project helped them understand the importance of documentation, reporting, and accountability. While local chapters may understand the overall mission of day camps and FS4JK, they may not grasp their accountability to the organization under which they operate. The richness of data gathered as part of this study is exemplified by the embedded case studies. By partnering with chapter leaders and the local chapters, we have five case studies. We know the history of the five camps and have a better understanding of how these organizations relate to "outside" instruction and evaluations. We have a better grasp of what triggers them to make a change and characteristics that make them resistant to change. Through these case studies we can better understand how to work with grass-root organizations so future evaluation programs can progress more effectively.

2) FS4JK day camp manual

As the study progressed and data were examined, several suggestions and recommendations for improvements in the camp became evident. Guidance on recruiting and training instructors, providing instructors with key points to deliver, and identifying the length and types of sessions needed in the camps emerged from the evaluation. This information was shared with the national FS4JK organization. The need for a guide on conducting farm safety day camps had previously been identified by the organization based on public request. FS4JK, aided by the results of this evaluation, developed a manual that included the recommendations of this study. The manual was written and compiled by the FS4JK staff and made available to all members of FS4JK as well as the public. A copy of the manual (see Appendix F) was given to each FS4JK Chapter.

3) Goodie bag checklist

FS4JK also recognized a need for a checklist to assist those individuals and organizations hosting farm safety camps in selecting relevant and appropriate resources for the "goodie bags" distributed at the camps. This checklist is still in draft form and is expected to be released early 2006.

International Linkage

The establishment of a linkage with Ireland for the development of farm safety day camps was not anticipated. Through joint efforts with the agricultural safety specialist in Ireland, we were given the opportunity to present findings from this study in a symposium geared directly at farm issues in Dublin, Ireland. Approximately 125 key agricultural leaders, government safety officials, and farmers attended the event. Media (TV, radio, print) also covered the event. The symposium specifically requested a presentation on farm safety day camps for the audience, noting that there is no organization that provides child instruction on farm safety in Ireland. The information was very well received and as a result, the agricultural group in Ireland plans to pilot tests farm safety day camps in their country. We will continue to work with the agricultural specialist throughout this endeavor. Copies of the day camp manual were provided to John McNamara, Teagus.

Challenges

An outside consultant was recruited for the project to lead the group in articulating the framework and objectives of the camps to be evaluated. Following the initial meeting, the consultant was supposed to conduct quarterly conference calls with the group to discuss progress, to troubleshoot, and to provide a format for the constant sharing of information. This step was considered crucial in a true partnership evaluation and essential in guiding the project. However, rapport between the consultant and the chapter leaders was never achieved. Most of the chapter leaders were overwhelmed, intimidated, and frustrated with the consultant's suggestions and recommendations and some considered dropping out of the project. The research team expended considerable effect for the remainder of the project to recover the enthusiasm and support of the chapter leaders. What effect this unfortunate situation created is unknown.

Working with grass-root organizations proved challenging. In addition to the chapter leaders, this project worked indirectly with the chapter membership and other community organizations that provided volunteer effort to deliver the day camp. These volunteers were generally unfamiliar with research and the protocols necessary for the integrity of the research. They may have been hesitant to disclose information they felt would potentially cast their program in a "less than ideal" light.

Limitations

Like many other evaluations of community-based interventions, this study was limited to the validity of self-report. Time and financial constraints, as well the impossibility of observing children's farm safety behavior without a significant observer effect, precluded the ability to collect observational data. We attempted to counter this limitation by collecting data on safety behavior from both the parent and child. Analyses of these data for response agreement disclosed major disparities between the child's report of farm exposure and close calls and the parent's report of the child's activities.

Future Implications

This study and the concurrent study conducted by the University of Alabama comprise the only large scale, population based studies that examine the prolonged effects of farm safety day camps on children who attend them. This study is the only one to explore the effects of the camps on parental attitude and behavior and the only one that provides evidence about the preparation and delivery of instruction. While results suggest children gain and retain farm safety knowledge and that, overall, instruction is accurate, there is a need for further guidance and basic standardization of content. Based on these findings it is suggested that 1) a different approach may be more beneficial in capturing meaningful data from children and parents (e.g. focus groups) and 2) an intervention needs to be developed and tested to see if effects differ if content and structure of the camp sessions is changed. Finally, to more fully understand the impact of the camp on child injury surveillance strategy needs to be devised.

Conclusion

Little examination of the effects of day camps have been published. In the most recent report, McCallum et al. (2005) conducted a survey with three samples of children who attended day camps in 1999, 2000, or 2001. They administered a 30 item survey at two time periods (pre-camp and 3 months following camp) for total sample of 1,780. Like our study, their report noted that safety scores improved for both farm and nonfarm children. As with previous studies, they acknowledged the difficulty in constructing survey questions that were appropriate for children and that also were reliable and valid. No reports on reliability and validity of their instruments were provided but the authors noted that the survey items lacked depth and breadth. Moreover, they recommended that the three month time interval may have been too short to substantiate prolonged effects of the camp. Our study extended this examination for 18 months following the camp experience, lending support for this effect. In addition, our study included opportunities for narrative reports, which were then triangulated in the examination of each hypothesis. This "multi-lens" view provided in-depth data lacking in other studies. Previous research on the effects of the camps on children's knowledge and behavior have relied on self-reports alone. Such reports are always suspect, especially from children who may be more highly motivated to respond favorably. In an effort to check the reliability of the data, we included measures of parental perceptions of their child's farm safety knowledge, attitude, and behaviors. The agreement between children and parents' responses lend support to the reliability of the children's answers, except in the case of injury and close calls.

Previous studies noted that day camps are subject to broad variation in content and context. This precludes rigorous evaluation of the outcomes of the intervention. Our study provided on-site and video analysis of the instructional delivery style and quality, content, context, and take home resources provided by each camp. While variations existed, the data support that instructional content and style were generally appropriate for the selected topics under study. This additional evaluative method provided evidence that may further explain the effects of the camp.

Criticisms of previous reports have included the lack of randomization, lack of comparison groups, and the small number of camps that were included in the study design (Baker 2001; McCallum 2005). Our study enrolled all campers who agreed to participate in the initial phase of the study, thus randomization of individuals was unnecessary. While we acknowledge that our study suffers from the lack of randomization at the camp level we would argue that this in-depth descriptive work is essential and prudent in light of the early stage of research with these community events. To that end, the purposeful selection of camps across various geographic regions of the nation, varied camp sizes, selecting camps that were fairly new as well as established camps, and insuring varied camp leadership, may have captured as much variability as a pure random sample.

It remains difficult to tease out the effects of the camps from other influences on the child's knowledge and natural history. The effects of aging certainly should be considered as well as other influences we may not have known about. It could have been that only the households that were extremely interested in safety remained in the study, therefore overestimating the effects of the camp. The reports of the chapter leaders provided some information (albeit very limited) about community interventions and sentinel events that might have influenced outcomes; however, there was no evidence from the parents that any of the events reported by the chapter leaders influenced their decisions about farm safety in their households. This multi-level design should be refined and retested to ferret out possible competing variables.

Presentations and Publications

Selected findings from this study were presented in multiple venues from small local events to international symposiums. Oral presentations and scientific poster discussions were given. As of the date of this report, 18 scientific presentations have been made. A list of these presentations appears in Appendix I. Topics covered were day camp instructor techniques, challenges of working with volunteers, farm exposures and work tasks reported by children and their parents, key components for planning a day camp, and camp evaluation measurement results. Target audiences included students, health professionals, safety advocates, cooperative extension officers, research groups, and community leaders.

In addition to health and safety conferences, findings from this study were presented to key agricultural leaders in Ireland to introduce them to the idea of farm safety camps. The information was very well received and as a result, the agricultural group in Ireland plans to pilot test farm safety day camps in their country. The research PI and project manager continue dialog with these new Irish colleagues to launch this educational project.

We were also able to involve undergraduate and graduate UK College of Nursing students in several presentations which increased their awareness of farm hazards and the need for appropriate instruction and guidelines for children on farms. One student received honorable mention for her scientific poster presented at the Southern Nursing Research Society Conference. This distinction had never previously been bestowed upon an undergraduate student. Upon graduation in May 2005, the student joined the Indian Health Service. She is currently assigned to a rural area in Washington and plans to incorporate farm safety in her practice with Native Americans.

A graduate student in the UK College of Agriculture majoring in Ag Communications also assisted in the day camp project. As a result of her involvement she is now employed full time in the Kentucky Department of Agriculture's Health and Safety unit and focuses much of her work on the child sector.

Evaluation findings were featureed at the FS4JK National Conference in 2004. The importance of recruiting and training instructors and evaluating their individual camps were stressed to FS4JK officers and local chapter leaders and volunteers from across the United States and Canada.

This project worked in collaboration with Dr. Debra McCallum and Susan Reynolds in the study of farm safety day camps hosted through the Progressive Agriculture Foundation to develop a poster addressing the challenges of working with grass-root organizations. Future work planned includes the merging and analysis of identical items from each study. These efforts support the plan of collaborative work outlined in the project proposal. The project principal investigators are now collaborating on an intervention based on findings from these two studies.

There is one publication as of the date of this report and a 2nd manuscript is in press. Both articles focus on day camp instructors and their methods of delivering farm safety messages to children

(see list in Appendix I). A number of other manuscripts are in various stages of writing. These include:

1) A solicited article on child farm injury (*Pediatric Nursing*)
2) Knowledge gained from attending a farm safety day camp; who learns the most (*Journal of Agricultural Safety and Health*)
3) Parent/child survey reports: convergence and discrepancies (journal undetermined)
4) Camp's over, now what? (*Health Education*)
5) Parental safety behaviors following children's attendance at a farm safety day camp (*Family and Community Health*)
6) Community leaders as research partners: case studies from 5 states (*Applied Occupational Health and Safety*)
7) FFA and day camps – Exemplars and Examples (*Journal of Agriculture Education*)
8) Its in the Bag – Let it out: Goodie bag resources from day camps (*Successful Farming*)
9) Farm safety day camps – Take a trip with your child (*Farmer's Pride* or *Progressive Farmer*)

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Principal Investigator/Program Director (Last, First, Middle): Reed, Deborah B.

Inclusion Enrollment Report

This report format should NOT be used for data collection from study participants.

Study Title: Evaluation of Farm Safety 4 Just Kids Day Camps

Total Enrollment: 1,960 **Protocol Number:** 01-0288-F1V

Grant Number: 1 R01 OH07534-01

PART A. TOTAL ENROLLMENT REPORT: Number of Subjects Enrolled to Date (Cumulative) by Ethnicity and Race

Ethnic Category	Sex/Gender			
	Females	Males	Unknown or Not Reported	Total
Hispanic or Latino	37	44	0	81 **
Not Hispanic or Latino	844	656	15	1,515
Unknown (individuals not reporting ethnicity)	2	4	358	364
Ethnic Category: Total of All Subjects*	883	704	373	1,960 *
Racial Categories				
American Indian/Alaska Native	11	19		30
Asian	1			1
Native Hawaiian or Other Pacific Islander				
Black or African American	8	9		17
White	824	628	15	1,467
More Than One Race		1		1
Unknown or Not Reported	39	47	358	444
Racial Categories: Total of All Subjects*	883	704	373	1,960 *

PART B. HISPANIC ENROLLMENT REPORT: Number of Hispanics or Latinos Enrolled to Date (Cumulative)

Racial Categories	Females	Males	Unknown or Not Reported	Total
American Indian or Alaska Native				
Asian				
Native Hawaiian or Other Pacific Islander				
Black or African American				
White	7			7
More Than One Race		1		1
Unknown or Not Reported	30	43		73
Racial Categories: Total of Hispanics or Latinos**	37	44		81 **

* These totals must agree.
** These totals must agree.

APPENDICES

APPENDICES

APPENDIX A

Data Collection Instruments

Appendix A.1

Pretest

Farm Safety Just Kids

PRE-TEST
FARM SAFETY 4 JUST KIDS DAY CAMPS

CIRCLE THE CORRECT ANSWERS

Instructions: Please read each question carefully. Circle only one answer for each question. If you don't know the answer to some of the questions – don't worry! Just circle the "don't know" answer. These will be some of the things you will learn at camp. ☺

YOUR NAME _____
First Last

1. What grade are you in at school? **3rd** **4th** **5th** **Other** _____ (*write in answer*)

2. How old are you? **Younger than 8** **8** **9** **10** **11** **Over 11**

3. Which of the following are you? **Boy** **Girl**

4. Which of the following are you? (*circle only one*)

White **American Indian** **Black** **Hispanic** **Other** _____ (*write in answer*)

5. Before coming to this camp, how many farm safety day camps have you attended?

None **1** **2** **3 or more**

6. Read a-e listed below. Then choose the one that best describes you? (*circle only one answer*)

a. **Live on a farm**
b. **Live on a farm and do farm chores**
c. **Do farm chores on someone else's farm but do not live on a farm**
d. **Visit farms**
e. **Never been on a farm**

7. How often do you usually do chores on a farm? (*choose the best answer*)

Never **Every Day** **A few days a Week** **A few days a month** **A few days a year** **Summers Only**

TRACTOR SAFETY

☺ *Remember – circle only one answer for each question* ☺

8. Which would be the safest way to travel from one end of the field to the other? (*Choose only one answer*)

As a rider in the tractor cab **On the fender of a tractor** **Walking along beside the tractor** **None of these ways are safe**

9. It's okay to have an extra rider on a tractor if the tractor has an enclosed cab. **Yes** **No** **Don't Know**

10. You should use a seatbelt if your tractor has a rollover protective structure. **Yes** **No** **Don't Know**

11. Dad's lap is a safe place to ride on a tractor. **Yes** **No** **Don't Know**

12. How often do you ride on a tractor while someone else drives?

Never **Every day** **A few days a week** **A few days a month** **A few days a year**

13. Have you ever driven a tractor by yourself? **Yes** **No** **Don't Know**

IF "NO" TO QUESTION 13, SKIP TO QUESTION 17

14. How often do you drive a tractor?

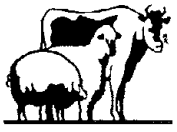
Every day **A few days a week** **A few days a month** **A few days a year**

15. Does the tractor you drive have a ROPS (roll-over protective structure)?

Yes **Usually** **No** **Don't Know**

16. How often do you use a seatbelt when driving a tractor?

Every time **Very often** **Sometimes** **Never**



Animal Safety

☺ *Remember – circle only one answer for each question* ☺

17. How often are you near livestock (like cows, horses, pigs, goats, sheep, or other farm animals)?

Every day **A few days a week** **A few days a month** **A few days a year** **Never**

18. How often are you near livestock <u>when there's no fence between you and the animals</u>?

Every day	A few days a week	A few days a month	A few days a year	Never

19. You should wear hearing protection when working with pigs inside a building.	Yes	No	Don't Know
20. Farm animals can become scared when someone walks up behind them.	Yes	No	Don't Know
21. I can outrun a cow if it starts to chase me.	Yes	No	Don't Know
22. Female animals can be more dangerous when they have babies.	Yes	No	Don't Know

23. When working around animals it is best to: (*choose one*)

Move quickly (run)	Wave your arms and shout	Be sure the animal can see you	Don't Know

24. When feeding livestock which is the safest? (*choose one*)

Keep a fence between you and the animals	Shout and yell at the animals to keep them away	Run in the pen, leave the feed, and run back out	Don't Know

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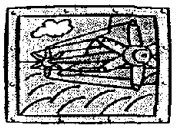


Power Equipment Safety

☺ *Remember – circle only one answer for each question* ☺

25. How often do you use farm equipment?

Every day	A few days a week	A few days a month	A few days a year	Never

26. How often are you near augers when they are in use?

Every day	A few days a week	A few days a month	A few days a year	Never	Don't Know

27. It is okay if the safety shield is not on power equipment if it saves time or makes the job go easier.	Yes	No	Don't Know
28. A safety shield makes it safe to step over a power take-off.	Yes	No	Don't Know

29. It's better to wear loose clothing when doing farm work, especially around power take offs (PTO). **Yes** **No** **Don't Know**

30. It is better to leave equipment running when you work on it. **Yes** **No** **Don't Know**

31. It is okay to climb over equipment if it is not running. **Yes** **No** **Don't Know**

32. Which of the following is important when working around farm equipment? (*choose one answer*)

Wear a hat **Pull long hair back** **Wear dark clothing** **Don't Know**

33. You see your Dad is off the combine and working on it. You want to know why. What should you do? (*choose one answer*)

Go to where he is standing beside the combine **Stay where you are and ask him at supper** **Yell at him then run across the field to him**

Thinking and Talking About Safety

For each idea listed, circle **one** number in each box to tell how much you have thought about and talked to others about that idea in the last month. The numbers can be different for each box.

		How much I **thought** about the idea			How much I **talked** to others about the idea		
No.	Ideas I have thought about and talked about in the last month	Not at all	A Little	A Lot	Not at all	A little	A lot
34.	How someone in my family might get hurt on a farm or ranch.	1	2	3	1	2	3
35.	Ways to protect myself from injury while I'm on a farm or ranch.	1	2	3	1	2	3
36.	How following safety rules can prevent injuries on the farm.	1	2	3	1	2	3

37. When you talk to people about the types of ideas listed above, who do you talk to? (*circle all that apply*)

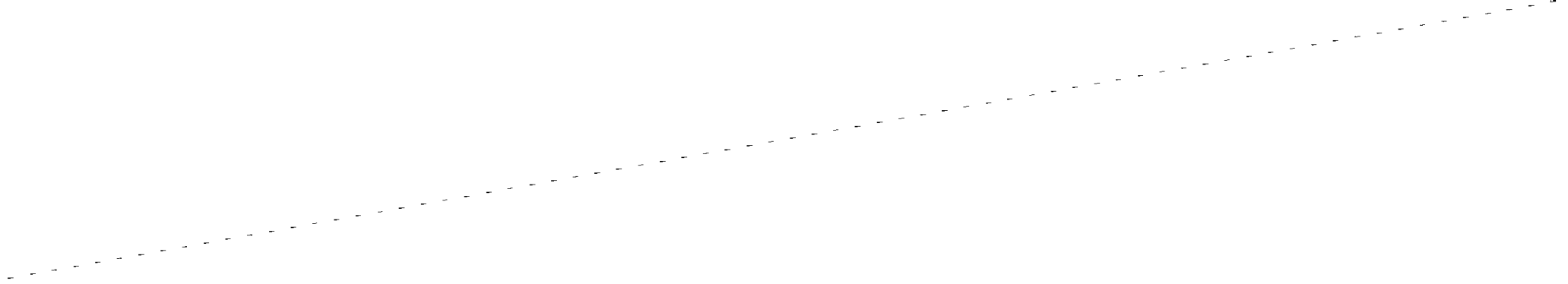
My friends **My parents** **Other family members** **Other adults** **Teacher**

You are finished! Please look back over all the questions and be sure you answered each one. If you have any questions ask your leader now. Turn in the survey to your leader. Thank you!

STAY SAFE!

Appendix A.2

Posttest



Farm Safety 4 Just Kids

POST TEST
FARM SAFETY 4 JUST KIDS DAY CAMPS

CIRCLE THE CORRECT ANSWERS

Instructions: Please read each question carefully. Circle only one answer for each question. If you don't know the answer to some of the questions – don't worry! Just circle the "don't know" answer. ☺

YOUR NAME _____

First Last

1. What grade are you in at school? **3rd** **4th** **5th** **Other** _____ (*write in answer*)

2. How old are you? **Younger than 8** **8** **9** **10** **11** **Over 11**

3. Which of the following are you? **Boy** **Girl**

4. Which of the following are you? (*circle only one*)

White **American Indian** **Black** **Hispanic** **Other** _____ (*write in answer*)

5. Before coming to this camp, how many farm safety day camps have you attended?

None **1** **2** **3 or more**

6. Read a-e listed below. Then choose the one that best describes you? (*circle only one answer*)

a. **Live on a farm**
b. **Live on a farm and do farm chores**
c. **Do farm chores on someone else's farm but do not live on a farm**
d. **Visit farms**
e. **Never been on a farm**

7. How often do you usually do chores on a farm? (*choose the best answer*)

Never **Every Day** **A few days a Week** **A few days a month** **A few days a year** **Summers Only**

TRACTOR SAFETY

☺ *Remember – circle only one answer for each question* ☺

8. Which would be the safest way to travel from one end of the field to the other? (*Choose only one answer*)

As a rider in the tractor cab **On the fender of a tractor** **Walking along beside the tractor** **None of these ways are safe**

9. It's okay to have an extra rider on a tractor if the tractor has an enclosed cab. **Yes** **No** **Don't Know**

10. You should use a seatbelt if your tractor has a rollover protective structure. **Yes** **No** **Don't Know**

11. Dad's lap is a safe place to ride on a tractor. **Yes** **No** **Don't Know**

12. How often do you ride on a tractor while someone else drives?

Never **Every day** **A few days a week** **A few days a month** **A few days a year**

13. Have you ever driven a tractor by yourself? **Yes** **No** **Don't Know**

IF "NO" TO QUESTION 13, SKIP TO QUESTION 17

14. How often do you drive a tractor?

Every day **A few days a week** **A few days a month** **A few days a year**

15. Does the tractor you drive have a ROPS (roll-over protective structure)?

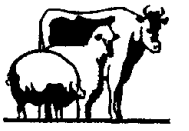
Yes **Usually** **No** **Don't Know**

16. How often do you use a seatbelt when driving a tractor?

Every time **Very often** **Sometimes** **Never**

Animal Safety

☺ *Remember – circle only one answer for each question* ☺



17. How often are you near livestock (like cows, horses, pigs, goats, sheep, or other farm animals)?

Every day **A few days a week** **A few days a month** **A few days a year** **Never**

18. How often are you near livestock <u>when there's no fence between you and the animals</u>?

Every day **A few days a week** **A few days a month** **A few days a year** **Never**

19.	You should wear hearing protection when working with pigs inside a building.	**Yes**	**No**	**Don't Know**
20.	Farm animals can become scared when someone walks up behind them.	**Yes**	**No**	**Don't Know**
21.	I can outrun a cow if it starts to chase me.	**Yes**	**No**	**Don't Know**
22.	Female animals can be more dangerous when they have babies.	**Yes**	**No**	**Don't Know**

23. When working around animals it is best to: (*choose one*)

Move quickly (run)	**Wave your arms and shout**	**Be sure the animal can see you**	**Don't Know**

24. When feeding livestock which is the safest? (*choose one*)

Keep a fence between you and the animals	**Shout and yell at the animals to keep them away**	**Run in the pen, leave the feed, and run back out**	**Don't Know**

Power Equipment Safety

☺ *Remember – circle only one answer for each question* ☺

25. How often do you use farm equipment?

Every day **A few days a week** **A few days a month** **A few days a year** **Never**

26. How often are you near augers when they are in use?

Every day **A few days a week** **A few days a month** **A few days a year** **Never** **Don't Know**

27.	It is okay if the safety shield is not on power equipment if it saves time or makes the job go easier.	**Yes** **No**	**Don't Know**
28.	A safety shield makes it safe to step over a power take-off.	**Yes** **No**	**Don't Know**
29.	It's better to wear loose clothing when doing farm work, especially around power take offs (PTO).	**Yes** **No**	**Don't Know**
30.	It is better to leave equipment running when you work on it.	**Yes** **No**	**Don't Know**
31.	It is okay to climb over equipment if it is not running.	**Yes** **No**	**Don't Know**

32. Which of the following is important when working around farm equipment? (*choose one answer*)

Wear a hat **Pull long hair back** **Wear dark clothing** **Don't Know**

33. You see your Dad is off the combine and working on it. You want to know why. What should you do? (*choose one answer*)

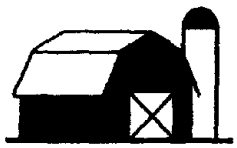
Go to where he is standing beside the combine **Stay where you are and ask him at supper** **Yell at him then run across the field to him**

You are finished! Please look back over all the questions and be sure you answered each one. If you have any questions ask your leader now. Turn in the survey to your leader. Thank you!

STAY SAFE!

Appendix A.3

Station Instructor Data Sheet



Station Instructor Data Sheet
FS4JK Day Camp Evaluation

STATION AT CAMP _____

1. What is your primary job? (*example: equipment dealer, farmer, factory worker*)

_____

2. Which of the following best describes you? (*circle only one answer*)

   a. **Live on a farm**
   b. **Live and work on a farm**
   c. **Work on a farm only**
   d. **Do not live or work on a farm**

3. How much farm work experience do you have? (*circle only one answer*)

   a. **None**
   b. **A little**
   c. **Quite a bit**
   d. **A lot**

4. Other than farm safety camps, where else do you instruct children? (*circle all that apply*)

   a. **Church**
   b. **Schools**
   c. **4-H**
   d. **Boy/Girl Scouts**
   e. **Other** _____

5. What was the primary reason you participated in today's day camp? (*circle only one answer*)

   a. **Part of my paid job**
   b. **Like to work with children**
   c. **Realize the importance of farm safety**
   d. **Personal experience with farm injury**
   e. **No one else could come**
   f. **Other** _____

6. Have you ever had a severe injury as a result of a farm-related activity? (*circle yes or no*) **Yes** **No**

7. Do you know anyone who has ever had a severe injury as a result of a farm-related activity? (*circle yes or no*) **Yes** **No**

8. How many times have you made this presentation? (*count each event as one time*)

_____ **times**

9. How often do your receive any written feedback on your performance as a station instructor?

Never **Rarely** **Sometimes** **Often**

10. Where did you get your information about the topic you presented? (*circle all that apply*)

a. Personal experience on farm
b. Internet
c. Agriculture safety specialist
d. Farm magazines
e. Other _____
f. Agriculture organizations
g. Brochures/leaflets
h. Research articles
i. Commercial dealers (like farm equipment dealers)

11. Will you (or did you) give the children any printed material today? (*circle yes or no*) **Yes** **No**

If yes, how important was each of the following in selecting the material?
(*check one answer for each feature*)

	Feature	Not Important	Somewhat Important	Very Important
12.	Price			
13.	Pictures			
14.	Color			
15.	Message			
16.	Reading level			

17. How much training have you had in educational techniques for children?

None **Some** **A lot**

18. What specific techniques do you use for children in the middle grades (8-12 years old)? (*examples: games, role play, lecture, nothing specific*)

_____

_____

19. What is the most important specific thing you want the children to remember from your station today?

_____

_____

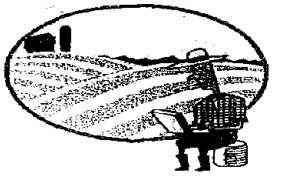
_____

Appendix A.4

Day Camp Demographics Sheet

FS4JK DAY CAMP DEMOGRAPHICS

(Attach program and schedule)



Chapter Name Hosting Camp			
Progressive Farmer Camp?	**Yes**	**No**	
Date of Camp			
Weather (*circle one*)	**Storms**	**Sunny**	**Raining**
Temperature (*circle one*)	**Comfortable**	**Hot**	**Cold**
# of Children that Attended			
Age Group Served			
Total # of Training Stations			
Length of Camp (hours)			
# of Adults Working Camp			
# of Adults Attending Camp			

Overall Impression (indicate strengths/areas for improvement)

FS4JK DAY CAMP DEMOGRAPHICS (continued)

Comments – Unusual circumstances or factors
(*examples: 2 station leaders/no show forced rescheduling; farm injury death last week*)

How many training sessions were held prior to camp and how long were the sessions? (*specify below*)

	Number of Sessions	Number of Hours
Training sessions for instructors		
Training sessions for other staffers		

Charge to campers $_____

Appendix A.5

Teacher Information Sheet

TEACHER INFORMATION SHEET-FS4JK Day Camp

Our camp is taking part in a formal evaluation study of farm safety day camps. We are only one of five Farm Safety 4 Just Kids Camps to be in this study. The study is being conducted by the University of Kentucky and the National Farm Safety 4 Just Kids Organization. For this evaluation to be valid all camps in the study are asking the teachers to have their students complete a short pretest in class sometime during the week before you come to camp. Please set aside about 15 minutes for this activity before camp. The tests are in this packet. Please read over the items before giving them to your students. It may be better if you read the items to the children. Most teachers find that this decreases confusion and the time it takes. Remind students to place their names on the form. Be sure to tell them this is not part of a class grade and that if they do not know an answer that it is ok to guess or to mark "don't know."

As part of our evaluation we need to know a few things about your class. Please complete the information below and return it with your class pretests. Thank you for helping!

Teacher:_____School_____

Grade 4 5 Number enrolled____

Number with permission to attend day camp _____

Number refusals _____ Reasons given, if known_____

What did you do in class to help prepare students for the day camp (examples: had a science unit on how plants grow on a farm, had students draw a picture about a farm, read poems about life on a farm)

If you plan to do any follow up activities what are they?

_____

_____

How much do you know about farm safety? Not much A little Quite a bit A lot

Place this sheet on top of your students' completed pretests and give them to the day camp leader. Thank you! Have fun at camp!

Appendix A.6

Camper's 1-month Post-Camp Survey

FARM SAFETY 4 JUST KIDS DAY CAMPS

CAMPER'S 1-MONTH FOLLOW UP

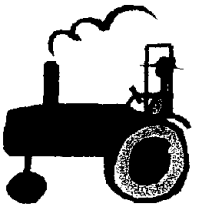
Label with Child's Name

Instructions: Please read each question carefully. Circle only one answer for each question unless told to do differently. If you don't understand the question, you can ask your Mom or Dad what it means.

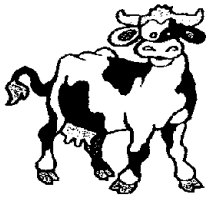
1. During the last month, have you been on a farm? **Yes** **No**

2. During the last month, how many times have you ridden on a tractor with someone else driving?

   a. None
   b. 1 time
   c. 2-3 times
   d. More than 3 times



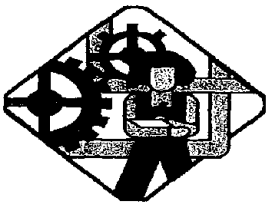
3. During the last month, how many times have you been close to farm animals when there was no fence between you and the animals?



   a. None
   b. 1 time
   c. 2-3 times
   d. More than 3 times

4. During the last month, how many times have you been near augers when they were in use?

   a. None
   b. 1 time
   c. 2-3 times
   d. More than 3 times



5. Have you talked to your parents about farm safety rules you learned at the day camp?

   Yes **No**

6. Are there any places on the farm that you have stopped playing around since the day camp?

   a. **Yes**
   b. **No**
   c. **Don't live on, work on, or visit farms** *(go to question #9)*

7. If yes, where are those places? _____

   _____

8. Why did you stop playing there? _____

   _____

9. Have you gotten hurt on the farm in the last month? **Yes** **No**

10. Did you miss any school because of getting hurt on the farm? **Yes** **No**

11. Did you have to go to the hospital or doctor when you got hurt? **Yes** **No**

12. Describe what you were doing when you got hurt.

    _____

    _____

    _____

13. Since the day camp, have you had any lessons or meetings that talked about the following safety areas? *Circle yes or no for each safety area.*

    a. Tractor safety? **Yes** **No**

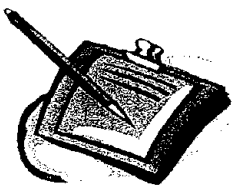
    b. Animal safety? **Yes** **No**

    c. Power equipment safety? **Yes** **No**

14. If yes, where did you have these lessons? (*circle all that apply*)

    a. **School**
    b. **Home**
    c. **4-H meeting**
    d. **Other (please describe)**

    _____



For the following statements, circle the answer that best describes how you feel about each one.

	Statement	Agree	Disagree	Not Sure
15.	I should let adults know when I don't know how to do a farm task.	1	2	3
16.	I could be injured while doing farm work.	1	2	3
17.	Safety rules should be followed even if they slow the job down.	1	2	3
18.	If my Mom or Dad don't follow safety rules, I don't need to either.	1	2	3
19.	There are some safety rules I would not follow if I thought my friends would laugh at me.	1	2	3
20.	Some injuries could affect me for the rest of my life.	1	2	3
21.	There are places on the farm that are dangerous for me to play or be around.	1	2	3
22.	There are places on the farm I don't go near because they are dangerous.	1	2	3
23.	Farm safety rules are only important for people who live or work on a farm.	1	2	3
24.	We have safety rules on our farm.	1	2	3

25. Finish as many of the safety rules below as you can:

e. If it dangles, it _____.
f. One seat, one _____.
g. Where animals play, stay _____.
h. Don't play where danger _____.

26. Have you or your parents used any of the things that were in the goodie bag you received at camp?

Yes **No**

27. If yes, what did you use and how did you use it? (Example: put stickers on machinery, read brochures, looked up websites on computer) *Answer in the boxes below.*

What Items Have You Used?	**How Did You Use Them?**

Thinking and Talking About Safety

For each idea listed, circle **ONE** number in each box to tell how much you have thought about and talked to others about that idea in the last month. The numbers can be different for each box.

		How much I **thought** about the idea			How much I **talked** to others about the idea		
No.	Ideas I have thought about and talked about in the last month	Not at all	A Little	A Lot	Not at all	A little	A lot
28.	How someone in my family might get hurt on a farm or ranch.	1	2	3	1	2	3
29.	Ways to protect myself from injury while I'm on a farm or ranch.	1	2	3	1	2	3
30.	How following safety rules can prevent injuries on the farm.	1	2	3	1	2	3

31. Who have you talked to about the safety ideas listed above? (*circle all that apply*)

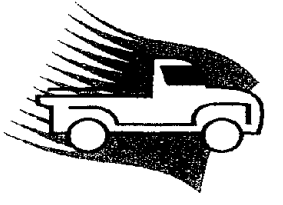
My friends **My parents** **Other family members** **Other adults** **Teacher** **No One**

32. Has it been easier to talk to your parents about farm safety since the day camp? **Yes** **No**

In the next set of questions you will find a short story about common activities on the farm. After reading the story, circle only one answer that best describes what you would do if you were the person in the story.

33. You and your family have been out in the field all afternoon helping with the farm work. Your job is finished. Your Mom is getting ready to leave in the truck to go start supper. Given the choices below, which would you do? *Circle only one answer*

a. **Ride back home with your Mom in the back of the truck.**
b. **Stay with your Dad and ride back on the tractor with him.**
c. **Walk back through the fields by yourself.**
d. **Get in the front of the truck with your Mom and go home.**



34. Two of your friends are spending the afternoon at your farm. They have never seen a baby calf and ask you to go show them the one you told them about at school. The calf and its mother are in a special fenced-in area. After getting your Mom's permission to see the calf, which of the following do you do?

a. **Feed the mother cow so your friends can pet the calf.**
b. **Tell your friends where the calf is and let them go out by themselves.**
c. **Take your friends out to where the cow and calf are and let them look at the calf from outside the fence.**
d. **Take your friends inside the fence so they can pet the calf.**

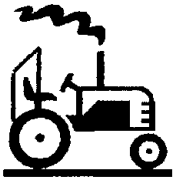
35. There's a storm moving in and your Dad is in a hurry to finish feeding before it starts raining. He asks you to operate the machine that moves the feed. You have seen him do it before but you've never done it. You are afraid you might get hurt doing it. What would you do?

   a. **Try to do the job without asking any questions.**
   b. **Tell your Dad you'd like to help but don't know how to do the job and you are afraid you could get hurt doing it.**
   c. **Tell him you don't feel well and are unable to do the task.**

If you ever do any farm work or chores, please answer questions 36 – 42. If you never do any farm work, please go to the box on the next page (#43).

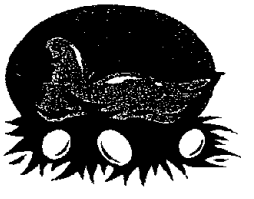
36. What kind of farm work have you done since the day camp? *Circle the letters of all that apply*

   a. **None**
   b. **Drive a tractor**
   c. **Operate other farm equipment**
   d. **Feed large animals (cows, horses, pigs)**
   e. **Feed small animals (chickens, ducks)**
   f. **Other (please list)** _____
   _____
   _____
   _____



37. Which jobs do you <u>usually</u> do on the farm? *Circle the letters of all that apply*

   a. **Drive a tractor**
   b. **Operate other farm equipment**
   c. **Feed large animals (cows, horses, pigs)**
   d. **Feed small animals (chickens, ducks)**
   e. **Other (please list)** _____
   _____
   _____
   _____



38. Thinking of all the farm work **<u>you</u>** do on the farm, which **<u>one</u>** do you think is the most dangerous? *Write your answer on the lines below*

_____

_____

39. Have you changed the way you do any of your farm work since the day camp? **Yes** **No**

40. If yes, what changes have you made? *Write answer here:*_____

_____

41. During the last month, did anyone ask you to do a job on the farm that you didn't know how to do?

Yes **No**

42. If yes, did you tell that person you didn't know how to do it?

Yes **No**

43. Tell us what you liked best about the farm safety day camp.	

Give this to your Mom or Dad to send back.

Thank you for helping us!

And don't forget...**SAFE IS COOL, OBEY THE RULES!**

Appendix A.7

Parent's 1-month Post-Camp Survey

Parent Survey - FS4JK Day Camp Evaluation
One Month Follow-Up

CHILD'S NAME
ADDRESS

1. What is your relationship to the child listed above?

   a. **Mother**
   b. **Father**
   c. **Grandparent**
   d. **Other (describe)** _____

2. Which of the following best describes you?

   a. **Live on a farm**
   b. **Live and work on a farm**
   c. **Work on a farm only**
   d. **Do not live or work on a farm**

3 How much farm work experience do you have?

   a. **None**
   b. **A little**
   c. **Quite a bit**
   d. **A lot**

4. What was the primary reason you sent your child to the FS4JK day camp?
   (Circle only one answer)

   a. **School field trip**
   b. **Child wanted to go with friend**
   c. **Realize the importance of farm safety**
   d. **Other** _____

5 · Did your child talk to you about any safety issues he/she learned about at the camp?

   Yes **No**

6. How effective do you feel the day camp was for increasing your child's knowledge of farm safety?

Very Effective **Somewhat Effective** **Not Effective**

7. How effective do you feel the day camp was for influencing your child's safety behavior on the farm?

Very Effective **Somewhat Effective** **Not Effective**

8. How effective do you feel the day camp was for increasing **your** knowledge of farm safety and safety behavior on the farm?

Very Effective **Somewhat Effective** **Not Effective**

9. Did you read any of the farm safety literature that your child brought home from the farm safety day camp?

Yes **No**

10. Have you requested any additional farm safety information or accessed any farm safety websites from the resources your child brought home?

Yes **No**

11. Have you made any changes related to farm safety since the day camp? (this includes rules for when your child visits a farm)

Yes **No** (skip to #14)

12. If yes, what change(s) did you make?

_____

_____

_____

13. Which of these changes were because your child talked to you about it after the day camp?

_____

_____

_____

_____

14. Is there anything on the farm you have **prohibited** your child from doing or being around since the farm safety day camp?

Yes **No**

15. If yes, please describe the activity. (*Example: not allowed to be near the auger*)

_____
_____
_____
_____

16. Is there anything on the farm you now **permit** your child to do or be around since the farm safety day camp?

Yes **No**

17. If yes, please describe the activity.

_____
_____
_____
_____

18. Do you have a "no extra rider" rule related to tractor riding? **Yes** **No**

If "no", go to question # 22

19. Who does the rule apply to? *Circle all that apply*

a. **My children**
b. **Any child**
c. **Hired labor**
d. **Adult family members**
e. **Others (list)** _____

20. How long has this rule been in effect? _____

21. What prompted you to adopt this rule?

_____
_____
_____
_____

22. If no to question 18, have you ever thought about adopting a "no extra rider" rule?

Yes **No**

23. Read a-e below. Then rank them in the order most likely to cause you to implement more farm safety rules or practices. (use #1 for most likely and #5 for the least likely) *Write the rank number beside the letter.*

___ **a. Information pamphlets about farm risk and safety precautions**
___ **b. A serious injury to your self or family member**
___ **c. A serious injury to another farmer you know**
___ **d. Someone's constant insistence that a change be made**
___ **e. Attending a safety training course**

24. Have <u>you</u> ever had a severe injury as a result of a farm-related activity?

Yes **No**

25. Has anyone else in your family ever had a severe injury as a result of a farm-related activity?

Yes **No**

26. In the last 12 months, did anyone in your household under the age of 20 experience any injuries which required at least 4 hours of restricted activity or required professional medical attention? (These injuries would include those resulting from farm work, chores or recreation on the farm or in the home.) *Circle only one answer.*

Yes **No** **Don't know** **Refuse to answer**

27. If yes: How many injuries of this type occurred? _____
How many injuries of this type occurred on a farm during the past year? _____

28 Has the child whose name is listed on the front of the survey ever had a farm-related injury?

a. Yes (*specify year of most serious injury & describe)*_____
_____
_____

b. No

29. Have you or any of your family had an injury as a result of a farm-related activity <u>since the day camp</u>?

Yes **No**

30. Have there been any close calls for farm-related injuries <u>since the day camp</u>? **Yes** **No**

31. Has any injury or close call caused you to make any changes on your farm?

Yes **No** **Don't have a farm**

32. Would you recommend a FS4JK day camp to other farm families? **Yes** **No**

33. Would you recommend a FS4JK day camp to non-farm families? **Yes** **No**

34. Would you like your child to attend another FS4JK day camp? **Yes** **No**

35. Why or why not? _____
_____
_____
_____

36. Have you discussed the day camp with anyone outside the family since your child attended?

Yes **No**

37. What was the total number of hours your child worked on a farm in the last month?

# of hours _____

38. How often does your child usually perform chores on a farm?

Every day	**A few days a week**	**A few days a month**	**A few days a year**	**Never**

39. How often does your child ride a tractor with someone else?

Every day	**A few days a week**	**A few days a month**	**A few days a year**	**Never**

40. How often does your child use a seatbelt when driving a tractor?

Every day	**A few days a week**	**A few days a month**	**A few days a year**	**Never**	**Doesn't drive a tractor**

41. How often is your child near livestock when there is no fence between them and the animals?

Every day	**A few days a week**	**A few days a month**	**A few days a year**	**Never**

42. How often does your child walk or stand near augers when they are in use?

Every day	**A few days a week**	**A few days a month**	**A few days a year**	**Never**

43. How often does your child use farm equipment?

Every day	A few days a week	A few days a month	A few days a year	Never

44. Which of the following **most** influences your decision to give your child a task to do on the farm? *Circle only one answer*

a. Strength and size of child
b. Mental maturity of child
c. Time pressures
d. Child's request to do task
e. Lack of other help

Compared to before the day camp, how much has your child talked to you about farm safety issues in the following areas:

	Area	More	About the Same	Less	Hasn't Talked at All
45.	Tractor Safety	1	2	3	4
46	Animal Safety	1	2	3	4
47.	Power Equipment Safety	1	2	3	4

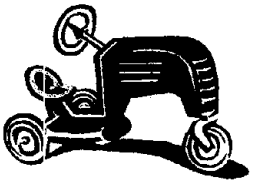
Thank you for taking the time to complete the survey for us. You should expect another survey in about 6 months. Your participation is extremely important for our study, for future farm safety day camps, and most importantly, the children.

Be sure to include your completed and signed W-9 if you wish to be paid for your participation.

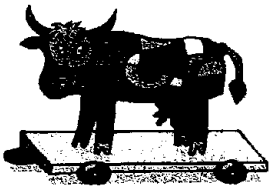
Additional Comments: (Use back of sheet if necessary)

Appendix A.8

Camper's 6-month Post-Camp Survey



FS4JK DAY CAMPS
CAMPER'S 6-MONTH SURVEY



Label Here
Child's Name/Address

Instructions: Please read each question carefully. Circle only one answer for each question unless told to do differently. If you don't understand the question, you can ask your Mom or Dad what it means.

1. During the last 5 months, have you been on a farm? **Yes** **No**

2. What kind of farm work or chores have you done in the past 5 months? *Circle all that apply*

   a. **Drive a tractor**
   b. **Operate other farm equipment**
   c. **Feed large animals (cows, horses, pigs)**
   d. **Feed small animals (chickens, ducks)**
   e. **Other (please list)** _____
   _____
   f. **None**

3. Have you changed the way you do any of your farm work since the last survey? **Yes** **No**

4. If yes, what changes have you made? *Write answer here:* _____
   _____
   _____

5. Have you done anything to make your farm safer? **Yes** **No**

6. If yes, what have you done? _____
   _____
   _____

7. In the last 5 months, have you done any farm work for the first time? **Yes** **No**

8. If yes, what type of work was it? _____
   _____
   _____

Flip page over and continue on the back

9. During the last 5 months, did anyone ask you to do a job on a farm that you didn't know how to do? **Yes** **No**

10. If yes, did you tell that person you didn't know how to do the job? **Yes** **No**

11. Are there any places on the farm that you have stopped playing around since the last survey?

Yes **No**

12. If yes, where are those places? _____

_____

_____

13. Have there been any new rules about farm safety on your farm since the last survey? **Yes** **No**

14. Have there been any new rules about farm safety for you since the last survey? **Yes** **No**

For the next set of questions, tell us how many times in the last month you have done each of the activities described in column1. *Circle only one answer for each activity.*

	IN THE LAST MONTH . . .				
15.	How many times have you ridden on a tractor with someone else driving?	**None**	**1 time**	**2-3 times**	**More than 3 times**
16.	How many times have you been close to farm animals when there was no fence between you and the animals?	**None**	**1 time**	**2-3 times**	**More than 3 times**
17.	How many times have you been near augers when they were in use?	**None**	**1 time**	**2-3 times**	**More than 3 times**
18.	How many times have you been around a tractor that was running?	**None**	**1 time**	**2-3 times**	**More than 3 times**
19.	How many times have you been near very loud noises on a farm?	**None**	**1 time**	**2-3 times**	**More than 3 times**

20. How likely is it that you would do something on a dare if you might get hurt? *(Circle only one)*

Very Likely **Somewhat Likely** **Not at all Likely** **Don't Know**

Continue on the next page . . .

21. How dangerous do you think it is for you to play around the places listed below?
Circle the number that best fits how you feel.

Place	Very Dangerous	Somewhat Dangerous	Not Dangerous	Not Sure
a. On the tractor	1	2	3	4
b. Where animals are	1	2	3	4
c. The barn	1	2	3	4
d. In the front yard	1	2	3	4

22. Since the last survey, have you had any lessons or meetings that talked about the following safety areas?
Circle yes or no for each safety area.

a. Tractor safety? **Yes** **No**

b. Animal safety? **Yes** **No**

c. Power equipment safety? **Yes** **No**

23. Have you gotten hurt on the farm in the past 5 months? **Yes** **No**

24. Did you miss any school because of getting hurt on the farm? **Yes** **No**

25. Did you have to go to the hospital or doctor when you got hurt? **Yes** **No**

26. Describe what you were doing when you got hurt.

_____

_____

_____

27. Did you almost get hurt on a farm in the past 5 months? **Yes** **No**

28. If yes to #27, describe how you almost got hurt. _____

_____

_____

Flip page over and continue on the back

For the next set of questions, tell us if you agree or disagree with each of the statements. If you're not sure, circle # 3.

	Statement	Agree	Disagree	Not Sure
29.	I let adults know when I don't know how to do a farm task.	1	2	3
30.	Safety rules should be followed even if they slow the job down.	1	2	3
31.	Farm safety rules are only important for people who live or work on a farm.	1	2	3
32.	If I hold on tight, it's okay to ride with someone else on a tractor.	1	2	3
33.	It's okay to play in a field with a cow as long as I don't bother the cow.	1	2	3
34.	Power equipment is not dangerous if it's not running.	1	2	3

In the next set of questions you will find a short story about common activities on the farm. After reading the story, circle only one answer that best describes what you would do if you were the person in the story.

35. You have watched your Dad use the weedeater several times and he finally decides that you can do the job. He gives you safety goggles and earplugs to wear. He never uses goggles or earplugs. You can't see through the goggles he gives you and the earplugs hurt. What do you do?

a. Try to talk your Dad out of making you wear the gear.
b. Use the protective gear even if you don't like it so he'll let you use the weedeater.
c. Ask your Dad if he can get you better fitting gear.
d. Take the gear off after Dad leaves.

Continue on the next page . . .

36. It's Saturday and you've been given the job to trim around the barn with the weedeater. Your parents told you to wear earplugs, gloves, and goggles while trimming. You start getting ready for the job and your older brother comes by and laughs at you. He says all that gear isn't necessary and he wouldn't use them. What would you do? *(Circle only one answer)*

a. **Agree with my brother and leave off some of the gear.**
b. **Explain to my brother the importance of the rules and how I could get hurt if I didn't follow the rules.**
c. **Wait until your brother goes away to do the job so he doesn't see you wearing all the protective gear.**
d. **Follow your parents' instructions for now and ask them later why it's so important.**

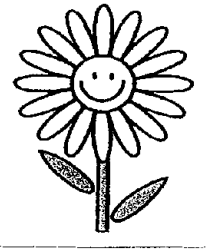
Thinking and Talking About Safety

For each idea listed, **circle only one number** in each box to tell how much you have thought about and talked to others about that idea in the last month. The numbers can be different for each box.

		How much I **thought** about the idea			How much I **talked** to others about the idea		
No.	Ideas I have thought about and talked about in the last month	Not at all	A Little	A Lot	Not at all	A little	A lot
37.	How someone in my family might get hurt on a farm or ranch.	1	2	3	1	2	3
38.	Ways to protect myself from injury while I'm on a farm or ranch.	1	2	3	1	2	3
39.	How following safety rules can prevent injuries on the farm.	1	2	3	1	2	3

40. Who have you talked to about the farm safety ideas listed above in the last 5 months? (*circle all that apply*)

My friends **My parents** **Other family members** **Other adults** **Teacher** **No One**



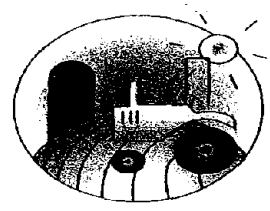
Thank you for helping us out. We will contact you again in about 6 months. Until then, remember...

SAFE IS COOL, OBEY THE RULES!

Appendix A.9

Parent's 6-month Post-Camp Survey

PARENT 6-MONTH FOLLOW UP SURVEY
FS4JK DAY CAMP EVALUATION



Label with Child's Name

Circle your answers unless otherwise instructed

1. What is your relationship to the child whose name is listed above?

   a. **Mother**
   b. **Father**
   c. **Grandparent**
   d. **Other (describe)** _____

2. Have you requested any additional farm safety information or accessed any farm safety websites from any source since the last survey?

   Yes **No**

3. Have you noticed any increase in media coverage by your local newspapers, television, and radio stations about farm safety events or issues since the FS4JK day camp?

   Yes **No**

Tell us if you have made any of the following changes *since the last survey* and if so, what was the main reason for each change you made. Circle yes or no for whether you've made the change. In the last two columns write the change(s) and the reason for the change (for example, *change* = not allowed to be near auger; *reason* – read about a child who was injured.).

4.	CHANGES	Have you made this change?		Specific Change(s)	Reason
	a. Prohibit my child from doing certain farm tasks.	**Yes**	**No**		
	c. Prohibited my child from being around certain places on the farm.	**Yes**	**No**		
	d. Prohibit my child from being around others doing farm work.	**Yes**	**No**		

Flip page over and continue on the back

5. Have you made any changes in your own behavior related to safety on the farm in the last 6 months?

Yes **No**

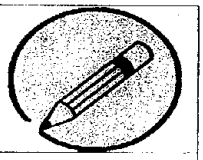
6. If yes, what changes have you made? _____

_____

_____

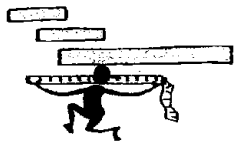
_____

When doing farm tasks, did you use any of the following **before** the day camp (Column A) and have you used any of the following **since** the day camp (Column B). *Circle yes or no in each column.*		Column A **Before the day camp**	Column B **Since the day camp**
7.	Seatbelt on a tractor?	**Yes No**	**Yes No**
8.	Hearing protection?	**Yes No**	**Yes No**
9.	Removed keys from equipment for safety?	**Yes No**	**Yes No**

10.	Since the last survey (6 months ago), have you done any of the following? Circle yes or no for each question		
	a. repaired or replaced safety shields?	**YES**	**NO**
	b. installed roll bars on tractors?	**YES**	**NO**
	c. improved animal confinement areas for safety reasons?	**YES**	**NO**
	d. made new work rules about safety?	**YES**	**NO**
	e. increased supervision while your child does farm work?	**YES**	**NO**
	f. adopted a "no extra rider" rule related to tractor riding?	**YES**	**NO**

Continue on the next page . . .

For questions 11-19, tell us how much the FS4JK day camp has increased you or your child's knowledge about farm safety. How much do you know or are aware of *because your child attended the day camp*?



	Because of your child's camp attendance . . .	**Less**	**Same**	**A Little More**	**A Lot More**
11.	How much do you know about children's safety on farms?	1	2	3	4
12.	How much general knowledge about farm safety do you have?	1	2	3	4
13.	How much attention do you pay to farm safety?	1	2	3	4
14.	How much does your child understand he/she should never be an extra rider on a tractor?	1	2	3	4
15.	How much does your child understand there should be a fence between them and farm animals?	1	2	3	4
16.	How much does your child understand not to step over a PTO shaft whether it's running or shut down?	1	2	3	4
17.	How much do you base your child's farm work on strength and ability?	1	2	3	4
18.	How much do you base your child's farm work on age?	1	2	3	4
19.	I allow my child to do additional farm tasks.	1	2	3	4

For the following questions, tell us how much you agree with each statement. *Circle the number that most reflects how you feel.*

		Strongly Agree	**Agree**	**Not Sure**	**Disagree**	**Strongly Disagree**
20.	If I'm in a hurry to get a farm task done, it's better to ask a child to do the job rather than wait until someone with experience is available.	1	2	3	4	5

Flip page over and continue on the back

		Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
21.	If a child has watched someone do a farm task several times, I would expect that child to know how to do it without giving step by step instructions.	1	2	3	4	5
22.	Because of the camp my child takes more risk when doing farm tasks.	1	2	3	4	5

23. Has your child received any instruction about farm tasks since the camp? **Yes** **No**

24. Was this instruction on a new task? **Yes** **No**

25. Was this instruction done by a family member? **Yes** **No**

26. How much emphasis on safety was included in the instruction? (*Circle one*)

Major amount **Some** **Very little** **None**

27. Who is primarily responsible for assigning chores and training your child in doing chores on the farm? *Circle only one answer*

a. Self **c. Other, older child** **e. Other worker**

b. Spouse **d. Other relative** **f. Other person**

28. When your child does farm work, how much supervision does the child usually receive? *Circle only one answer*

a. Usually direct supervision **c. Usually does job without supervision**

b. Usually checked on periodically **d. Child never does farm work**

29. How likely is it that your child would do something risky or dangerous on a dare?

Very Likely **Somewhat Likely** **Not at all Likely** **Don't Know**

Continue on the next page . . .

30. In the past 6 months, has your child entered areas on the farm where he/she has been instructed not to go?

Yes **No** **Don't Know**

31.	How likely is it that your child will be injured doing the farm work listed below before your child is 18 years old?	**Very likely**	**Somewhat likely**	**Not likely at all**
	a. Driving a tractor	**1**	**2**	**3**
	b. Operating powered equipment	**1**	**2**	**3**
	c. Operating an auger	**1**	**2**	**3**
	d. Working with livestock	**1**	**2**	**3**
	e. Doing any other farm work	**1**	**2**	**3**

The last set of questions relate to health and injuries. Answer these questions with regard to **the last 5 months only** (since the last survey).

32. In the last 5 months, did anyone in your household under the age of 20 experience any injuries that required at least 4 hours of restricted activity or required professional medical attention?

Yes **No** **Don't Know** **Refuse to answer**

33. If yes: How many injuries of this type occurred? _____ injuries

How many were the result of a farm-related activity? _____ injuries

34. Have there been any close calls for farm-related injuries in the last 6 months? *A "close call" is defined as something in which an injury did not occur but could have easily occurred. For example, someone fell off a farm wagon but was not injured.*

Yes **No** **Don't know**

Flip page over and continue on the back

35. If yes, how many close calls have occurred? _____ close calls

36. Have there been any injuries or close calls for the child whose name appears on this survey?

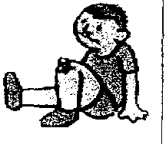
Yes **No** **Don't know**

37. If yes, describe what the child was doing at the time, where the child was, and the outcome. (e.g., Did it occur on a farm? Was the child doing chores or playing?)

_____

_____

38. What concerns have you ever had about your child growing up on the farm?



39. How would you describe your farm? For example, is it mainly a dairy farm, a tobacco farm, a beef cattle farm, a grain farm or something else?

_____

40. What is your race?

a. American Indian
b. Asian
c. Hawaiian/Pacific Islander
d. Black
e. White
f. More than one race

41. Are you of Hispanic or Latino origin? **Yes** **No** **Don't know**

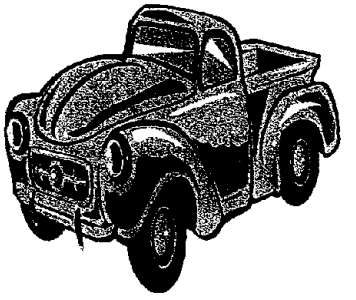
Once again, we thank you for your participation. We know how valuable your time is and appreciate you taking a few minutes to answer this survey. If you have any questions, you may contact us at (859)257-9636.

Appendix A.10

Camper's 12-month Post-Camp Survey

FS4JK DAY CAMPS
CAMPER'S 12-MONTH SURVEY

Label Here
Child's Name/Address



Instructions: Please read each question carefully. Circle only one answer for each question unless told to do differently. If you don't understand the question, you can ask your Mom or Dad what it means.

WE WILL PAY YOUR FAMILY $20 IF YOU AND YOUR PARENTS COMPLETE THE SURVEYS!

1. How many days have you ridden an ATV (four-wheeler) in the last month?
   a. **None**
   b. **Usually every day**
   c. **At least once a week**
   d. **At least one time**

2. How often do you ride as a passenger with someone else driving an ATV?
   a. **Never**
   b. **Sometimes**
   c. **Most of the time**
   d. **Always**

3. Have you ever attended a safety training class about ATV's? **Yes** **No**

4. What size engine does the ATV you normally ride have?
   a. **> 400 cc**
   b. **< 400 cc**
   c. **Don't know**
   d. **Never ride an ATV**

For the next set of questions, tell us how many times in the last 6 months you have done each of the activities listed below. *Circle only one answer for each activity*:

	IN THE LAST SIX MONTHS . . .				
5.	How many times have you ridden on a riding lawn mower with someone else driving?	**None**	**1 time**	**2-3 times**	**More than 3 times**
6.	How many times have you ridden on a tractor with someone else driving?	**None**	**1 time**	**2-3 times**	**More than 3 times**
7.	How many times have you ridden in the back of a pickup truck (truck bed)?	**None**	**1 time**	**2-3 times**	**More than 3 times**
8.	How many times have you been near very loud noises?	**None**	**1 time**	**2-3 times**	**More than 3 times**
9.	How many times have you been near very loud noises on a farm?	**None**	**1 time**	**2-3 times**	**More than 3 times**
10.	How many times have you used ear plugs or other hearing protection items?	**None**	**1 time**	**2-3 times**	**More than 3 times**
11.	How many times have you been close to farm animals when there was no fence between you and the animals?	**None**	**1 time**	**2-3 times**	**More than 3 times**
12.	How many times have you been near augers when they were in use?	**None**	**1 time**	**2-3 times**	**More than 3 times**
13.	How many times have you been around a tractor that was running?	**None**	**1 time**	**2-3 times**	**More than 3 times**

14. Have you been on a farm in the last 6 months (living, working, or visiting)?

Yes **No** (*if no, skip to question #21*)

15. What kind of farm work or farm chores have you done in the past 6 months? *Circle all that apply*

a. **Drive a tractor**
b. **Operate other farm equipment**
c. **Feed large animals (cows, horses, pigs)**
d. **Feed small animals (chickens, ducks)**
e. **Other (please list)** _____
_____
f. **None** (*If none, skip to question #18*)

16. Have you changed the way you do any of your farm work since the last survey? **Yes** **No**

17. If yes, what changes have you made? *Write answer here*: _____
_____
_____

18. Are there any places on the farm that you have stopped playing around since the last survey?

Yes **No**

19. If yes, where are those places? _____
_____
_____
_____

20. Have there been any new rules about farm safety for anyone on your farm since the last survey?

Yes **No**

21. Have there been any new rules about safety for you since the last survey? **Yes** **No**

22. If yes to #21, what are the new rules? _____
_____
_____

23. Tell us one thing you learned at the day camp about tractors, farm equipment, or animals.
_____
_____
_____

24. Have you gotten hurt in the past 6 months? **Yes** **No** (*if no, skip to question #32*)

25. How many times have you gotten hurt in the last 6 months? _____ **times**

26. What were you doing when you got hurt? (*examples: riding a horse, ATV, doing a specific chore*)

_____

_____

27. Did you have to go to the doctor when you got hurt? **Yes** **No**

28. Have you gotten hurt *on a farm* in the past 6 months? **Yes** **No** (*if no, skip to question #32*)

29. Did you miss any school because of getting hurt *on the farm*? **Yes** **No**

30. Did you have to go to the doctor or a hospital when you got hurt *on the farm*? **Yes** **No**

31. What were you doing when you got hurt on the farm?

_____

_____

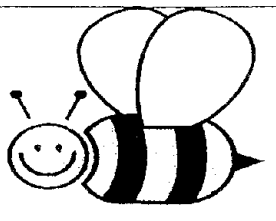
32. Did you almost get hurt on a farm in the past 6 months? **Yes** **No**
(*example: fell off horse or almost got hit by a tractor*)

33. If yes to #32, describe how you almost got hurt. _____

_____

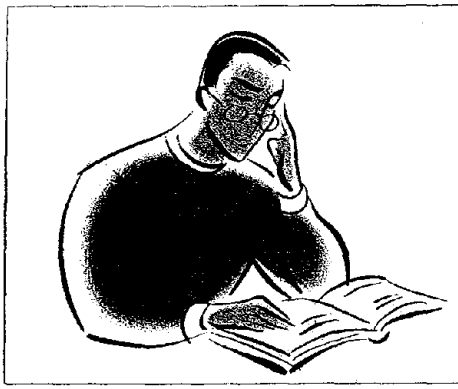
_____

Thank you for helping us and don't forget - Always "BEE" Safe!



Appendix A.11

Parent's 12-month Post-Camp Survey



PARENT 12-MONTH FOLLOW UP SURVEY
FS4JK DAY CAMP EVALUATION

Label with Child's Name

WE WILL PAY YOUR FAMILY $20 IF YOU AND YOUR CHILD COMPLETE THE SURVEYS!

Circle your answers unless otherwise instructed

1. What is your relationship to the child whose name is listed above?
   a. **Mother**
   b. **Father**
   c. **Grandparent**
   d. **Other (describe)** _____

2. Where is your child (*whose name appears above*) in birth order?
   a. **Oldest (first of 2 or more children)**
   b. **Second**
   c. **Third**
   d. **Other (specify)** _____
   e. **Only child**

3. How often is your child (*whose name appears above*) on a farm? (This includes visits)
   a. **Every day**
   b. **A few times a week**
   c. **A few times a month**
   d. **A few times a year**
   e. **Never** *(if never, go to question # 7)*

4. How often do you supervise your child's farm activities?

   Always **Frequently** **Sometimes** **Never**

5. Which of the following influence your decisions about what your child does on a farm?

	Influence?		*If yes, how much?*		
a. Know of a child injured	**Yes**	**No**	**A little**	**Some**	**A lot**
b. Had injury in family	**Yes**	**No**	**A little**	**Some**	**A lot**
c. Heard statistics about farm injury	**Yes**	**No**	**A little**	**Some**	**A lot**
d. What child learned at camp	**Yes**	**No**	**A little**	**Some**	**A lot**
e. What other families allow their children to do	**Yes**	**No**	**A little**	**Some**	**A lot**

6. How much farm work is your child doing compared to the amount of farm work your older children were doing at the same age?

   a. More

   b. Less

   c. Same

   d. No older children

7. How many <u>adults</u> living in your household grew up on a farm (*include yourself*)? _____

8. Did you grow up on a farm? **Yes** **No**

9. When was the last time anyone in your family (*<u>other than</u> the child whose name appears on the front of this survey*) attended a farm safety day camp?

   a. No one else has attended a camp

   b. Within the last 12 months

   c. Within the past 5 years

   d. Over 5 years ago

10. Have you requested any farm safety information or accessed any farm safety websites from any source in the last 6 months?

    Yes **No**

11. Have you noticed any media coverage by your local newspapers, television, and radio stations about farm safety events or issues in the last 6 months?

    Yes **No**

12. Does your child do any of the following activities? If yes, tell us how often:

Acvitity	***Does child do this?***		***If yes, how often?***			
a. Ride in a truck bed	Yes	No	Daily	Weekly	1-2 times month	Rarely
b. Mow the lawn	Yes	No	Daily	Weekly	1-2 times month	Rarely
c. Ride a horse	Yes	No	Daily	Weekly	1-2 times month	Rarely
d. Operate a 4-wheeler (ATV)	Yes	No	Daily	Weekly	1-2 times month	Rarely
e. Ride as passenger on ATV	Yes	No	Daily	Weekly	1-2 times month	Rarely
f. Drive a tractor	Yes	No	Daily	Weekly	1-2 times month	Rarely
g. Ride as a passenger on a tractor	Yes	No	Daily	Weekly	1-2 times month	Rarely
h. Feed livestock	Yes	No	Daily	Weekly	1-2 times month	Rarely

13. Have you made <u>any</u> safety rules or decisions for any of your children as a result of what the child (*whose name appears on the front of this survey*) learned at the farm safety day camp?

Yes **No**

14. Have you made any <u>farm</u> safety rules or decisions for any of your children as a result of what the child (*whose name appears on the front of this survey*) learned at the farm safety day camp?

Yes **No**

15. Have there been any significant events in the last 6 months that caused you to make a change related to farm safety?

Yes **No**

16. If yes, describe those events.

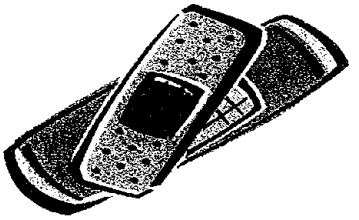
_____

_____

Tell us if you have made any of the following changes related to farm safety *in the last 6 months* and if so, what was the main reason for each change you made. Circle yes or no for whether you've made the change. In the last column write the reason why you made each change.

17.	CHANGES	Have you made this change?		Why did you make this change?
a.	Adopted new farm safety rules related to tractors, animals, or power equipment?	**Yes**	**No**	
b.	Increased supervision while your child does farm work?	**Yes**	**No**	
c.	Prohibited your child from doing certain farm tasks?	**Yes**	**No**	
d.	Prohibited your child from being around certain places on the farm?	**Yes**	**No**	
e.	Prohibited your child from being around others doing farm work?	**Yes**	**No**	
f.	Permitted your child to do additional farm tasks?	**Yes**	**No**	
g.	Permitted your child to be around places on the farm that were previously prohibited?	**Yes**	**No**	
h.	Permitted your child to be around others that were doing farm work more than you previously allowed?	**Yes**	**No**	
i.	Changed your own behavior related to safety on the farm?	**Yes**	**No**	
j.	Installed roll bars on tractor(s)?	**Yes**	**No**	
k.	Adopted a "no extra rider" rule related to tractor riding?	**Yes**	**No**	
l.	Improved animal confinement areas for safety reasons?	**Yes**	**No**	
m.	Repaired or replaced safety shields?	**Yes**	**No**	

The last set of questions relate to health and injuries. Answer these questions with regard to ***the last 6 months only*** (since the last survey).



18. In the last 6 months, did anyone in your household experience any injuries that required at least 4 hours of restricted activity or required professional medical attention?

Yes **No** **Don't Know**

19.	If yes, how many injuries of this type occurred to:	Number of Injuries	Number that Were Farm-related
	a. Persons under the age of 20?		
	b. Persons 20 years of age or older?		

20. For any farm-related injuries reported in question 19 above, describe each injury and how it happened (*example: cut arm on gravel after ATV crash in field*). Please include age and sex of person who was injured.

_____
_____
_____
_____
_____
_____
_____
_____

21. In your household, have there been any close calls for farm-related injuries in the last 6 months? *A "close call" is defined as something in which an injury did not occur but could have easily occurred. For example, someone fell off a farm wagon but was not injured.*

Yes **No** **Don't know**

22. If yes, how many close calls have occurred? _____ close calls

23. Have there been any injuries or close calls for the child whose name appears on this survey?

Yes **No** **Don't know**

24. If yes, describe what the child was doing at the time, where the child was, and the outcome. (e.g., Did it occur on a farm? Was the child doing chores or playing?)

_____

_____

If you have any additional comments related to the FS4JK day camp, please share them with us in the space below.

Once again, we thank you for your participation. We know how valuable your time is and appreciate you taking a few minutes to answer this survey. If you have any questions, you may contact us at (859)257-9636.

Appendix A.12

Camper's 18-month Post-Camp Survey

FS4JK DAY CAMPS
CAMPER'S 18-MONTH SURVEY

Label Here
Child's Name/Address

Instructions: Please read each question carefully. Circle only one answer for each question unless told to do differently. If you don't understand the question, you can ask your Mom or Dad what it means.

WE WILL PAY YOUR FAMILY $25 IF YOU AND YOUR PARENTS COMPLETE THESE SURVEYS!

1. Since the last survey (April 2003), have you told a friend, brother, sister, or other family member anything about farm safety?

   Yes **No**

2. Since the last survey (April 2003), have you made anyone follow a farm safety rule they didn't follow before?

   Yes **No**

3. What do you see your parents doing on the farm that might cause them to get hurt?

   _____
   _____
   _____
   _____

4. What have you done since the day camp (the past year and a half) to show a safe behavior to a friend or younger brother or sister?

   _____
   _____
   _____
   _____

For the next set of questions, circle the answer you feel is most correct.

5.	It's okay to have an extra rider on a tractor if the tractor has an enclosed cab.	**Yes**	**No**	**Don't know**
6.	You should use a seatbelt if your tractor has a rollover protective structure.	**Yes**	**No**	**Don't know**
7.	Dad's lap is a safe place to ride on a tractor.	**Yes**	**No**	**Don't know**
8.	You should wear hearing protection when working with pigs inside a building.	**Yes**	**No**	**Don't know**
9.	Farm animals can become scared when someone walks up behind them.	**Yes**	**No**	**Don't know**
10.	I can outrun a cow if it starts to chase me	**Yes**	**No**	**Don't know**
11.	Female animals can be more dangerous when they have babies.	**Yes**	**No**	**Don't know**
12.	It is okay if the safety shield is not on power equipment if it saves time or makes the job go easier.	**Yes**	**No**	**Don't know**
13.	A safety shield makes it safe to step over a power take-off.	**Yes**	**No**	**Don't know**
14.	It's better to wear loose clothing when doing farm work, especially around power take offs (PTO).	**Yes**	**No**	**Don't know**
15.	It is better to leave equipment running when you work on it.	**Yes**	**No**	**Don't know**
16.	It is okay to climb over equipment if it is not running.	**Yes**	**No**	**Don't know**

17. When working around animals it is best to: (*choose one*)

Move quickly (run)	**Wave your arms and shout**	**Be sure the animal can see you**	**Don't Know**

18. When feeding livestock which is the safest? (*choose one*)

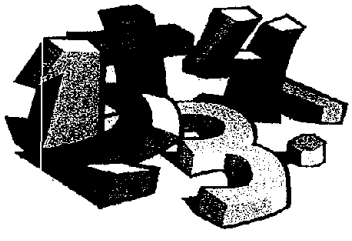
Keep a fence between you and the animals	**Shout and yell at the animals to keep them away**	**Run in the pen, leave the feed, and run back out**	**Don't Know**

19. Which would be the safest way to travel from one end of the field to the other? (*Choose only one answer*)

As a rider in the tractor cab	**On the fender of a tractor**	**Walking along beside the tractor**	**None of these ways are safe**

20. Which of the following is important when working around farm equipment? (*choose one answer*)

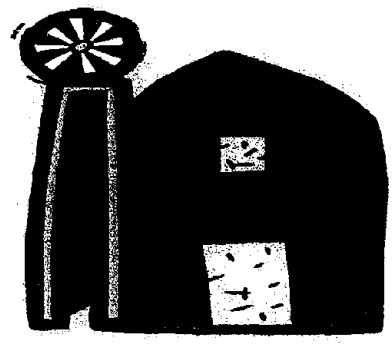
Wear a hat	**Pull long hair back**	**Wear dark clothing**	**Don't Know**



Tell us how many times since the last survey (April 2003) you have done each of the activities listed below. *Circle only one answer for each activity*:

	SINCE APRIL 2003 . . .				
21.	How many times have you ridden on a tractor with someone else driving?	**None**	**1 time**	**2-3 times**	**More than 3 times**
22.	How many times have you been close to farm animals when there was no fence between you and the animals?	**None**	**1 time**	**2-3 times**	**More than 3 times**
23.	How many times have you been near augers when they were in use?	**None**	**1 time**	**2-3 times**	**More than 3 times**
24.	How many times have you been around a tractor that was running?	**None**	**1 time**	**2-3 times**	**More than 3 times**
25.	How many times have you been near very loud noises on a farm?	**None**	**1 time**	**2-3 times**	**More than 3 times**

26. Why do you think farm safety is important?



27. Have you gotten hurt in the past 6 months? **Yes** **No** *(if no, skip to question #34)*

28. How many times have you gotten hurt in the last 6 months? _____ **times**

29. What were you doing when you got hurt? (*examples: riding a horse, ATV, doing a specific chore*)

30. Did you have to go to the doctor when you got hurt? **Yes** **No**

31. Have you gotten hurt *on a farm* in the past 6 months? **Yes** **No** *(if no, skip to question #34)*

32. Did you have to go to the doctor or a hospital when you got hurt *on the farm*? **Yes** **No**

33. What were you doing when you got hurt on the farm?

34. Did you almost get hurt on a farm in the past 6 months? **Yes** **No**
(*example: fell off horse or almost got hit by a tractor*)

35. If yes to #34, describe how you almost got hurt. _____

_____

_____

_____

_____

_____

36. In the last month, have you been asked to do a farm job you were not sure how to do? **Yes** **No**

37. If yes, did you tell the person that you did not know how? **Yes** **No**

38. Did you do the job? **Yes** **No**

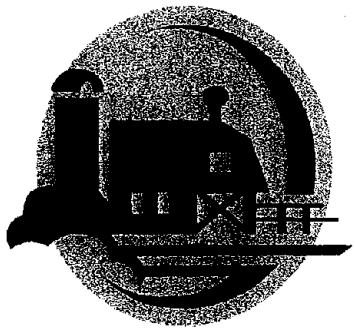
For the next set of questions, tell us if you agree or disagree with each of the statements. If you're not sure, circle # 3.

	Statement	Agree	Disagree	Not Sure
39.	I let adults know when I don't know how to do a farm task.	1	2	3
40.	Safety rules should be followed even if they slow the job down.	1	2	3
41.	Farm safety rules are only important for people who live or work on a farm.	1	2	3
42.	If I hold on tight, it's okay to ride with someone else on a tractor.	1	2	3
43.	It's okay to play in a field with a cow as long as I don't bother the cow.	1	2	3
44.	Power equipment is not dangerous if it's not running.	1	2	3

Thank you for helping us!

Appendix A.13

Parent's 18-month Post-Camp Survey



PARENT 18-MONTH FOLLOW UP SURVEY
FS4JK DAY CAMP EVALUATION

Label with Child's Name

WE WILL PAY YOUR FAMILY $25 IF YOU AND YOUR CHILD COMPLETE THE SURVEYS!

1. What is your relationship to the child whose name is listed above?
   - **a. Mother**
   - **b. Father**
   - **c. Grandparent**
   - **d. Other (describe)** _____

2. Today, 18 months after your child attended the day camp, how effective do you feel the day camp was for each of the following:

	Very Effective	Somewhat Effective	Not Effective
a. Your knowledge about farm safety?	1	2	3
b. Your child's knowledge about farm safety?	1	2	3
c. Your child's safety behavior on the farm?	1	2	3

3. In the last year and a half (since April 2002), have you adopted new safety rules related to:

a. Tractors?	**Yes**	**No**
b. Animals?	**Yes**	**No**
c. Power equipment?	**Yes**	**No**

4. Have you requested any farm safety information or accessed any farm safety websites from any source since April 2003?

Yes **No**

5. Since the last survey, has your child:

a. Convinced someone in your household to change the way they do a farm task to make it safer?	**Yes**	**No**	**Don't Know**
b. Convinced you to adopt new farm safety rules?	**Yes**	**No**	**Don't Know**
c. Told other children about farm safety rules?	**Yes**	**No**	**Don't Know**
d. Told an adult they didn't know how to do a farm task they were asked to do? *If not asked to do a farm task, check here* _____	**Yes**	**No**	**Don't Know**

6. Have you made any changes related to farm safety since the last survey? **Yes** **No**

7. If yes, what change did you make?

_____

_____

_____

_____

8. Which of these changes were because your child talked to you about it?

_____

_____

9. How many times in the last month has there been an extra rider on a tractor on your farm?

a. None

b. 1-2 times

c. 3-4 times

d. 5 or more times

e. Do not have farm

10. How often do you allow any of your children to ride as a passenger (on someone's lap) on a riding lawn mower?

Never **Rarely** **Sometimes** **Often**

11. Read the statements below and tell us how much you agree or disagree with each statement.

		Strongly Disagree	Somewhat Disagree	Not Sure	Somewhat Agree	Strongly Agree
a.	A short ride on the tractor with an adult is okay.	1	2	3	4	5
b.	I can give my child additional farm tasks if he/she's been to a FS4JK farm safety day camp.	1	2	3	4	5
c.	A child that doesn't live on a farm wouldn't learn much of value from a FS4JK farm safety day camp.	1	2	3	4	5
d.	The only safety rule needed on a farm is to "Be careful."	1	2	3	4	5
e.	A child who grew up on a farm doesn't need to be told all the safety dangers on the farm.	1	2	3	4	5
f.	Hearing about farm safety from the day camp makes my child more likely to follow farm safety rules.	1	2	3	4	5

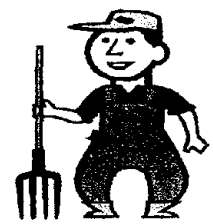
12. Which of the following situations influence your decisions about what your child does on a farm?

	Influence?		***If yes, how much?***		
a. Know of a child injured	**Yes**	**No**	**A little**	**Some**	**A lot**
b. Had injury in family	**Yes**	**No**	**A little**	**Some**	**A lot**
c. Heard statistics about farm injury	**Yes**	**No**	**A little**	**Some**	**A lot**
d. What child learned at camp	**Yes**	**No**	**A little**	**Some**	**A lot**
e. What other families allow their children to do	**Yes**	**No**	**A little**	**Some**	**A lot**

13. For the questions below tell us how much the FS4JK day camp has influenced your farm safety decisions:

Because of your child's camp attendance ...	**Less**	**Same**	**A Little More**	**A Lot More**
a. How much attention do you pay to farm safety?	**1**	**2**	**3**	**4**
b. How much do you base your child's farm work on age?	**1**	**2**	**3**	**4**

14. Since the last survey (April 2003), tell us if you have done any of the following and if so, how much the camp influenced this change. If any of the questions do not apply to you (for instance, if you don't own any tractors or no safety shields needed to be replaced, please circle "Not applicable" for your response.



	Made a change?			*How much influence?*			
	Yes	No	Not Applicable	None	A Little	Some	A Lot
a. Repaired or replaced safety shields?	Y	N	NA	1	2	3	4
b. installed roll bars on tractors?	Y	N	NA	1	2	3	4
c. Improved animal confinement areas for safety reasons?	Y	N	NA	1	2	3	4
d. Increased supervision while your child does farm work?	Y	N	NA	1	2	3	4
e. Adopted a "no extra rider" rule related to tractor riding?	Y	N	NA	1	2	3	4

15. Since April 2003, have you:

a. Prohibited your child from doing certain farm tasks?	**Yes**	**No**
b. Permitted your child to do additional farm tasks?	**Yes**	**No**
c. Permitted your child to be around places on the farm that were previously prohibited?	**Yes**	**No**

16. How much did your child's attendance at the FS4JK day camp influence your decision to

a. Give your child additional farm tasks?	**None**	**Some**	**A lot**
b. Allow your child to play or be around places they were previously prohibited?	**None**	**Some**	**A lot**

17. If your child was visiting a farm and someone on the farm you trust (grandfather, close friend) invited your child to ride on the tractor with them, how likely is it you would let the child ride?

Definitely would <u>not</u> allow	**Somewhat unlikely**	**Somewhat likely**	**Definitely would allow**

18. <u>Since April 2003</u>, did anyone in your household experience any injuries that required at least 4 hours of restricted activity or required professional medical attention?

Yes **No** **Don't Know**

19.	If yes, how many injuries of this type occurred to:	Number of Injuries	Number that Were Farm-related
	a. Persons under the age of 20?		
	b. Persons 20 years of age or older?		
	c. For the child whose name appears on this survey?		

20. For any <u>farm-related injuries</u> reported in question 19 above, describe each injury and how it happened (*example: cut arm on gravel after ATV crash in field*). Please include age and sex of person who was injured.

_____

_____

_____

_____

21. In your household, have there been any close calls for farm-related injuries since April 2003? *A "close call" is defined as something in which an injury did not occur but could have easily occurred. For example, someone fell off a farm wagon but was not injured.*

Yes **No** **Don't know**

22. If yes, how many close calls have occurred? _____ close calls

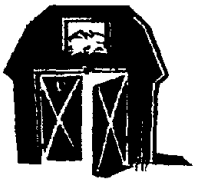
23. Have there been any injuries or close calls for the child whose name appears on this survey?

Yes **No** **Don't know**

24. If yes, describe what the child was doing at the time, where the child was, and the outcome. (e.g., Did it occur on a farm? Was the child doing chores or playing?)

_____

_____



Please tell us if you agree or disagree with the following statements.

25.	Farming is more dangerous than jobs in industry or manufacturing.	**Agree**	**Disagree**
26.	Accidents are just one of the occupational hazards of farming that must be accepted if you are going to be in the business.	**Agree**	**Disagree**
27.	Compared to other farmers I am very conscientious about avoiding accidents.	**Agree**	**Disagree**
28.	During a normal work week, it's common for me, while doing farm work, to experience a number of "close calls" that under different circumstances might have resulted in personal injury or property loss.	**Agree**	**Disagree**
29.	To make a profit, most farmers take risks that might endanger their health.	**Agree**	**Disagree**

30. Did you attend the day camp with your child? **Yes** **No**

31. If you had the opportunity to attend a farm safety day camp with your child, how likely would it be that you would attend?

Not likely at all	**Somewhat likely**	**Very likely**	**Definitely would attend**

32. Do you wish to be paid for completing the 18-month set of surveys?

a. Yes	*If you haven't already submitted one, complete W9 form and return it with the surveys. If a W9 is not received, no follow-up attempts will be made to obtain one and no payment will be made.*
b. No	

Don't forget to include your W9 form when you send in your surveys.

This concludes <u>all</u> the surveys for this study. You have been so valuable to this study and once again we thank you! May you and your family always remember to stay safe on the farm!	THANK YOU

Appendix A.14

Research Team Form

RESEARCH TEAM FORM

Camp Name _____

Date: _____

Research Team Members _____

_____

Place (city, state) _____

Specific location: County Park Fairground Private farm Other_____

Training Format for **Tractor Safety** *(Circle all that apply)*	Video	Real Tractor Started	Handouts	Lecture	Hands-on Activity	Mr. Goodegg	Games	Demon-stration
Training Format for **Animal Safety** *(Circle all that apply)*	Video	Live animals with child	Handouts	Lecture	Hands-on Activity	Games	Demon-Stration	
Training Format for **Equipment Safety** *(Circle all that apply)*	Video	Equipment started	Handouts	Lecture	Hands-on Activity	Games	Demon-Stration	

Item	Tractor	Equipment	Animal
Number of instructors			
Number children per group			

TURN THE PAGE AND COMPLETE GRID FOR THE THREE MAIN SESSIONS

	Tractor	Equipment	Animal
Distractions	Y N	Y N	Y N
Noise			
Other stations			
Weather			
Other_____			
Demonstrations	Y N	Y N	Y N
Worked properly			
Done in safe manner			
Interaction (scale 0- 5 with 0 being absent and 5 being best)			
Questions to students	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5
Questions appropriate	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5
Questions from Students	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5
Attentiveness	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5
Length in minutes			
Station location			
Indoor			
Outdoor			
Seating arrangements			
Stand up only			
Seated-chairs			
Bleachers			
Hay bales			
Floor or ground			

WRITE ANY COMMENTS ON REVERSE SIDE

Appendix A.15

Community Farm Safety Event Record Form

COMMUNITY FARM SAFETY EVENT RECORD FORM

Event Name _____

Date of Event _____

Event Sponsored By _____

Event Opened To:
_____ Public
_____ Farm Families Only
_____ Adults Only
_____ Children Only
_____ Members of Sponsoring Organization Only

Which of the following safety areas were covered by the event? (check all that apply)

_____ Tractor safety
_____ Animal safety
_____ Chemicals
_____ Equipment safety
_____ First aid on the farm
_____ Fire safety on the farm
_____ Other (please specify) _____

Was the event advertised in any of the following media types? (*attach photos/clippings*)

MEDIA TYPE	YES	NO
Radio		
Newspaper		
Television		
Organization Publications		
Local Business Marquees		

Was the event covered by any of the following media types?

MEDIA TYPE	YES	NO
Radio		
Newspaper		
Television		
Organization Publications		

Appendix A.16

Child Injury Record Form

CHILD INJURY RECORD FORM

Date of Injury _____

Age of Injured Child _____

Gender of Injured Child _____ Female _____ Male

Did child attend the 2002 FS4JK day camp? _____Yes _____ No _____Don't know

Cause of injury: *(if more than 1 cause, list them by number with #1 being the primary cause)*

_____ Tractor
_____ Animal
_____ Farm Equipment
_____ Power Tools
_____ Other (please list) _____

Describe the type of injury:

Describe in as much detail as possible how the injury occurred:
(*Attach news clipping if available*)

Check either "yes", "no", or "don't know" to the following questions:

		YES	NO	Don't Know
1.	At the time of the injury, was the child working?			
2.	If working, was the task the child was performing new or unfamiliar to the child?			
3.	At the time of the injury, was the child playing?			
4.	Were there any adults around at the time of the injury?			
5.	Was the child riding or driving a tractor at the time of the injury?			
6.	Did the injury require professional medical attention?			
7.	Did the injury require response by an EMS?			
8.	Did this injury receive any media attention? (*attach supporting documentation if possible*)			

Appendix A.17

Log Book Form

LOGBOOK

Date	Topic	Source(s)	Comments/Summary	Effect on Community	Additional Report or Documentation
7/4/02	*Death – teen at parade* 	*Newspaper, TV, many reports and conversations.*	*Teen fell off wagon during parade and was crushed under wheel.*	*Much publicity.* *Teen well known.* *Happened in public view.* *Flag half-staff.* *Many people at funeral.* *Possible new policy for parades.*	*News clippings.* *Child injury record form.*

APPENDIX B

IRB Approvals

UNIVERSITY OF KENTUCKY

Research and Graduate Studies
Office of Research Integrity
315 Kinkead Hall
Lexington, KY 40506-0057
(859) 257-9428
Fax: (859) 257-8995
www.uky.edu

Initial Review

Approval Ends	Project Ends	IRB Number
June 3, 2002	August 31, 2004	01-0288-F1V

TO: Deborah Reed, Ph.D.
Nursing Administration
553 Health Sciences Learning Center
0232

FROM: Chairperson/Vice Chairperson
Medical Institutional Review Board (IRB)

SUBJECT: Approval of Protocol Number 01-0288-F1V

DATE: June 5, 2001

On June 4, 2001, the Medical Institutional Review Board approved your protocol entitled:

Evaluation of Farm Safety 4 Just Kids Day Camps

This approval extends to any consent/assent document unless the IRB has waived the requirement for documentation of informed consent.

Approval is effective from June 4, 2001 until June 3, 2002. If applicable, attached is the IRB approved consent/assent document(s) to be used when enrolling subjects. [Note, subjects can only be enrolled using consent/assent forms which have a valid "IRB Approval" stamp unless special waiver has been obtained from the IRB.] Prior to the end of this period, you will be sent a Continuation Review Report Form which must be completed and returned to the Office of Research Integrity so that the protocol can be reviewed and approved for the next period.

In implementing the research activities, you are responsible for complying with IRB decisions, conditions and requirements. The research procedures should be implemented as approved in the IRB protocol. It is the principal investigators responsibility to ensure any changes planned for the research are submitted for review and approval by the IRB prior to implementation. The IRB also requests that you attend any future meetings where your attendance is requested.

Attached for your review is a booklet describing investigator responsibilities after IRB approval has been obtained. Please read the information carefully and retain a copy for your files. If you have questions or need additional information, contact the Office of Research Integrity at (859) 257-8315 (Medical) or (859) 257-3138 (Nonmedical).

Thomas Foster Pharm D/jb
Chairperson/Vice Chairperson

An Equal Opportunity University

Farm Safety 4 Just Kids

110 South Chestnut Avenue
P.O. Box 458
Earlham, IA 50072
Phone (515) 758-2827 • Fax (515) 758-2517 • E-Mail fs4jk@netins.net • Web Site www.fs4jk.org

To: Deborah Reed, Ph.D.
Nursing Administration
553 Health Sciences Learning Center
0232

From: Shari Burgus
IRB Committee Chair

Subject: Approval of Protocol Number IRB00001848

Date: December 19, 2001

On December 19, 2001 the Farm Safety 4 Just Kids Institutional Review Board IRB 00001848 approved the protocol entitled:

Evaluation of Farm Safety 4 Just Kids Day Camps

Approval is effective from December 19, 2001 until December 18, 2002. Consent/assent documents used when enrolling subjects has not been developed but will need to be approved when completed. [Note, subjects can only be enrolled using consent/assent forms which have a valid "IRB Approval" stamp unless special waiver has been obtained from the IRB.]

In implementing the research, the committee is responsible for complying with IRB decisions, conditions, and requirements. The research procedures will be implemented as approved in the IRB protocol. It is the principal investigator's responsibility to ensure any changes planned for the research are submitted for review and approval by the IRB prior to implementation. The IRB also requests that you attend any future meetings where your attendance is requested.

Shari Burgus
FS4JK IRB Chair

UNIVERSITY OF KENTUCKY

Office of Research Integrity
Office of the Vice President
for Research
315 Kinkead Hall
Lexington, KY 40506-0057
(859) 257-9428
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Amendment Review	Approval Ends	IRB Number
Waiver & Instrument	June 3, 2002	01-0288-F1V

TO: Deborah Reed, Ph.D.
Nursing Administration
553 Health Sciences Learning Center
0232

FROM: Chairperson/Vice Chairperson
Institutional Review Board (IRB)

SUBJECT: Approval of Modification Request for Protocol 01-0288-F1V

DATE: March 12, 2002

On March 11, 2002, the Institutional Review Board approved your request for modifications in your protocol entitled:

Evaluation of Farm Safety 4 Just Kids Day Camps

The IRB approved your request for waiver of documentation but encourages you to obtain consent when possible. The IRB also encourages you to remind subjects that they do not have to complete the survey. If your modification request necessitated a change in your approved informed consent/assent form(s), attached is the new IRB approved consent/assent form(s) to be used when enrolling subjects. [Note, subjects can only be enrolled using informed consent/assent forms which have a valid "IRB Approval" stamp, unless waiver from this requirement was granted by the IRB.]

If you need further assistance or have questions, please call the Institutional Review Board, Office of Research Integrity, at 257-9084 (Medical) or 257-3138 (Nonmedical).

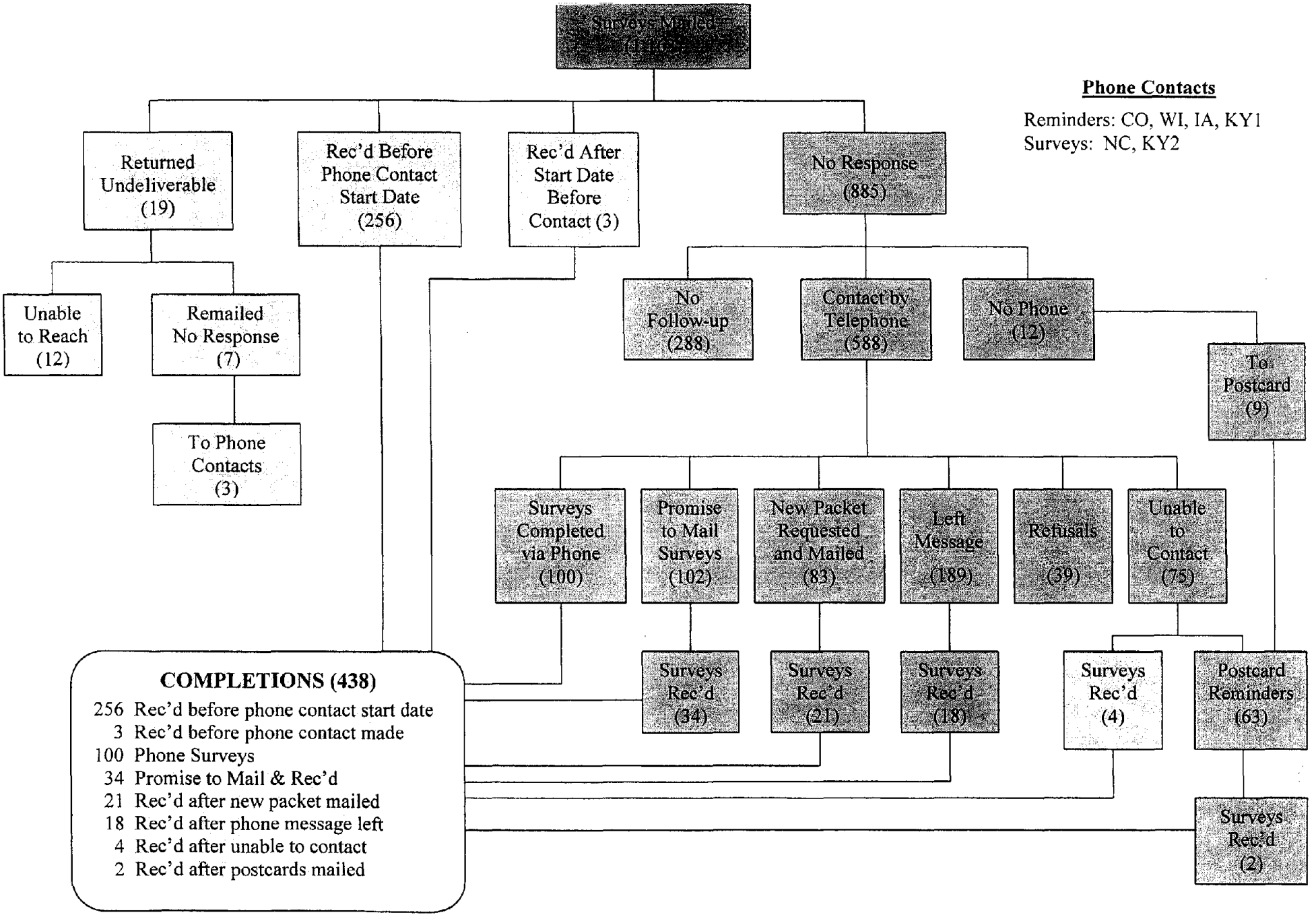
Chairperson/Vice Chairperson

An Equal Opportunity University

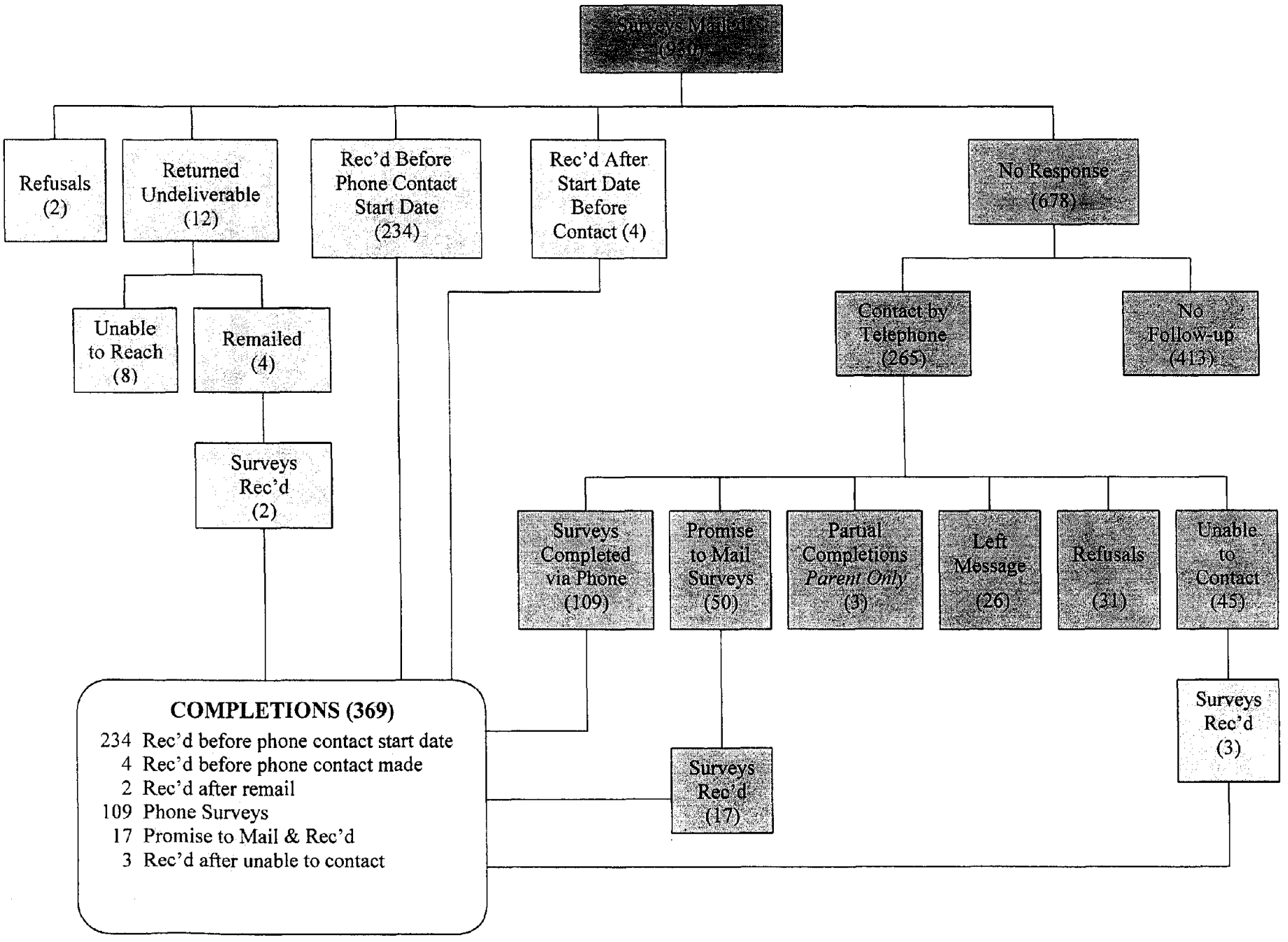
APPENDIX C

Survey Completion Flowcharts

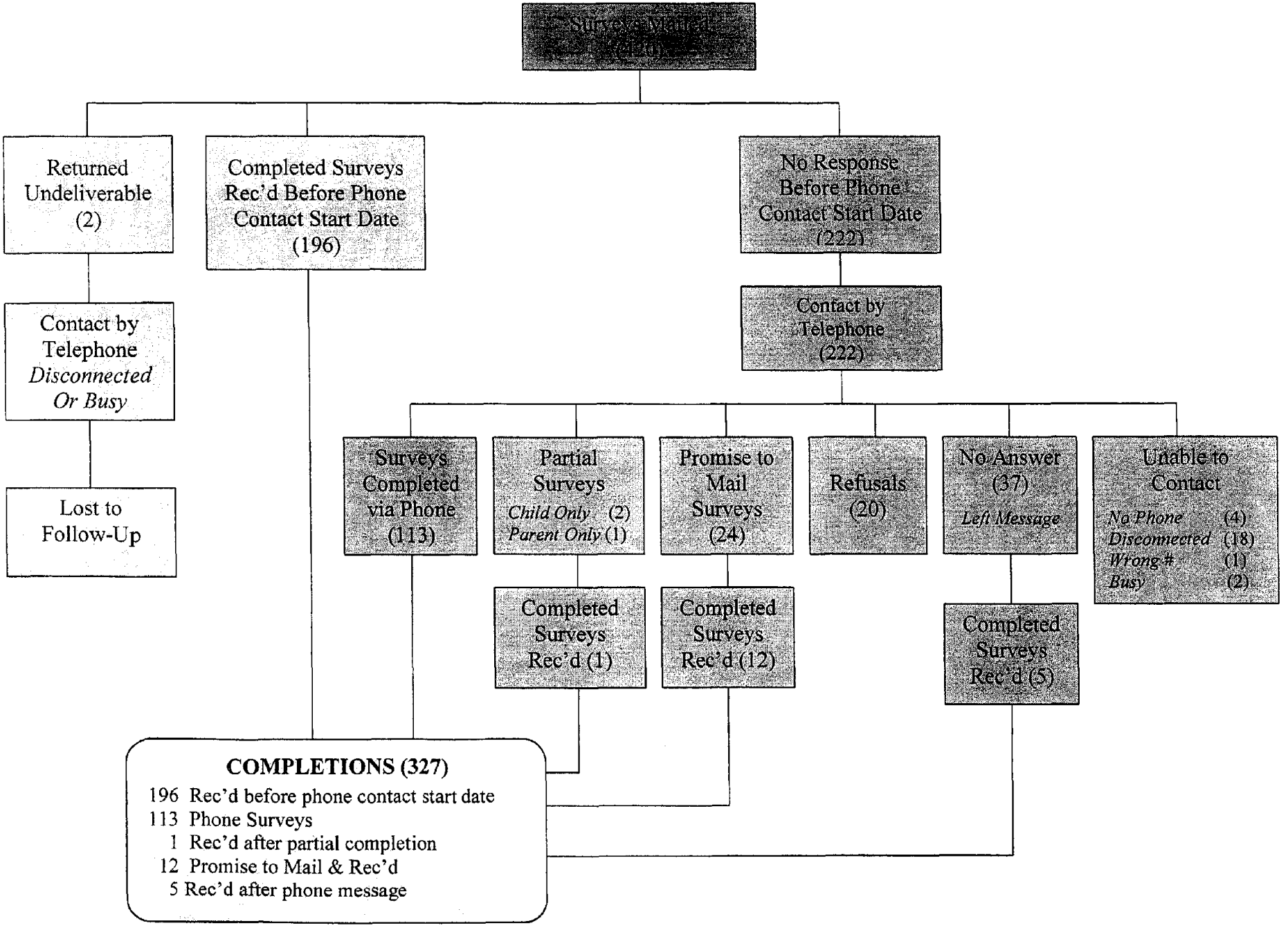
1-MONTH SURVEYS



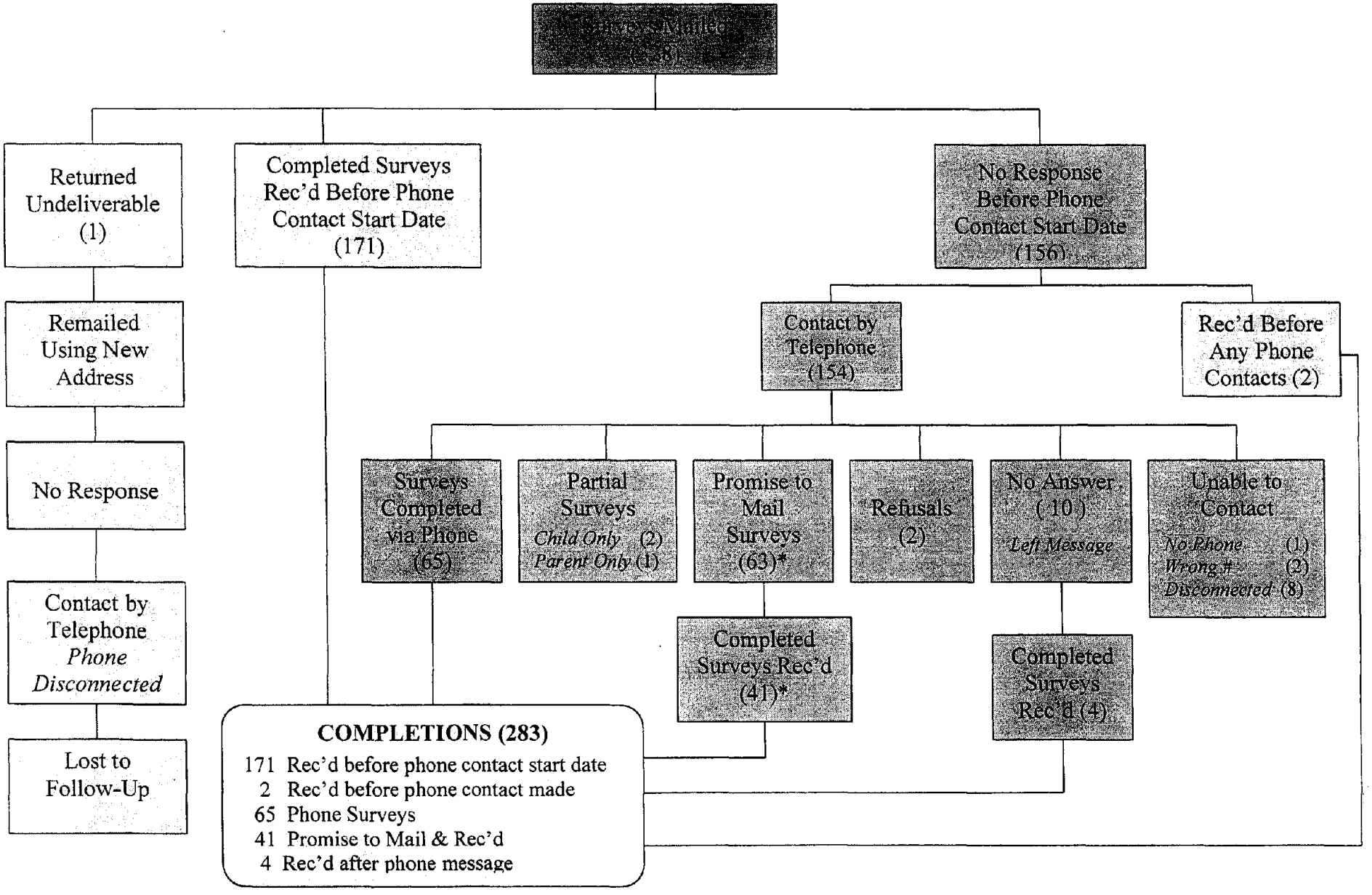
6-MONTH SURVEYS



12-MONTH SURVEYS



18-MONTH SURVEYS



* 12 of these households requested a new packet; 9 of them completed and returned the survey from the remail.

APPENDIX D

Technical Report on Day Camps' Instructional Methods and Techniques

Instructor Characteristics and the Reading Difficulty and Instructional Properties of Materials Distributed to Children at FS4JK Safety Day Camps

Henry P. Cole

Joan M. Mazur

Southeast Center for Agricultural Health and Injury Prevention
University of Kentucky, College of Public Health

Initial draft September 29, 2003

Revised
October 2, 2003
November 15, 2003
December 23, 2003

Final draft completed January 14, 2005

The research reported in this paper was partially supported by CDC/NIOSH Grant R01OH07534-01, principal investigator Deborah Reed, University of Kentucky, College of Nursing. The grant duration was from September 1, 2001 to August 31, 2004. The research was completed under human subjects protocol number 01-288-FIV awarded by the University of Kentucky Institutional Review Board. This work also was supported by CDC/NIOSH Grant U50/OH07547 to the Southeast Center for Agricultural Health and Injury Prevention, principal investigator Robert McKnight. Henry Cole completed the work reported under the Center's Stakeholders' Project. The opinions expressed are the author's and not necessarily those of CDC, NIOSH, or the U.S. Government.

Contents

Overview

This document analyzes the reading difficulty level and instructional properties of printed materials given to children who attended seven Farm Safety 4 Just Kids (FS4JK) safety day camps held in five states in 2002. Characteristics of 48 instructors who taught sessions on tractor, machinery, and animal safety are described to provide information about their farm experience, motivation, and experience in teaching farm safety. The instructors' preferences for instructional material formats and the information sources they used as the basis for their presentations are also described.

The print materials were distributed to children in plastic shopping bags (referred to as *goodie bags*) at the conclusion of the safety day camps with a twofold intention. First, the *goodie bags* of objects and materials dealing with a wide array of farm safety topics was intended to reward children's camp attendance. Second, the children were expected to take the materials home with the expectation that parents and other family members could use the materials to continue teaching children about farm injury hazards and safety practices to prevent injuries.

Print materials in the *goodie bags* that dealt with tractor, machinery, and animal safety were separated from the collection of the many other print materials and objects that focused on other farm safety topics. Verbatim text passages from the relevant materials were then subjected to two methods of readability analyses. Analytic observations and comments about the instructional properties of the materials were also noted.

Videotape observations of instructors and students in each machinery, tractor, and animal safety session provided information about the degree to which instructors' made use of the concepts, ideas, activities, and materials included in the *goodie bags*. The videotapes revealed that during their class sessions instructors did not distribute or make reference to any of the print materials in the *goodie bags* including those that were relevant to their session topics. Instructors did, however, systematically address farm hazard recognition and the adoption of safety practices to prevent the injury events described in the print materials in the *goodie bags*. The utility of the printed materials for farm safety instruction of children and adults is discussed. The document concludes with suggestions for ways in which instructors and family members can use the print materials to increase hazard recognition and safety behavior among children who visit, play, live, or work on farms.

Background

In 1994 Farm Safety 4 Just Kids (FS4JK) conducted 18 safety day camps attended by 1,448 children. Since that time the number of camps and child attendees has increased steadily. In 2000 there were 32 camps attended by 5,959 children. This paper is part of a larger study of a sample of Farm Safety 4 Just Kids (FS4JKS) safety day camps

conducted during 2002. The project involved a partnership with local FS4JK chapters at seven sites in five states. One camp each was located in Colorado, Iowa, and Wisconsin, and two each in Kentucky and North Carolina. A total of 1,220 elementary and middle school children attended these seven camps. A total of 48 instructors from six of the camps completed a demographic and instructional materials questionnaire. A primary purpose of the project was to make more explicit the theoretical frameworks and objectives of the camps in order to assist local chapters to evaluate their day camps.

One part of the study focused on the instructional materials distributed to children at the camps. These materials were provided to children in plastic shopping bags and referred to as *goodie bags*. A second part of the study described the safety day camp instructor characteristics. A third part focused on the teaching methods instructors used at the camps. The materials in the *goodie bags* and the topics presented by instructors included a wide array of farm safety topics. However, consistent with the goals of the larger study this paper focuses only on the three topics of interest in the larger study, tractor, machinery, and animal safety.

The first portion of this document provides a brief description of the instructors' characteristics including their prior teaching experience, motivation for participating in the program, the information sources they used to prepare their presentations, and their preferred formats for instructional materials. Detailed analyses of the reading difficulty and instructional properties of the session-relevant printed *goodie bag* materials follows. Observations about the degree to which safety day camp instructors included concepts and topics from the *goodie bag* materials in their instruction are noted. The document concludes with recommendations for the effective use of the materials by camp instructors and family members.

Method

The method section is divided into two parts. The first part describes how the information about safety day camp instructors was collected and analyzed. The second part describes how the *goodie bag* materials given to children at the camp were collected, sorted, and analyzed. An analysis of the teaching methods used by the instructors as observed from videotapes of the instructors and students during the safety-day-camp sessions was also conducted. The videotape analyses are presented in another paper.

Data Source for Instructor Characteristics

Instructors at each camp were asked to complete the *Station Instructor Data Sheet FS4JK Day Camp Evaluation*. A copy of this two-page questionnaire is found in Appendix A. A total of 48 instructors completed the form. The North Carolina Allegheny County and Ashe County Camps were replications of the same topics taught by the same instructors but to two different groups of children. The data from the completed instructor forms were entered into an Excel file and analyzed with descriptive statistics. Appendix A presents the results of these analyses in a series of tables and figures. The main findings from the *Instructor Data Sheet* are summarized in the results section of this paper.

Analysis of Readability and Instructional Properties of the Print Materials

Printed handouts, graphics, and objects distributed to children at the safety day camps were collected from all sites except for the Iowa camp. Text materials and graphic materials with text messages were separated from the many other materials that included, stickers, pencils, ballpoint pens, erasers, rulers, key chains, safety stickers, and other trinkets. Only those materials containing text and graphic messages about tractor, machinery, and animal safety were selected for analysis. Documents composed wholly or primarily of text as well as documents consisting of cartoon and graphic illustrations accompanied by text messages were included. All materials that were received from each camp that met these criteria were included in the analysis.

For short items the full text passages and text captions that accompanied graphic illustrations were typed verbatim into a Microsoft Word file. For large documents multiple samples of the text passages and graphic captions were randomly selected and typed verbatim into the Microsoft Word file. In each case the reading difficulty level of the text materials was analyzed using the Microsoft Word spelling and grammar checker program. The analyses provided two estimates of reading difficulty and the percent of passive voice sentences for each passage.

The two standard readability-scoring methods used were the *Flesch Reading Ease* and the *Flesch-Kincaid Grade Level* methods.

The *Flesch Reading Ease* score rates text on a 100-point scale. The higher the score, the easier it is to understand the document. The goal for most documents is a score of approximately 60 to 70 on the 100-point scale. The formula for the Flesch Reading Ease score is:

206.835 – (1.01 5x ASL) – (84.6 x ASW)

where:

ASL = average sentence length (the number of words divided by the number of sentences)

ASW = average number of syllables per word (the number of syllables divided by the number of words)

The *Flesch-Kincaid Grade Level* method scores text on a United States grade-school level scale. For example, a score of 4.0 suggests that a fourth grader can comprehend the text material. The goal for most documents is to achieve a reading difficulty of 7.0 to 8.0. Many newspapers including the New York Times routinely achieve this goal.

The formula for the Flesch-Kincaid Grade Level score is: (.39 x ASL) + (11.8 x ASW) – 15.59, where the definitions for ASL and ASW are identical to the *Flesch Reading Ease* method.

Each *goodie bag* item included in the selection was also analyzed in terms of its instructional characteristics and its utility for teaching children the intended farm safety attitudes, knowledge, and behaviors. This logical analysis was facilitated in two ways. First, the instructional sessions that dealt with tractor, machinery, and animal safety were videotaped at each of the seven camp locations. Two simultaneous videotapes were made of each session. One camera focused on the instructor and his or her activities and dialog. The second camera focused on the students and recorded their dialog and activities. The author and his colleague, Dr. Joan Mazur, observed all 42 videotapes viewing sections of each tape multiple times as necessary. We independently recorded our notes on a standard form. We then shared our observations, noted points of agreement and disagreement. Disagreements about what we observed were resolved by replaying sections of tapes. After our notes were completed we also discussed the teaching methods used by the instructors and the degree of student deportment, interest, attention, engagement, and participation in the session. The notes and sketches from our observations where then entered verbatim into a Microsoft Word file. The results of the video analysis of the teaching and learning interactions are presented in a separate paper.

Second, both Cole and Mazur are experts in the design, use, and analysis of instructional materials and methods. As we viewed and discussed the videotapes we talked about the instructional features that were evident from the two camera angles, one focused on the instructor and the other on the students. These observations and conversations proved useful when Cole subsequently conducted the readability and logical analyses of the *goodie bag* print materials given to children who attended the camps. For example, the videotape analyses provided information about how frequently and in what ways the instructors made use of, referred to, or addressed concepts included in the printed materials. Watching the videotapes provided unambiguous information about what instructors taught and how they taught as well as what materials they used.

Results

The Station Instructor Data Sheet questionnaire results are presented first. Then the readability analyses and instructional characteristics of the *goodie bag* print materials are presented.

Instructor Characteristics

Forty-eight instructors completed the 18-item *Station Instructor Data Sheet* questionnaire. The key data from the questionnaire are summarized here. More detailed results including tables and graphs of the results are found in Appendix A.

The instructors who conducted the tractor, machinery, and animal safety sessions reported primary jobs that included farmers, farm managers, farm workers, agriculture teachers, agricultural extension agents, farm safety specialists, equipment dealers, FFA high school students, horse trainers, veterinarian assistants, and dairy workers among others. Forty-two (87.5%) of the instructors reported having lived or worked on a farm. Forty-three (89.6%) reported that they had *quite a bit* or *a lot* of farming experience. A total of 10 (20.8%) instructors reported that they themselves had experienced a severe farm injury in the past. Forty four (91.7%) reported they knew one or more persons who had sustained a severe farm injury.

Only 4 (8.5%) of the instructors reported that they had not previously taught the farm safety topic for which they were responsible. Nine (19.1%) of the instructors reported one prior experience of teaching their farm safety topic. The remaining 35 (72.9%) of the instructors had taught their safety session two or more times. Twenty (41.7%) of the instructors had previously taught their farm safety topic 10 or more times.

Eleven (22.9%) of the instructors reported having had *a lot of training in educational techniques for children* while another 5 (10.4%) reported have having had *some* training. Thirty-two (66.7%) reported no training.

A total of 44 (91.7%) instructors reported that they taught children in settings other than safety day camps including public schools, churches, and community organizations like 4-H and Scouts. (See Table 1.) Twenty-three (47.9%) of the instructors listed their primary reason for teaching their safety day camp session was because *farm safety is important.* Only 6 (12.5%) reported doing so because it was *part of their paid job.* Only 5 (10.4%) selected *like working with children* as a primary reason for teaching at the camp. Eight (16.7%) instructors listed multiple reasons. Only one instructor (2.1%) noted that he or she was forced to do so. (Based on the videotape analysis this person was probably a university agricultural extension staff member who was assigned to teach a tractor safety session.)

Table 1: Frequency of instructors teaching children at sites other than safety day camps

Camp Site	Number of Instructors	Instruction at Sites Other than Safety Day Camps				
		Church	Schools	4-H	Scouts	Other
NC Alleghany	4	3	2	3	1	0
Eastern Colorado	4	1	1	2	1	3
Stratford, WI	4	0	3	0	0	1
Mammoth Cave, KY 1	8	2	3	4	1	4
Mammoth Cave, KY 2	15	7	10	8	1	4
IA	13	4	8	5	2	3
Totals	44	14	25	19	5	15

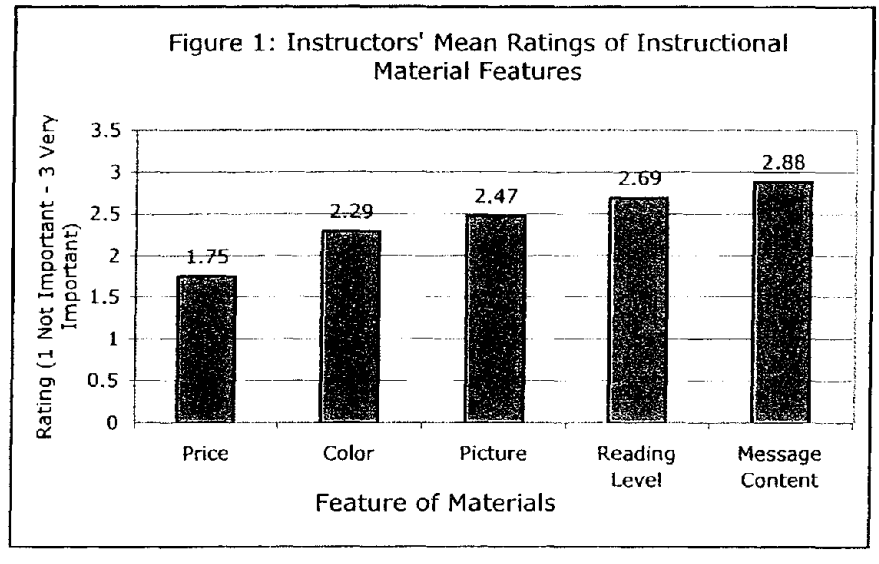
* The same instructors taught the NC Alleghany Camp and the NC Ashe County camp.

The instructors were asked to rate the importance of five characteristics of instructional materials for utility in teaching children at safety day camps. The three point Likert rating scale was *1 Not Important → 3 Very Important.* The instructors' mean

ratings of each feature are presented in ascending order in Table 2. The graphed results in Figure 1 reveal a nearly linear relationship of instructors' ratings of the five features.

Table 2: Instructors' ratings of the importance of features of instructional materials

Instructional Material Feature	Number of Ratings	Mean Rating
Price of materials	16	1.75
Use of color in materials	17	2.29
Pictures included in materials	17	2.47
Reading level of text materials	17	2.69
Message content	16	2.88



The instructors were asked if they gave children printed materials. Seventeen (35.4%) reported doing so while 31 (64.6%) said they did not. This is an interesting finding. The videotapes of the camp sessions revealed that none of the instructors mentioned, directed students' attention to, or discussed the handout materials included in the *goodie bags*. No instructor was observed suggesting that students discuss with their parents or other adults any of the instructional materials included in the *goodie bags*. No instructor was observed using any of the handout materials with children during the teaching sessions as part of an instructional activity. Only one instructor was observed distributing a handout to children and this occurred at the very end of the session with no discussion of the document by the instructor. The instructor had just completed a session

on horse safety. The document was a drawing of the parts of a horse and was not included in the *goodie bag*. The children examined the document with interest, but had no opportunity to ask questions or discuss it with the instructor or each other.

Another item asked the instructors how often they received written feedback on their performance as a station instructor. The results for the 47 persons who responded are presented in Table 3.

No information on instructor age and gender is provided because these items were not included on the *Station Instructor Data Sheet* questionnaire.

Table 3: Frequency of written feedback to instructors about their performance

Feedback	Frequency	Frequency %
Never	18	38.3
Rarely	7	14.9
Sometimes	14	29.8
Often	8	17.0
Total	47	100.0

Readability and Instructional Property Analyses of Print Materials

Table 4 summarizes the total number of *goodie bag* handouts by camp location. The third column lists the number of handouts that contained text passages relevant to the three topics of interest (machinery, tractor, and animal safety). The last column presents the range of reading difficulty of the materials distributed to children who attended each camp. Appendix B lists the titles of all *goodie bag* items given to children at each camp.

Inspection of Table 4 reveals four findings. First, the total number of handouts varied widely across camps. Second, totaled across camps only 33 (28.2%) of the 117 total *goodie bag* items related to the three targeted safety topics. Third, the number of topic-relevant textual materials given to students varied from two to eight across camps. Fourth, the reading difficulty of the materials varied greatly within and across camp locations.

Inspection of the materials revealed that at some sites many documents included in the *goodie bags* were written for parents, school, and community leaders. An example is the 50-page EPA document *Citizen's Guide to Pest Control and Pesticide Safety*. All camps included in their handouts to children materials targeted to adults. Many of these materials have potential utility for teaching children aspects of the targeted safety topics. Yet, few of these adult-oriented materials would be effective for teaching children

without adult assistance in selecting, simplifying, and presenting the material to children in a way matched to their interests and capabilities.

Table 4: Instructional materials distributed to students at Safety Day Camps by site, topic, and reading difficulty range

Site	Handouts		Reading Grade Level Range
	Total Number of Items	Number of Relevant Items *	
Eastern Colorado	50	7	3.2-7.3
NC Alleghany County	25	8	3.2-12.0
Mammoth Cave, KY 2	13	6	6.6-12.0
NC Ashe County	12	3	7.3-12.0
Stratford, WI	9	2	5.5
Mammoth Cave, KY 1	8	7	2.6-12.0
Iowa **	?	?	?
Total	117	33	

* Materials with text passages or text captions related to tractor, machinery, and animal safety

** No listing of or copies of the Iowa *goodie bag* materials were available.

Instructors' Presentation of Concepts Contained in the Print Materials

The videotape analyses revealed that most instructors presented orally the safety information included in many of the handouts. This was usually accomplished by instructor controlled, didactic, fast-paced question and answer sessions. The instructor would first describe a hazard, quiz the children on recognizing and naming the hazard, and then present a safety rule related to avoiding the hazard. In most cases the instructors' descriptions of hazards included the use of physical objects such as actual dogs, horses, sheep and cattle (animal safety) and actual machinery or scale models of machinery (tractors, augers, PTO drive lines). Sometimes diagrams or photographs of these objects were displayed. The instructors usually stated safety rules in conjunction with reference to physical objects. Children were frequently asked to point out hazards and to restate the safety rules for dealing with that hazard. Children often recited in unison answers to the instructors' questions about hazards, dangerous behaviors that expose people to injury, and safety rules for avoiding specific injury hazards. (Instructor: Should you step over a PTO shaft? Children in choral unison: Nooo!) Instructors also used short stories and descriptions of injury events to describe farm hazards and the importance of safety rules for preventing injuries.

A few instructors solicited students' short brief accounts of injuries or close call events. Most instructors did not encourage students to make verbal statements, though many students repeatedly held up and waved their hands hoping to be called on. A few instructors cut off and discouraged student initiated stories and comments. FFA youth who served as instructors usually adopted a team teaching approach. Their presentations were well rehearsed and moved smoothly from one presenter to the next. The FFA student instructors were more prone to eliciting and incorporating student questions, observations, and short stories into their instruction than were the majority of the adult instructors.

Across all the sessions observed, students paid close attention to the instructor and remained on-task. This was true even when loud noise and distracting activities from other nearby sessions or other sources were close by. In the presence of such potential distractions, only three or four students in a group of 15 or 20 would momentarily be distracted by these competing stimuli and then quickly return their attention to the instructor. There was virtually no disruptive behavior by students in any of the videotaped sessions. One or two instructors were observed telling students to stop shuffling their feet in the sawdust or soil beneath the benches where the children sat. It was apparent that these instructors thought the students' shuffling was disruptive. It was also apparent that the shuffling was not disruptive or disrespectful and that the children did not intend it to be so.

Detailed Readability Analyses by Site and Passage

The text passages sampled are included verbatim in the sections that follow. Each heading is one Safety Day camp location. A readability analysis is provided for each passage. In cases where the same item was used at more than one camp, the analysis of that passage is presented only once for the camp under which it first appears. Comments about the instructional properties of the passage and the document in which the passage occurs are provided for each item. In most cases comments about the potential use of the materials in safety day camps is generalized rather than specific to any one camp.

Allegheny County NC, 9/11/02

This safety day camp was operated at a county fair grounds. A total of 361 fourth grade elementary school students attended this camp and the Ashe County NC camp. Eight of the 25 goodie bag items for this camp were relevant to the topics of interest for this study. A total of 20 adults attended these camps, 16 of whom worked at 10 different stations. Only four completed Station Instructor Data Sheet questionnaires were obtained from the Alleghany County instructors.

Willy's Farm Safety Case Book

North Carolina Farm Bureau Federation

Case # 2 – The Shiny Shields

From the meadow, Willy headed to the barn to treat his bee sting. There he found his good friend, Sal, cleaning up the barn. After treating his bee sting with ointment and resting to see if he would have an allergic reaction, Willy was ready to move on to his next case.

On the wall of the barn were red, blue and green metal objects hanging on nails. They looked like parts of a tractor. "These look like worn out parts, but why are they so shiny?" asked Sal. And that was the case. What were these interesting parts hanging about the walls of the barn? What did the stickers on them mean? Here are Willy's notes.

Readability	Estimated Value
Passive Sentences (%)	0
Flesch Reading Ease	92.9
Flesch – Kincaid Grade Level	3.2

Case # 5 - One Seat-One Rider

The day had been a busy one and Willy went into the farmhouse with Farmer Louise to have fresh lemonade. As Farmer Louise was standing at the kitchen sink looking out the window she began to shout, "There's only one seat on the tractor!" Farmer Louise ran outside. Willy chased after her and saw Sal sitting on Farmer Don's lap. Both were riding on Farmer Don's big tractor. Sal was steering the tractor. Farmer Louise continued to call to Farmer Don, "There is only one seat on that tractor!" Why was Farmer Louise so upset?

Willy asked Farmer Don what Farmer Louise meant. Farmer Don looked embarrassed. He said that a tractor only has one seat, so it should only have one rider. Farmer Don removed his hand from the fender of the tractor to reveal this sticker, "No Riders." It is very dangerous for more than one person to ride a tractor.

Help Sal learn more about tractor safety, as well as other machines around the farm by completing the following activity.

Readability	Estimated Value
Passive Sentences (%)	0
Flesch Reading Ease	72.6
Flesch – Kincaid Grade Level	6.2

Family Fun - The Scavenger Hunt

This is a fun game for the entire family. Your goal is to find hazards around your farm.

Divide everyone into two or more teams. Each team has a sheet of paper and a pencil. There must be a game leader who determines the length of the game and says, "Go."

Once you've started, find as many hazards as you can around the farm, the building, the equipment, and your house. Return to the home base and review your lists when your allotted time is up. The team identifying the most hazards wins a prize. The game leader is responsible for the prizes.

Once you have completed the game, the real fun begins. Discuss ways to solve the hazardous situations on your farm. You might choose to create signs or designate someone as the safety patrol. The safety patrol would be responsible for checking hazards on the first day of every month and making sure that friends and visitors know about working and playing safely on your farm.

Readability	Estimated Value
Passive Sentences (%)	0
Flesch Reading Ease	70.3
Flesch – Kincaid Grade Level	6.6

Comments: *Willy's Farm Safety Case Book* is a 12-page series of six short interactive farm safety cases. The cases are presented in a narrative sequence as Willy the safety squirrel explores a farm and looks for clues about interesting and potentially dangerous things and places. Each case is presented as part of the ongoing story of Willy's adventures and discoveries. Each case is followed by the child being asked to help Willy make sense of what he has experienced and to involve other adults or family members in assisting with this task. Each case also has an accompanying activity or task designed to engage the child and family members in generalizing the Willy case hazard recognition and safety behavior to other farming contexts. The cases include:

- hazards related to animals (insects, ticks, cattle, horses)
- missing safety shields, the reasons they are removed, the functions of shields, warning stickers, and their meaning
- chemicals, tools, machinery hazards and personal protective equipment
- second riders on tractors, keys left in tractor ignitions, fueling tractors, and cleaning debris from lawnmowers
- hazards to children who work and play on farmsteads (animals, ponds, tractors, tools, chemicals)

The casebook concludes with a family scavenger hunt activity. The child and his or her family members tour their own farm looking for the hazards that Willy found on the farm he toured. Then they plan ways to correct or avoid the hazards they find on their farm.

This casebook contains a wealth of well-formulated activities that could be used in a series of safety day camp activities. The casebook adopts an activity theory and discovery learning approach to farm safety education. To be fully effective such methods require that children actively participate in the inquiry activity. Completion of the casebook inquiry activities likely would require a minimum of four or five 10 to 12 minute sessions. It would be more effective for children supervised by an adult leader to work through the cases over a period of a few days rather than all at one time on a given day. Additional time would be needed for the scavenger hunt activity. The Willy casebook could be the focus of a number of related safety day camp sessions. One topic from each portion of the booklet could be used at each of several stations. As a concluding and generalizing activity, children under adult supervision could engage in the scavenger hunt on a university or other farm.

What You Should Know About Rabies

Alleghany County Animal Control, Sheriff's Department, and Health Department

What Should I Do If I Am Bitten?

The most effective rabies prevention measure following a bite is immediate and thorough washing and flushing of the wound for 15 to 20 minutes with soap and water.

If the biting animal is a wild animal, it should be killed or captured with as little damage to the head as possible. Report the bite or other exposure to the Animal Control Department and the Health Department during working hours or to the Sheriff's Department after working hours and on weekends. Any bite by any warm-blooded animal, regardless of species, should be evaluated by a medical professional either by phone or in person. See or call your doctor at once. An assessment of the exposure risk will be made to determine the need for rabies vaccinations for the bite victim, taking into consideration such factors as species of the biting animal, status of immunization (dogs and cats only), circumstance surrounding the bite (provoked or unprovoked), health and behavior of the animal at the time of the bite or after ten day quarantine (dogs and cats only), and the results of the laboratory analysis if the animal dies or is sacrificed for testing.

Readability	Estimated Value
Passive Sentences (%)	33
Flesch Reading Ease	32.3
Flesch – Kincaid Grade Level	12.0

Comments: This two-page informative handout is printed on one folded 8.5 x 11-inch sheet of paper. The front cover graphics depict common wild and farm animals (raccoon, skunk, fox, bats, cattle, dogs) and lists the telephone numbers for the county animal control, sheriff's and health department. The document is written for adults.

No instructors were observed handing out or referring to this document. During their animal safety presentations the instructors at this site (and some instructors at other sites) did describe rabies and state facts and safety rules consistent with the information in the document.

Dog Bites Dos and Don'ts Coloring Page

1997 The Humane Society of the United States. Youth Education Division

Unsafe Behavior

Don't pet or approach a dog (or a cat) while he or she is eating, sleeping, or guarding something. Pets naturally guard their food, their babies, and their toys. Dogs also protect their owners, as well as property that belongs to their owners – such as an owner's home, yard, or car.

Don't try to pull a toy, a stick, or any item from a dog's mouth. Also avoid playing tug-of-war with dogs. Playing roughly with dogs may teach them to bite, jump, or become aggressive.

Don't run away from a dog that is chasing you. (A dog's natural instinct is to chase and catch someone who is running away. If you stand still, the dog will most likely stop, sniff you, and leave you alone when he or she realizes you are not a threat.) Also, don't chase or tease dogs or cats, and avoid petting or trying to pick up strange pets.

Don't approach a dog (or any other animal) that is injured. Instead, tell an adult about the animal.

Readability	Estimated Value
Passive Sentences (%)	0
Flesch Reading Ease	74.1
Flesch – Kincaid Grade Level	6.4

Comments: This is a two-page document. The first page is a drawing of a neighborhood that includes houses, dogs, children and adults. Children are shown interacting with dogs or attempting to do so when the dog is leashed, fenced, loose, eating, not eating, and under or not under the supervision of the dog's owner. The task for the child is to mark each child-dog interaction with an S for safe or U for unsafe. The second page then presents the facts and rules about safe and unsafe ways to approach and interact with dogs. The graphic problem-solving task is likely to appeal to children. To be most effective an adult or youth leader should first ask children to complete the graphic

problem-finding activity. Once children have marked the interactions with an S or a U, the instructor should discuss with the children the second page summary of rules for safe and responsible behavior as well as the signs and potential consequences of unsafe acts. Children could then be given blank copies of the document and encouraged to conduct the activity with their friends and family members. No instructors were observed using these materials. Several animal safety instructors presented information and initiated discussion of these topics with children. The instructors usually had one or more animals present but behind a fence. Instructors demonstrated proper ways to approach and interact with the animals, and then allowed the children to do so one at a time under the instructors' supervision.

Extension Fact Sheet

The Ohio State University Extension: Food, Agricultural and Biological Engineering

Barnyard Animals

*Animals sometimes give other **warning signs** they are upset or hurt. Some of the signs are: putting their ears back, getting on their knees, or having an evil look in their eyes. When an animal is showing any of these signs you should not go near them.*

***Fences** keep livestock in a restricted area and are there for your protection. Fences are different for the types of animals they contain. They are made from a variety of materials. Some fences are electric and may shock you. Some have sharp barbs, and others are wooden or woven wire. Never enter a fence or a pen without adult supervision.*

*You should never **tease** livestock. Throwing stones, hitting with sticks, chasing, or teasing with food is not kind treatment. Chasing animals for fun may cause them to turn and attack you. Animals are not concerned about the harm they cause to people. They are reacting to protect themselves. Treat all livestock kindly and respect them for their purpose on the farm.*

Readability	Estimated Value
Passive Sentences (%)	6
Flesch Reading Ease	67.0
Flesch – Kincaid Grade Level	6.6

Comments: This two-page fact sheet is written in simple language. The first page is a text summary about common farm animals and the situations that tend to make them nervous and aggressive. The materials teach that farm animals while often cute are not pets and need to be treated with respect and understanding. This includes recognizing cues that animals are upset, aggressive, or fearful and avoiding spooking, teasing, or upsetting animals. The materials also emphasize staying outside fences and pens where animals are contained. The second page is a game. Children look at four drawings of animals and identify and list the warning signs exhibited by the animal. A "Parent Alert"

message on this page directs parents to supervise children on farmsteads, to teach children skills for recognizing animal alarm cues, and proper methods for working around and handling farm animals. The materials are a good example of how to design simple interactive safety instructional activities for use by parents with their children. Children who learn how to use this material could also teach other siblings and friends using blank copies of the document. No instructor was observed using this material.

ABC Always Be Careful On The Farm

North Dakota Farm Bureau

No Riders, Please!

There is only one seat on a farm tractor. *Why? Because it takes only one person to drive a tractor. That person should put all of his attention on the job he has to do. He should not share his attention with a rider on his tractor.*

Many people have been killed as a result of being a rider on a tractor and falling off. Riders who fall from tractors fall under the wheels or into the machine that the tractor is pulling. The driver never has time to stop the machine before the rider is injured, it happens too quickly.

There is no place for a rider to sit or stand safely on a tractor. *Usually there are no handholds for the rider to safely hold onto. Tractors can easily travel over large bumps. But since they do not always ride smoothly, an extra rider can easily get bounced from his position and get hurt when he falls.*

Readability	Estimated Value
Passive Sentences (%)	16
Flesch Reading Ease	71.5
Flesch – Kincaid Grade Level	6.5

Comments: This two-page document is printed front and back. Neither of the two tractors shown is equipped with ROPS. One illustration shows a child second rider falling from a moving tractor into the path of equipment being pulled by the tractor. The text emphasizes that the tractor driver must (a) attend to the driving chore and can't constantly watch out for the child, (b) that when children fall drivers don't have time to stop, (c) that when moving tractors jerk and bump second riders can fall, and (d) that there are usually no good handholds for second riders. The same issues are also related for riders on other farm equipment. The second page is a letter and number matrix game that uses the number of letters in the child's first name to find a number key that when used by the child with the matrix reveals a safety message. This document is likely to be most effective with elementary school children if adults present and discuss the text materials. The materials are effective for presenting the no second rider rule and the reason for that rule. The many reasons for why up to 80% of farm children routinely are second riders on

tractors are not addressed. The second rider practice is so widespread and the second rider rule so well known, it is doubtful that repeating the rules and the Always Be Careful (ABC) slogan will have much impact on actual second rider practices. Discussions of the social circumstances and practical contingencies that promote second rider practices should be addressed in order that children and their parents can ponder and address ways to avoid these contingencies. In addition, the long-term as well as the immediate consequences of second rider injuries should be addressed to help parents and children better contemplate the terrible costs of these injury events. Often this can be accomplished by short but powerful first person narratives by family members who have experienced such an event and the subsequent loss and stress. Marilyn Adams' story of her son's death and its effect on herself and her family members is a good example of this instructional method.

It Can't Happen on My Farm

UK/Farm Safety 4 Just Kids; Printed with funds from CDC/NIOSH Grant # U07/CCU408035-09

Each year over 100 children die on farms and thousands are injured. Most of these could have been prevented if farm safety rules were followed. Remember the rules and stay safe on the farm!

This booklet contains safety rules, games, and facts to make both you and your child aware of ways to stay safe on the farm. Encourage your children to learn and obey the safety rules. Remember, children are the most valuable resource on your farm!

Readability	Estimated Value
Passive Sentences (%)	16
Flesch Reading Ease	65.6
Flesch – Kincaid Grade Level	7.3

Comments: This seven-page booklet is printed front and back on 8.5 x 11 inch heavy paper. The text passages listed above are information and instructions to parents. The second page lists four websites from which additional farm safety material is available. The third page presents four safety messages to "make your farm safer" (no extra riders, ROPS on tractors, safety shields in place, danger signs marking places children should not play). The next page is a centerfold titled *What's Wrong with this Picture?* The black and white line drawing depicts a farmstead filled with farm machinery, farming activities, and children and adults who are exposed to a variety of injury hazards. The task for children is to identify and describe the hazards. The next page is a combination of simple rhyming captions and drawings that present five safety rules. A farm safety secret message puzzle follows. The last page is a form for listing emergency phone numbers with instructions to parents to review the list with their children. This is a simple, inexpensive, easy to use and likely an effective handout. It is specifically designed to foster parent (or other adult) and child interactive instruction

about farm safety. The find what's wrong with this picture activity is a simple and well designed activity that assists children and adults in first identifying farmstead hazards and then discussing how to correct and avoid these hazards. This activity could be used in conjunction with a walk-through hazard inspection of an actual farm. It could also be used in conjunction with the *Willy's Farm Safety Case Book.* The activity is well suited to children learning farmstead hazard recognition as they interact with friends and relatives. Although this document was distributed at multiple camps, none of the instructors observed in the videotapes used or referred to any of the materials during their presentations, although they did address the topics included in the case book.

Fido! Friend or Foe Activity Book

College of Veterinary Medicine
Auburn University, Alabama
State Farm Fire and Casualty Company

All pets should visit a veterinarian.
Stay calm around dogs.
Never chase a dog.
It is not cool to pull a puppy's ears
Be kind to all pets.
Remember: When meeting a new dog always let the dog come to you and smell you first.
Never try to take away a dog's toy.
Remember: Always ask the owner's permission before petting a dog.
Never reach through a fence to pet a dog.
Never leave a baby alone with a dog.
Remember: Never pull a dog's tail.
Remember: Never try to help a dog that is hurt. Get an adult to help the dog.
Be careful around a mother dog. She loves her puppies.
Not every dog that wags its tail is friendly.
Remember: Always approach a dog slowly and carefully.
Remember: Never tease a dog.
How many balls is the sleeping dog dreaming about.
Remember: Never put your face close to a dog.
Never put your hand between two dogs.
Remember: Always know where dogs live in your neighborhood.
Remember: Never take a toy away from a dog.
Never wake a sleeping dog.
Never bother a dog when it is eating.

Readability	Estimated Value
Passive Sentences (%)	0
Flesch Reading Ease	78.7
Flesch – Kincaid Grade Level	4.1

Comments: This 22-page document begins with the listing of dos and don'ts found above. The remainder of the booklet is a series of 20 coloring book pages. Each page contains a realistic line drawing of dogs and puppies interacting with each other and people in a variety of settings. Each drawing is accompanied by one of the captions listed above. The last page of the document is a message to parents about the purpose of the materials. The materials and messages are well designed, easy to use, and can be easily comprehended by children and adults. Each message is presented simultaneously in text and iconic (image) form. The booklet would likely appeal to most children in the 5 to 10 year old range, and to some older children. The videotapes provide no instances in which instructors made reference to or used the materials. Instructors did present, discuss, and demonstrate the dos and don'ts included in the document.

Personal Safety For Children – A Guide For Parents

Department of Justice, Department of Health & Human Services, Department of Education, National Center for Missing Children

How To Talk To Your Child: *Tips for Discussing Child Safety*

Who?

You. A parent is the best person to teach a child about personal safety.

What?

Effective personal safety skills.

- *Smart Thinking*
- *Strong Character*
- *Sticking Together*

When?

Now. Age and maturity matter.

- *There is no perfect age when parents should begin teaching children about personal safety.*
- *A child's ability to comprehend and practice safety skills is affected by age, educational, and developmental levels.*

How?

Listen to your children.

- *Know your children's daily activities and habits.*
- *Listen to what they like and what they don't like.*
- *Encourage open communication. Let your children know they can talk to you about any situation.*
- *Reassure your children that their safety is your #1 concern.*

Readability	Estimated Value
Passive Sentences (%)	5
Flesch Reading Ease	55.0
Flesch – Kincaid Grade Level	7.1

Comments: This 12-page document is designed to inform parents about a variety of risks to their children (abductions; safety at home, in the neighborhood, and at school). Farm safety is not included. However the sections about how to talk to children about safety, what parents can do to help children, and what to do in an emergency are relevant to farm safety. This document is most appropriate for teaching parents appropriate ways to help their children be safe. No instances of instructors referring to this document were observed in the videotapes although instructors did emphasize that children need to keep their parents informed about where they are, what they are doing, and to ask their parents for help to avoid problems and injuries.

Ashe County NC, 9/12/02

This safety day camp was operated at a state park. A total of 361 fourth grade elementary school students attended this camp and the Alleghany County NC camp. The instructors at this camp also conducted the same stations at the Alleghany County camp. Thus, no additional Instructor Data Sheet questionnaires were collected during the Ashe County camp.

The Ashe County camp goodie bag contained 12 items, only three of which were relevant to the topics of interest for this study. The three items were *It Can't Happen on My Farm! What You Should Know About Rabies*, and *Dog Bites Dos and Don'ts*. These same three items were used at the Alleghany, NC camp. Descriptions of these items, their readability, and comments are found in the Alleghany camp section of this report.

Eastern Colorado, April 17, 2002

This safety day camp appeared to be operated on a fair grounds or at a university farm. A total of 156 elementary school students attended this camp. Four completed Station Instructor Data Sheet questionnaires were obtained.

The Colorado camp goodie bag contained 50 items, only seven of which were relevant to the topics of interest for this study.

Exclusive Interview With An Accident

John Deere

Q. Everybody would like to know your name.
A. What's my name? Just "Accident," but you can call me "Next" if you like.

Q. What kind of accident are you, Next, or what kind are you going to be?
A. I never know until I do my thing.

Q. I suppose you have a lot of things you can do?
A. That's right, but within my specialty it's the equipment user who sets up what I can do. Sometimes it's just a good scare, sometimes an arm, or a leg.

Q. Even a life?
A. Sure, it doesn't matter to me. I just go to work and do what can be done when I get a chance.

Q. Then you are always waiting for work.
A. Every minute, every second, of course.

Q. You keep pretty busy these days?
A. It depends, there are a lot of jobsites I never even see. Some outfits haven't had me around in years. I don't mind waiting at all. But I think they know that, and everybody there is so S.C. they just don't give me a chance.

Q. S.C. – what's that?
A. That's Safety Conscious. Everybody in those outfits, they don't miss a point. I come in when people start missing points.

Q. Like what?
A. They keep their machines in shape. They keep in touch with their equipment dealers about retrofit programs. They know load limits, safe operating speeds in different conditions, and they're alert to things going on around them on the job. Walk around the machine before they start it up. They know their operator's manuals and all the cues on safer operation. Never let anyone ride on their machine. Never start their machine without being on board, and belted in. But that's more than you wanted to know.

Q. Not really – in fact, I have one more question...
A. Sorry, I've got a call. I have to go do my thing.

Q. Then reader, we'll ask you: Will you be giving Next Accident a call to your job today?

Readability	Estimated Value
Passive Sentences (%)	0
Flesch Reading Ease	85.0
Flesch – Kincaid Grade Level	3.2

Comments: This small brochure is written for adult or nearly adult farm workers. The third grade reading level demonstrates that materials for adults can be written in

simple language. Given the content and focus of this document many third and fourth grade students could read and comprehend the surface structure but not the intended deep structure of the document. Many children at this age level tend to be concrete and literal. They do not grasp implicit meaning embedded in printed text or spoken language. Text materials written at elementary school reading levels do not ensure that children will comprehend the message. The document could be used as an effective "tailgate" or "toolbox" safety presentation for adolescent and adult farm workers. It could also be presented as a role-play skit between the "Next Accident" and the "Everybody" characters. The skit could be enhanced with demonstrations of equipment hazards that lead to "Next Accident's" getting another "Everybody" injured or killed. The participants could be invited to identify these hazards and to describe how "Everybody" and others could be caught and injured. The skit format and concrete examples would make it easier for younger children to understand the intended message. No instructors were observed using or referring to this document.

My Telephone Book

When To Call 9-1-1

1. *To get help for someone who is hurt.*
2. *If you smell smoke or see a fire.*
3. *If you see someone taking something that belongs to someone else.*
4. *If you see someone hurting someone else.*

When Not To Call 9-1-1

1. *Never call 9-1-1 as a Joke.*
2. *Never call 9-1-1 to ask for information.*
3. *Never call 9-1-1 just to see if 9-1-1 works.*

What To Say When You Call 9-1-1

1. *Tell the person who answers what is wrong.*
2. *Tell them your name, address and telephone number.*
3. *Do not hang up until they ask you more questions.*

Readability	Estimated Value
Passive Sentences (%)	0
Flesch Reading Ease	67.4
Flesch – Kincaid Grade Level	5.8

Comments: This is a folded four-page worksheet printed on both sides of one 8.5 x 11-inch sheet of paper. It encourages children to make a list of emergency telephone numbers as well as the child's parents work telephone numbers. It also explains how, why, and when to call 9-1-1. The child's name and address is to be printed on the booklet. A list of rules for emergency use of telephones is provided. Completing this

worksheet and having children keep a copy at home near the telephone is a worthwhile activity that could be completed at home by parents and children. No instructors were observed using or discussing this form.

Farm Safety Guide

State Farm Insurance Company

Tractors

- *Do not allow children to ride on tractor.*
- *Have roll-over protection (ROPS) on all tractors.*
- *Have all operators complete a tractor safety course.*
- *Make sure all equipment has proper working lights and slow moving vehicle signs.*
- *Wear seat belts when operating all vehicles, including farm machinery.*
- *Make sure all power take-offs, belts and augers have proper guards and shields.*

Farm Machinery

- *Turn off power before adjusting, servicing, or unclogging power-driven machinery.*
- *Make sure loads being towed are properly hitched to the drawbar and that pins and chains are in place.*
- *Display slow moving vehicle signs on machinery towed or driven on the highway.*
- *Have shields and guards in place and maintained at all times.*
- *Inspect and maintain all hydraulic hoses and couplings.*
- *Make sure tires are properly inflated.*

Readability	Estimated Value
Passive Sentences (%)	8
Flesch Reading Ease	61.8
Flesch – Kincaid Grade Level	7.2

Comments: This is a brochure with six pages of bulleted text stated as safety rules. Five full pages of color farm photos accompany the text. The document is written for adult farm operators and workers. The tractor and farm machinery bulleted text are listed on one page of the brochure as reproduced above. The other five pages deal with other safety topics (chemicals, PPE, security, buildings, fire, and loss prevention). The brochure content is a set of rules. No instructors were observed using these materials although most of the instructors stressed many of the safety rules.

101 Farm Safety Tips: Stuff you should know so you don't lose a finger or toe!

Farm Safety 4 Just Kids

Critter Cautions

1) Be cautious when around large animals.
2) Stay away from nursing animals.
3) Approach an animal from the side, not the back.
4) Use a soft, calm voice when around animals.
5) Don't go near mad, snarling, or snorting animals.
6) Don't wrap the lead rope around your hand.
7) Never try to catch wild animals.
8) Report any animal bite.

Keeping Safe

- *Use tractors with rollover protective structures (ROPS).*
- *Walk around a PTO, not over.*
- *Know the height of tall equipment before driving under power lines.*
- *Wear non-skid shoes when climbing ladders.*
- *Make sure steps on ladders are secure.*
- *Chain or secure large dual tires in an upright position.*
- *Use the gate instead of climbing over fences.*
- *Start the PTO while sitting on the tractor seat.*
- *Use ladders instead of riding or walking up the conveyor elevator.*
- *Know where others are when operating machinery.*
- *Don't light a match or allow anyone to smoke around fuel or in the barn.*
- *Never reach through or around safety shields.*

Readability	Estimated Value
Passive Sentences (%)	0
Flesch Reading Ease	72.9
Flesch – Kincaid Grade Level	5.0

Comments: This document is an attractive, colorful, and well-designed poster designed for use with multiple groups. Short lists of safety rules (dos and don'ts) are presented for tractors, other machinery, animals, chemicals, safety helmets, safety goggles, and other topics. Each topic consists of a set of bulleted rules accompanied by a relevant color picture. The poster's information and graphics could easily be incorporated into each of the three topics of interest in this study. The poster could be used with elementary school children in a variety of ways including assigning individual or small groups of children the task of examining one portion of the chart and then explaining that part of the chart to other students and/or relating the material to their own experiences. Instructors orally presented the safety rules stressed in the poster. No instructor was observed actually using or making reference to the poster.

Farm Safety & Health – Farm Safety Tips

Cooperative Extension Service, Agricultural Engineering, Oklahoma State University

Tractor – Equipment

- *Don't allow operation until trained.*
- *Don't allow riders.*
- *Don't permit playing around idle machinery.*
- *Lower front loaders and hydraulic equipment when not in use.*
- *Keep PTO shields in place.*
- *Disengage PTO when not in use or idle.*
- *Use parking brake.*
- *Remove ignition key when not in use.*
- *Don't allow playing around grain auger, elevators or pits.*
- *Maintain reflectors on machinery, trailers, etc.*
- *Display SMV emblems.*

Livestock

- *Care should be taken around livestock pens and feeding equipment.*
- *Caution should be taken when working around waste storage facilities.*
- *Caution should be taken around confinement operations or holding pens.*

Readability	Estimated Value
Passive Sentences (%)	7
Flesch Reading Ease	54.7
Flesch – Kincaid Grade Level	7.3

Comments: This three-panel double-sided brochure is designed for farm workers and adults. One panel of the farm safety tips is reproduced above. Other panels present rules for vision and hearing protection, protective clothing for chemical application, and child injury hazards and prevention. All the bulleted items in the above list were presented orally by the instructors and usually recited by children in teacher question and student group recitation sessions. Instructors made no reference to the brochure.

Farm Safety Rules!

AgriSafe and Farm Safety 4 Just Kids

- *Follow rules and always stay in places where it's safe to play.*
- *Gravity Wagons – Don't Go In! Never go inside grain bins.*
- *By PTOs you should not play! You're too slow to get away!*
- *If you don't know what it is, never drink or eat it. If you see some chemicals, it's time for you to beat it.*
- *Wait until you're big enough to ride an ATV. When you ride an ATV, be sure to wear your PPE!*

- *A mower is no place to ride! When you hear one, go inside!*
- *No seat, no rider! If you hear a tractor sound, it's not safe to stick around!*
- *Play away from animals – use good sense! With large ones stay outside the fence!*

Readability	Estimated Value
Passive Sentences (%)	0
Flesch Reading Ease	90.2
Flesch – Kincaid Grade Level	2.6

Comments: This poster presents the eight farm safety rules that are listed above in bullet form. The text of each rule is a caption for an iconic safety sticker. Five of the stickers depict a yellow play area were children should play to avoid being injured by playing near hazardous farm machines, chemicals, and work areas. One sticker depicts a 6-foot ruler behind a rider on an ATV to graphically demonstrate being physically tall enough to operate an ATV. Another sticker depicts a child watching a bull from a safe position outside of the fenced area. The poster is well designed. The concepts it teaches could be presented by asking children to examine each sticker and then to elaborate on its meaning and relevance for themselves, parents, and other families. The videotapes of the instructors' sessions revealed that they addressed each of the topics on the poster in oral statements followed by rapid question and answer sessions. No instructors were observed using the poster as part of their instructional activity.

Farm Safety Day Activity Book

AgriSafe and Farm Safety 4 Just Kids

Comments: This is a 10-page booklet designed to accompany the poster that presents the Farm Safety Rules poster described above. The booklet is an attractive series of activities presented in black and white iconic drawings that make concrete the eight farm safety rules presented in the poster. The eight safety rule icons are each presented in a three-panel pretest format where only one of the panels depicts the safe behavior and the other two panels depict common behaviors that are not safe. (For example the three panel tractor safety panel has one panel with a second child rider, another with a child standing in a blind spot for the operator, and a third panel with an operator on the tractor and children in a fenced in play area away from the tractor. In each of the eight cases the task for the child is to identify the safe practice panel. This is an effective way to teach the meaning of the safety icons. A page depicting the safety stickers and rules is then presented. A connect the dot activity follows that when completed shows a child standing outside the fence looking at a cow. The booklet concludes with the safety icon panel post-test and a certificate of completion. All the safety day camp instructors were observed presenting these rules. Few if any instructors actually used and made reference to the safety icons. None included activities from the *Farm Safety Day Activity Book* in their instruction.

Stratford, Wisconsin, April 25, 2002

The Further Adventures Of Ready Rooster

Sometimes It's Good To Be A Chicken
John Deere

No Riders Allowed
It's a mistake to ask for a ride on farm equipment until you're old enough to learn how to drive.

Adults Need Protection Too
Dads, moms, older brothers and sisters need a ROPS (Rollover Protection Structure) if a tractor should tip over.

Buckle Up The Seatbelt
It's not "chicken" to wear a seatbelt. It's the smart thing to do.

Avoid Moving Parts
Loose, floppy clothing can get caught in a PTO shaft, belt, or auger. Stay far away from machines while they are running.

Farm Animals Are Fun
But stay on your side of the fence unless there is an adult with you. Animals with babies are protective, just like your parents protect you.

Readability	Estimated Value
Passive Sentences (%)	12
Flesch Reading Ease	77.2
Flesch – Kincaid Grade Level	5.5

Comments: This 18-page document is an attractive set of games, problem solving activities, and a coloring booklet. It includes many line diagram illustrations of farm equipment, farm animals, and farmstead features including silos, ladders, and ponds. The booklet begins with Ready Rooster's introducing himself as having grown up on this farm. He knows where it is safe to play and to avoid dangerous places. Thus, his motto, "Sometimes it's good to be a chicken." The activities in the remainder of the booklet are conveyed by Ready Rooster's interactions with Katy and Jeff who are depicted as 7 or 8 year-olds in comic strip format drawings. Ready Rooster first introduces the two children to his farm. Subsequent pages in the workbook involve the children looking at drawings and find "mistakes" including tractors without ROPS, unshielded PTO drivelines, and second riders on tractors. Other pages involve matching drawings of sharp objects that can cut or poke with drawings of the farm machines that contain those sharp objects. Other single page drawings and activities involve hazardous chemicals, the hazards of

wearing floppy clothing near moving machine parts, safety around animals with babies, gravity flow grain wagons, electrical cords and circuits. One activity asks children to circle objects that can ride safely in the back of a pickup truck. (Katy and Jeff are shown standing near the back of the pickup truck near a variety of other farm objects and tools. The intention is that the child should *not* circle the pictures of Katy and Jeff. Other pages, games, and activities deal with climbing and the risk of falls, boating with adult supervision and the use of life jackets, and avoiding being a second rider on a tractor, and slow moving vehicle signs (SMVs). The last page of the booklet provides an answer key for each activity. Included with the last page are 30 stickers, 10 each of Ready Rooster, miniature SMVs, and a "Safety live with it" triangle.

The document is well designed, attractive, and the activities engaging, especially for children age 5 to 9 years of age. Individual pages and activities in the booklet easily can be used as a group activity to elicit from children the safety messages and principles illustrated. This could be accomplished by enlarging specific booklet pages to poster size and conducting small group problem finding and solving activities. An alternative would be to give each group of three or four children a copy of one page and have them solve the problem and then report their results to the entire group. Including a few of these activities in Farm Safety Day Camp sessions and then giving the booklet to children at the conclusion of the camp would encourage children's taking the booklet home and continuing to complete additional activities with family members and friends.
No instructor in any of the day camps was observed referring to or using any of the activities from this booklet. Using materials from the booklet in the ways suggested above could increase students' skills in hazard recognition and application of farm safety principles. Active participation by students in instructional activities enhances the learning process. That which is learned becomes more memorable and more likely to be generalized and applied to life activities.

It Can't Happen on My Farm

UK/Farm Safety 4 Just Kids; Printed with funds from CDC/NIOSH Grant # U07/CCU408035-09

This item is described earlier under the Alleghany, NC camp.

Mammoth Cave, Kentucky #1, May 2, 2002

Emergency Care And Rescue On The Farm

Farm Safety 4 Just Kids
Farm Safety 4 Just Kids, Mammoth Cave Chapter

Every year many farm individuals die, or their injuries are aggravated after a farm accident because they were either not located promptly, or the first individuals to arrive upon the scene were not prepared to aid them. Planning which establishes check-in time, work locations, and emergency procedures will greatly reduce the potential for tragedy.

In addition, communication devices such as cell phones and radios may facilitate a call for help and can greatly increase chances for rescue.

According to a study by Dr. Fredrick Rivara, completed in 1997 of data collected nationally from 1990-1993 there has been a 39 percent decline in the rate of fatalities to children in the past 10 years. One of the reasons for this decline is most likely improved EMS and trauma care. More injury victims are being transported to hospitals faster, allowing them to be resuscitated from their injuries during the first "golden" hour, with a resultant improvement in outcome. Higher quality regional trauma care has probably contributed to the decline in mortality. To continue this downward trend in deaths a few simple precautions can have a significant impact:

- *Encourage the whole family to develop a "what if" plan.*
- *Predetermine appropriate behavior if an emergency does arise.*
- *Establish a check-in procedure for workers in remote areas.*
- *Contact the emergency providers who will be responding to your farm. Provide them with a site plan to aid in their response.*
- *Have a number of people on the farm trained in emergency CPR and first aid.*
- *Post emergency numbers and clear, concise directions to the farm by each phone.*

In the event you have to call for help:

1. *Stay calm and listen carefully to the questions and instructions given by the dispatcher.*
2. *Note any special access requirements, such as four-wheel drive for a muddy field or other extraordinary circumstances.*
3. *Do not move the victim until professional emergency responders arrive unless life-threatening conditions exist.*

All family members, including children, can play a big role in knowing what to do in a rescue situation. By working together with your local emergency agencies, your neighbors, family members, and farm employees, you can assure the best chance of survival and recovery for farm accident victims.

Readability	Estimated Value
Passive Sentences (%)	5
Flesch Reading Ease	35.2
Flesch – Kincaid Grade Level	12.0

Comments: This is an informative two-page document printed front and back on one sheet of 8.5 x 11 inch paper. The document encourages parents to engage in emergency preparedness for dealing with potential farming-related injuries. It stresses that all members of the family including children should know these plans and procedures. The telephone number of the local community educational resource center is provided. The center is affiliated with the local regional hospital. It is presumed that

children were given this document to take home to their parents. No instructor was observed making reference to the document.

So That Kids Might Live – Farm Safety Rap Song

Successful Farming, 1991

Verse 1
Let me tell you about a story of a man and his grain.
Stepped in the bin, corn fell around him like rain.
It was a mistake, but it ain't no sin,
Suffocation in the grain bin.
Verse 2
Tractor on the shoulder late at night.
Loaded grain wagons; it was quite a sight.
No use trying to keep it on the shoulder,
Another farm vehicle tipped over.
Refrain
This is a rap of farm safety for kids.
Listen up, you may learn something you never did.
If you don't stay alert,
Someone could really get hurt.

Readability	Estimated Value
Passive Sentences (%)	0
Flesch Reading Ease	86.2
Flesch – Kincaid Grade Level	2.6

Comments: This rap song and a photograph of 35 fifth grade students and two of their teachers is the introduction to a five-page "blueprint for action" to help get farm safety started in "your community" as part of a "Save the Children" day. The entire section was printed by *Successful Farming* magazine and later reprinted for use in this Safety Day Camp and probably other camps as well. An important feature of this document and its five short stories is that elementary school children and adult teachers and community members interested in farm safety worked together on a series of projects. The projects include students' writing, preparing, performing, and videotaping the instrumental and vocal music for the song. Multiple groups of students from different classes were involved in these creative activities. In conjunction with their art classes, elementary school children created drawings to accompany the song and to illustrate farm safety hazards and safety behaviors. Students from elementary and junior high schools presented the program of materials at public gatherings including one for Barbara Bush. Other articles in this document describe how other farm community adults became involved in teaching farm machinery safety to elementary, middle school, and junior high

students. The adults represented the Iowa state extension service, 4-H, FS4JKS, church leaders, and others. High school students also developed safety demonstrations projects. One student constructed a physical model to demonstrate PTO entanglement injuries using tissue-paper farmers and a battery powered model tractor that operated a model manure spreader through a PTO driveline.

The activities described in this document are notable for several reasons. First, each activity was part of a community safety campaign. Second, all the activities described were developed and completed over a period of weeks and months. Third, all the projects involved students in active roles, first planning and developing materials and activities, and then using the materials to teach others about farm safety issues. Fourth, students were guided and assisted by teachers and other adults. Fifth, the fruits of this effort were displayed, presented, and celebrated at community gatherings.

Farm safety day camps have limitations in terms of available time and resources. Over time there is a lack of continuity across camps for students and instructors. Despite this limitation, it is possible to involve children in more active ways in typical safety day camps. Methods for doing so are described above with respect to the use of the *Willy's Farm Safety Case Book, It Can't Happen on My Farm, the Fido Friend or Foe Activity Book,* and the *Ready Rooster* activity book. All of these materials (as well as others used in the safety day camps) can effectively engage children in problem recognition and problem solving, as well as in teaching others what they the children have learned. One of the most effective ways to learn is to teach others.

Children – The Future of Farming

Farm Safety 4 Just Kids

The mission of Farm Safety 4 Just Kids is to prevent farm-related childhood injuries, health risks and fatalities. We feel strongly about our mission because each year, hundreds of children are needlessly killed on farms and ranches. We believe that these deaths and thousands of other injuries should not be accepted as a fact of farm life. The future of farming depends on the safety and health of its most vulnerable population – children. By becoming a chapter member of Farm Safety 4 Just Kids, you will help local children grow up in a safe farm environment.

Studies Show

- *One-third to one-half of non-fatal childhood agricultural injuries occur to children who do not live on farms.*
- *In both the United States and in Canada, children younger than 16 years of age comprise up to 20% of all farm fatalities reported in 1990.*
- *Tractors accounted for 44% of machine-related deaths during 1980-1989 for working 16 and 17 year olds.*

Readability	Estimated Value
Passive Sentences (%)	25
Flesch Reading Ease	42.5
Flesch – Kincaid Grade Level	12.0

Comment: This is a tri-fold informative brochure about the mission of Farm Safety 4 Just Kids. Statistics about farming-related injuries and fatalities are presented. Chapter activities, ways to become involved, and other organizations that assist FS4JKS are described. Chapter benefits are described and a combination membership and donation form is included. FS4JKS chapters organized the safety day camps included in this study. Presumably this flyer was distributed at this camp with the intention of having the children take the document home to their families.

This Test Is No Killer (But Failing It Could Be!)

John Deere

Just Try To Find Fault In This Test

Study this picture and write down the faults you find on a separate sheet of paper. Then compare your answers to those on the back of this poster. John Deere hopes you ace this test, not just here but for the rest of your life.

It Never Hurts To Know The Answers Up Front…

- *Make sure all safety devices are in place and working.*
- *Display a "slow moving vehicle" sign, proper lighting and reflectors when driving on roads.*
- *Equip your tractor with a rollover protective structure (ROPS) if possible. See your dealer for details.*
- *Always wear a seat belt if your machine is equipped with a rollover protective structure (ROPS).*
- *Stop the engine and be sure the power take-off (PTO) stops before connecting, adjusting or cleaning PTO-driven attachments or implements.*
- *Never carry riders. They could fall off and be seriously injured or killed.*
- *When mowing, wear close-fitting clothes, long slacks and closed-toe shoes with traction soles for protection.*

Readability	Estimated Value
Passive Sentences (%)	7
Flesch Reading Ease	68.8
Flesch – Kincaid Grade Level	6.6

Comment: This is a 16 by 22 inch color poster printed on both sides. The display side of the poster is a large and complex drawing of many farm tractors engaged in various chores and involving a variety of other equipment as well as tractor operators and others including children, bystanders, motorists, and animals. A series of 17 hazards are depicted in the drawing including things like second riders, tractors without a ROPS operating on steep slopes, tractor driver inattention, bypass starting tractors, using a raised front-end loader as a work platform, using a back hoe to dig over an underground power line. The object is to examine the poster to find the safety problems/hazards and then to articulate the problem and its preventive safety rule/practice counterpart. The rear of the chart contains a map that locates each of the 17 unsafe practices, a list of captions than explains each practice error, and a bulleted set of safety rules to avoid the hazardous practices depicted.

The poster is similar in design and intent to the *Ready Rooster* activity book described earlier. It differs from the *Ready Rooster* booklet in four ways. First it is a single poster rather than a booklet.

Second, the poster drawing is very complex. All 17 hazards depicted are in close proximity to one another. This and the many colors and multiple viewing perspectives incorporated into one drawing makes a very busy illustration as compared to the much cleaner single or few concept line diagrams in the *Ready Rooster* graphics. A much higher level of visual literacy is required to process the information in the *This Test is No Killer* graphic. The document and activity is more suited for use with children age 11 years or older and adults.

Third, the unsafe behaviors depicted in the graphic are illustrated with humorous-cartoon-style characters. The use of such humorous characters in safety posters and materials is an old and common tradition. The intention is to gain the viewer's attention by making the characters look funny in a slapstick manner. This approach confounds and demeans the safety message. The injuries depicted are not funny. The *Ready Rooster* booklet uses cartoon characters but it does not use slapstick depictions of injury events that make the events seem funny and the injured persons silly dolts.

The poster would be more effective if it were less cluttered with so many different viewing perspectives. It should also present fewer injury events on a single chart. A series of several drawings that depicted fewer errors with better artistic perspectives would be easily processed and more effective in achieving the intended learning outcomes. The characters, their plights, and injuries should not be depicted in a humorous fashion.

The manner in which the various parts of the poster on the front and back work together is very well designed and can serve as a template for other similar posters.

Most older children and adults will find the poster to be an interesting activity. It is challenging to find the errors in the drawing and then to check one's performance against the answer keys, messages, and rules provided on the other side of the poster. Using the poster in conjunction with actual color photographs of farm equipment and

farming practices would be a good way to reinforce and generalize the drawing's intended messages. Photos of actual farm tractor and machinery operation typically reveal many of the "errors" that are the focus of the "Find the Fault Test." The question of whether or not the hazardous situations and behaviors depicted are funny should also be addressed.

Our Farm & Home Safety Plan

Kentucky Department of Agriculture

Animals

Animals are affected by disasters just as humans are. Following a disaster, animals will be disoriented, possibly injured, and may have undergone a complete change of character.

Planning ahead will make it easier to exercise our responsibility of caring for farm animals and pets.

- *Always make your presence known to an animal before touching.*
- *Respect all animals. They can and will hurt you without intending to.*
- *Never try to separate animals who are fighting.*
- *Animals respond well to routine. Be calm and deliberate.*
- *Always leave an escape route when working in close quarters.*
- *Take extra care around breeding males and female animals with young.*
- *A human gate is essential.*

Children On The Farm

Tradition says the farm is a good place to raise children, but farms hold special dangers for youngsters wandering near equipment and animals, where harmless childhood exploration can quickly turn threatening. Many dangerous situations can by controlled in advance through proper foresight, education, and supervision. Watch out especially for these common hazards, and help your children claim their chance to follow in your footsteps.

- *Never allow children to ride as a passenger on equipment. Remember the rule: "One seat, one rider."*
- *Children should never play in or near farm work areas such as grain bins, silos, manure pits, pesticide storage areas, equipment storage sheds, spare part (junk) piles or sheds, or even roadways on which equipment frequently travels.*
- *Never allow children to play in or ride on grain trucks, wagons or bins. Children can be completely submerged in flowing grain in as little as **three seconds**, and children can suffocate if covered by grain.*
- *Keep all chemicals and poisons in a locked storage area away from where children might play.*
- *Keep young children away from livestock. Instruct older children how to act safely around animals.*
- *Teach proper use of farm ponds.*

- *Include children in emergency planning. Give them roles to carry out in safety drills.*
- *Be honest with children about what may happen during accidents or disasters.*
- *After an accident or disaster, children may undergo behavior changes, symptoms of illness or regression in age in an attempt to cope. Do not hesitate to seek outside help through schools, your local Red Cross, or a local health center.*

Readability	Estimated Value
Passive Sentences (%)	6
Flesch Reading Ease	53.9
Flesch – Kincaid Grade Level	8.8

Comments: This well organized and well-written 20-page booklet is designed to help families establish an emergency plan for their farm and home. The document includes short text statements and worksheets to facilitate recording and keeping near the telephone emergency telephone numbers, directions to the family's farm, and preparing and maintaining first aid kits. Information and worksheets are provided for topics including machinery safety, animal safety, child safety, and safety hand signals. Instructions and forms for dealing with the post-event aspects of injury events are provided. A one-page medical history form to be completed for each family member is included, something that can greatly facilitate emergency care of injured persons. Completing this workbook would be an excellent task for upper elementary and middle school students who could do so in cooperation with each other and their individual family members. The product of this activity can be an important contribution to the safety of farm families and an excellent learning activity for students.

It Can't Happen on My Farm

UK/Farm Safety 4 Just Kids; Printed with funds from CDC/NIOSH Grant # U07/CCU408035-09

This item is described earlier under the Alleghany, NC camp.

Mammoth Cave, Kentucky #2 May 2, 2002

Don't Worry, They Won't Bite

State Farm Insurance Companies
Insurance Information Institute
American Veterinary Medical Association

While that's true for the vast majority of dogs, even the cuddliest, fuzziest, sweetest pup can bite if provoked. Unwisely, some owners actually promote aggression in their dogs as symbols of power.

From nips to bites to actual attacks, dog bites are a serious problem. Dog bite victims requiring medical attention in the United States number 500,000 to 1 million annually. Countless more bites go unreported and untreated. On average, about a dozen people die each year from dog bites.

Fortunately, there are steps we can take to address this problem.

Who's being bitten?

Children make up more than 60 percent of all dog bite victims. The national Centers for Disease Control and Prevention estimates half of all children 12 and younger have been bitten by a dog.

The elderly and home service people – like mail carriers and meter readers – also are high on the list of frequent dog bite victims.

How can my family and I avoid being bitten

Be cautious around strange dogs and treat your own pet with respect. Because children are the most frequent victims of dog bites, parents and caregivers should:

- *Never leave a baby or small child alone with a dog.*
- *Be on the lookout for potentially dangerous situations.*
- *Start teaching young children – including toddlers – to be careful around pets. Children must be taught* ***NOT*** *to approach strange dogs. Children should be taught to ask permission from a dog's owner before petting the dog.*

Other tips that may prevent or stop a dog attack:

Don't run past a dog. *Dogs naturally love to chase and catch things. Don't give them a reason to become excited or aggressive.*

Never disturb a dog that's caring for puppies, sleeping or eating.

If a dog approaches to sniff you – stay still. *In most cases, the dog will go away when it determines you're not a threat.*

If you're threatened by a dog, remain calm. *Don't scream. If you say anything, speak calmly and firmly. Avoid eye contact. Try to stay still until the dog leaves, or back away slowly until the dog is out of sight. Don't turn and run.*

If you fall or are knocked to the ground, curl into a ball *with your hands over your head and neck. Protect your face.*

Readability	Estimated Value
Passive Sentences (%)	18
Flesch Reading Ease	66.9
Flesch – Kincaid Grade Level	6.6

Comments: This is a tri-fold informational brochure printed front and back on three panels of 8.5 by 11-inch glossy paper. Most of the brochure's text material is reproduced above. Six thumbnail color photograph illustrations depicting dog and human interactions are interspersed with the text. In the interest of public safety the brochure was prepared and distributed by the three groups listed. It is targeted toward a general audience of older children and adults. None of the instructors were observed either using or making reference to this document. The animal safety instructors in this camp and in the other safety day camps orally presented the safety rules presented in the brochure. The rules were usually presented while having the children first observe one or more dogs located some distance away. In these and in other animal safety demonstrations, the children were usually seated on benches or stood with a gate or fence between them and the animal. After the rules were presented the children were invited to approach and pet the dog. While the petting was in progress the instructor usually quizzed the children about the safety rules for dogs. The children usually talked about experiences with their own dogs.

Emergency Care And Rescue On The Farm

Farm Safety 4 Just Kids
Farm Safety 4 Just Kids, Mammoth Cave Chapter

Comments: This document was used in the first Mammoth Cave Safety Day Camp. Its reading level and instructional properties are described earlier.

The Mystery Club. On Track with Tractor Safety

Iowa State University
University Extension

The Dark Side
But these powerful and useful machines have a dark side. As long as farmers have been using tractors they have been injured and killed by them. The National Safety Council has been recording the number of tractor fatalities for years. In 1990, they estimated that 460 people in the United States died from tractor injuries.

There are four types of tractor fatalities. Overturns happen when the tractor flips or rolls on top of the operator. Runovers happen when the tractor wheel runs over someone who either falls off the tractor or happens to be in the area. Deaths that occur when someone gets caught in the tractor's power take-off unit also are considered tractor fatalities. The fourth type are deaths from a tractor collision on a road or highway.

Dangerous Traditions, Dangerous Beliefs

In the past, families have had a dangerous tradition of allowing children to ride on tractors. Riders are never safe on tractors for these reasons:

1. *Riders that fall off the tractor immediately face a second hazard, being run over by a tractor wheel.*
2. *On uneven terrain, riders are first to bounce off the tractor (this is especially true for children because of their light body weight).*
3. *Riders can distract the driver or bump into controls.*
4. *Rollover protective structures are not designed to protect riders, only the operator of the tractor.*

Many people also believe that tractor cabs can keep riders safe. This is not true! A cab is designed to protect only the tractor operator, it does not prevent a rider from being thrown from the cab and run over. Doors might not latch, windows pop open. And if the tractor overturns, the rider can be thrown or crushed against the tractor frame: there is no protection for a rider.

Four Magic Words

Four magic words can prevent almost all injuries and deaths of extra riders on tractors:

NO SEAT
NO RIDER

Judging by the number of deaths caused by extra riders, this may be the most important safety rule for agricultural operations today.

What You Can Do

You need to say "no" when adults offer rides on a tractor. If you do not already have the "no seat no rider" rule in your family, talk to your parents. There are decals you can get from organizations, such as Farm Safety 4 Just Kids, to put on tractors as a reminder. It might not always be easy to say "no" especially when that request comes from a grandparent or a friend who drives a tractor.

You also can stay out of an area where tractors are being operated. It is not safe for bystanders, children or visitors to be in an area where people are working with tractors and other equipment.

The Mystery of "The Sick Sister"

Chris knew that his little sister wasn't kidding this time. "My tummy hurts and I want Mommy!" Susie yelled from the TV room. Chris peeked in and there she was, hanging

her head over the couch, her usually rosy cheeks pale and white. She wasn't in an arguing mood.

"You stay right there and don't move," Chris told Susie with a sudden sense of authority. "I'll get Mom. She's helping Dad mix cattle feed."

Chris knew that Mom and Dad couldn't hear him over the roar of the tractor and feeder-grinder. They would not even see him because they were busy. He also knew that when his parents were outside they trusted him to keep tabs on his younger sister, and that kids should not be in a work area. But he remembered his family's special trouble signal, and it was time to use it. He flicked the porch light on and off several times, then stood underneath the apple tree where he knew his Mom could spot him.

It worked. Within a few minutes, Mom was inside calling the emergency room. "They think she could be having an appendicitis attack," Mom told him as she hurriedly got ready to leave with Susie. "I'm so glad you knew what to do."

Your Challenge:

What dangers did Chris avoid by not going out to the area where his mother was working?

What did he do instead?

What does your family do in an emergency?

Readability	Estimated Value
Passive Sentences (%)	15
Flesch Reading Ease	66.4
Flesch – Kincaid Grade Level	7.5

Comments: This is a four-page 8.5 x 11 inch extension document printed on 11 x 17-inch high-quality white paper in black, blue, and grey. Charles Schwab, Laura Miller, and Lynn Graham wrote the document text. Jules Design was responsible for layout and design. The document contains five short interactive activities and puzzles related to the primary topic of tractor safety. It also includes seven short articles, a number of which are reproduced above. The text materials are a combination of informative pieces related to tractor safety and short narratives like *The Mystery of the Sick Sister*. Some sections present safety rules and the reasons for the rules. The Wacky Science section includes three short and interesting factual articles about the development of the human brain and eyeball. The purpose is to help the reader understand that children's immature brain and eye development make it difficult for them to be proficient in throwing and catching baseballs or in performing farm chores like driving a tractors. Inclusion of this material provides a context that makes age-related farm safety rules more understandable.

The document is well written and organized. The materials are presented in an engaging way that appeals to a wide age range. The safety rules are presented in a meaningful context that makes them relevant and memorable for the reader. Attention to the context and purpose for which rules are designed often is omitted in safety instruction. This document is an excellent teaching resource that can be used in multiple ways and on multiple occasions with upper elementary and middle school children as well as with older children and adults. All groups, including instructors, can learn from the material. The document's integration of multiple methods for introducing and teaching safety concepts and rules and transferring these to farm life is a good model for others who plan and conduct safety training class activities and materials.

No instructors were observed making reference to or using the materials. Instructors did present nearly all the tractor safety rules included in the document, usually by orally stating the rules and then using real tractors and machinery to point out safety hazards. In some cases the instructors asked children to locate and describe safety hazards on actual farm machinery and to state rules for avoiding those hazards. In such cases, the machinery was not being operated, or if operating was placed at a safe distance from the children who seated in a confined area.

The Mystery Club, Those Mighty Machines

Iowa State University
University Extension

Man Versus Machine

Man and machine in a contest of speed is no competition at all. The machine always wins. Even though most people know that machines are faster than humans, they think they can react quickly enough to avoid an injury – wrong!

It takes most adults an average of ¾ of a second to react to something. First, you recognize a danger. Next, you consider which action to take. And then you do something to avoid the danger. For example, when you see a ball coming toward your head you can duck to avoid it, raise your hands to catch it, or move your feet to get away from it. It takes you longer to react because you are thinking about which choice to make.

On the other hand, machines do not make choices. Once turned on, machines operate at a set speed no matter what else is happening.

Let's say you need to get away from a power take-off (PTO), lawnmower blade, or stalk roller. In just one second, a PTO can pull in 7 feet of shoelace, a lawnmower blade spins 52 times, and a stalk roller can pull in 12 feet of cornstalks.

Even if you could react with lightning seed – say, 1/10 of a second – you still would not be safe. In that 1/10 of a second, the PTO would have wrapped up 8 inches of your body, the lawnmower blade would have cut you 5 times, and the stalk roller would have pulled in 14 inches of your body.

The machine wins and you lose an arm or leg.

The only way to win is to use your head to avoid dangerous situations.

Power Take-Off (PTO)

A PTO transfers power from the rotational or spinning energy of a shaft attached to a tractor engine. Some PTOs make 540 revolutions per minute (called rpm), while others turn faster at 1,000 rpm. PTOs run many types of machines such as augers, mowers, balers, conveyors, and mixers. The amount of power moved through the shaft depends on the size of tractor engine spinning the PTO. PTOs generate enough force to rip denim blue jeans in half, tear clothing off people, and crack bones when a leg is wrapped around the shaft.

Key danger: Clothing, hands, feet, hair, jewelry, ties, and other items can get wrapped around the shaft. An item that even gets close to the shaft can be pulled into it!

Belts and Pulleys/Chains and Sprockets

These combinations of devices transfer power from the spinning or rotational energy of a shaft attached to an engine. They are used in complex machines such as combines, cotton harvesters, and balers. They also are used in machines that carry crops and other materials a long distance, including conveyors, grain elevators, silo unloaders, and manure wagons. The belts and chains move very, very fast.

Key danger: Fingers are often caught between the belt and pulley or the chain and sprocket. This happens quickly. Other loose items also can be wrapped up in the belts and pulleys or chains and sprockets.

The Mystery of the "Offer Too Good to Refuse"

"Jeremy, what on earth were you thinking?" Jason asked as they rode the bus home from school. "I would have given anything to drive your cousin's new ATV to the Wilson's yesterday!"

Jeremy knew it sounded too good to be true: an offer from his 15-year-old cousin to drive the family's brand-new all-terrain vehicle to a neighbor's farm. Jeremy said no. More than that, 12-year old Jeremy refused to even ride with his cousin to the Wilson's. Instead, Jeremy stayed home to do chores.

"You are right," Jeremy answered. "I wanted to drive that new ATV really bad. It's so cool, with that big engine and everything. My Dad says it has a 120 cc engine, so my cousin is not old enough to operate it legally. You gotta be 16."

"We also would have had to drive on the road to get to the Wilson's," Jeremy continued. "That is a no-no for ATVs. Remember that from class last year?"

"And I did not have my helmet, gloves, or boots," he added. "When my cousin offered to let me ride with him, I knew he did not know what he was talking about. Everyone knows that ATVs are built for only one person, the operator."

"I guess I did not think of all those things," Jason said. "Maybe it was not such a dumb thing to say no, after all."

Your Challenge:

What dangers did Jeremy avoid by not accepting his cousin's offer?

What did he do instead?

What other safety rules does Jeremy need to follow when he operates an ATV?

Readability	Estimated Value
Passive Sentences (%)	12
Flesch Reading Ease	70.4
Flesch – Kincaid Grade Level	6.9

Comments: The authors of the previous *On Track with Tractor Safety* document also prepared this document. The *Those Mighty Machines* document has a format identical to the *On Track* material. As is evident from the text of the document the only difference is that the short stories, interactive puzzles, the safety rules and their rationales focus on farm machinery hazards and prevention of entanglements in these machines.

This document has all the features of the *On Track* document and like that other document is an excellent teaching resource and a good model for the design of effective instructional materials and activities. As in the case of the former document, no instructors were observed using or referring to the *Mighty Machines* document. Instructors did state and discuss the relevant safety rules and frequently asked children to recite the rules. Most instructors also used farm machinery to illustrate entanglement hazards. At four camps instructors arranged for a demonstration of a PTO driveline entanglement by using a newspaper stuffed dummies and a rotating PTO driveline shaft powered by a tractor. In all such cases children were kept well away from the machine while it was being operated. In one case when the dummy failed to become entangled, the instructor approached the rotating driveline and poked the dummy a few times with his left hand until it became entangled in the rotating shaft. This was a dangerous behavior and a bad example. The Tyvek coveralls that were the outer portion of the dummy could have entangled the instructor in the machinery.

It Can't Happen on My Farm

UK/Farm Safety 4 Just Kids; Printed with funds from CDC/NIOSH Grant # U07/CCU408035-09

Comment: The readability and instructional properties of this document are described earlier in the Alleghany, NC safety day camp section of the report.

The Arabian Horse

International Arabian Horse Youth Association

The Unique Arabian

When looking at an Arabian horse, you immediately notice how its entire appearance exudes energy, intelligence, courage and nobility. The Arabian is known for a well-coordinated, free, easy stride with stylish, natural, balanced action. His neck is long and arched, the back is short and the tail is naturally carried high. And every time an Arabian moves in its famous "floating trot," he announces to the world his proud, graceful nature.

Many of the Arabian's distinct characteristics proclaim its desert heritage. Long eyelashes were designed to protect the eyes from sand while large nostrils assured easy breathing in a hot, dry climate. Likewise, the Arabians' deep chest, strong joints and good lungs guaranteed its ability to carry its owners across the large stretches of their desert homeland.

Temperament also sets the Arabian apart from many breeds. For thousands of years Arabians lived among the desert tribes of the Arabian Peninsula, bred as war mounts for quick forays into enemy camps. The harsh desert climate required these Bedouin nomads to share food and water, and sometimes even their tents, with their horses. As a result, Arabians developed a strong desire for human companionship.

Readability	Estimated Value
Passive Sentences (%)	27
Flesch Reading Ease	38.8
Flesch – Kincaid Grade Level	12.0

Comments: The text presented above is from a two-page 8.5 by 11-inch sheet of glossy paper. The text appears on one side and a full-page color copy of a painting of an Arabian horse on the other side. This sheet was accompanied by four full-page black and white line drawings. Two of the drawings illustrated native Arabian horse costumes. A third drawing is a line drawing of the internal skeletal structure of a horse with each of the major bones and joint structures clearly labeled. The fourth illustration is a drawing of

a horse with boundary lines marking each of 51 external features of the animal. A key listing each feature and is location by number accompanies the drawing. The drawings are full-page enlargements of smaller illustrations that appear in a document titled International *Arabian Horse Youth Association, An Information Guide to Youth Programs, Activities and Events.* These materials were not included in the camp *goodie bag*.

The instructor gave the materials to the students in her sessions. Prior to doing so she and a teenage student helper demonstrated safe and unsafe ways to approach, touch, stand by, walk around, and lead a horse. The demonstration included a full-size horse. After the demonstrations, under the supervision of the instructor, students one-by-one were allowed to approach, touch, and walk around the horse. At the very end of the session the instructor distributed the drawings. There was no time for her to discuss the materials with the children. The videotape of this session shows the children intently examining the materials and talking with other children as they were carrying the handout and hurrying off to the next session. If the instructor had more time the students would almost certainly been interested in having the external parts of the horse depicted in the drawing pointed out with the actual horse. They also would have been interested in a dialog about the skeletal structure of horses that was depicted on a second 8.5 x 11-inch drawing.

Conclusion and Recommendations

Many of the print materials included in the *goodie bags* clearly were not intended for use by students. Examples included large documents written for community and school leaders, parents, and other adults. One specific example is a 50-page EPA document titled *Citizen's Guide to Pest Control and Pesticide Safety.* This is a well-organized, well-written document that makes good use of simple illustrations to teach key safety practices. Topics include the safe storage and handling of common pesticides, proper clean-up procedures for spills, and first aid procedures for pesticide exposure. The document includes many graphic illustrations and captions that can be understood by elementary school children and that clearly convey the message content. The pesticide document and other similar safety materials about prevention of substance abuse, abduction of children, and school/community safety are directed at parents and other community adults. If parents or teachers examine and discuss selected portions of these materials with children, the content is likely to be understood by children. Discussion of the material with an adult can inform children about safety hazards and preventive strategies previously outside the child's awareness. Most of the materials could be used in parent and child discussions about such matters. However, when such items are simply one of 30 to 50 items placed in a child's *goodie bag* and never incorporated into instructors' awareness or training, or even mentioned to children and their parents, it is questionable if the materials will reach the child's home. If they do reach the home it is questionable if the materials will be discussed with the child by his or her parents. Thus, it is likely that the materials will have and have little impact upon the child.

Goodie bags frequently contained materials and objects unrelated to or only marginally related to farm safety. These items included such things as pencils, pens, erasers, rulers, and an occasional product advertisement or election campaign refrigerator magnet or button. The intention is undoubtedly to reward children's attendance with collectibles that they may find useful or interesting. Many other items included safety messages printed on pens, pencils, stickers, or other objects.

In addition to these materials, the *goodie bags* often included excellent and well-designed farm safety education print and graphic materials. Examples include the materials and activities reviewed in this document. These materials have great potential for use in farm safety day camps and in other settings including public schools. If used as the designers intended the materials and activities can become powerful tools for teaching hazard recognition and proactive safety attitudes, knowledge, and behavior to children and adults to reduce the risk of injury events.

Most of the instructors included in their presentations the concepts addressed in the tractor, machinery, and animal safety print materials in the *goodie bags*. Yet, virtually none of the instructors were observed either using or referring to the *goodie bag* materials relevant to their topics.

Many of the goodie bag materials are designed to be used by students and instructors (or family members) as engaging interactive activities. The videotapes of the sessions reveal that instructors rarely involved students in interactive activities. The FFA student instructors were observed to do so more frequently than the adult instructors. The most common mode of instruction was didactic presentation of safety rules, pointing out of safety hazards by using real object or models of these objects, and then restating the rules usually in a rapid question and answer session with students responding with short canned answers in unison. All that said, the students appeared to be very attentive to the instruction, the instructor, and to enjoy the sessions.

The videotapes of the sessions make it clear that instructors were rushed. In all but one or two cases instructors were also effective in presenting their materials in ways that maintained student interest and attention. Yet it also clear that many and perhaps most students wanted more opportunity to be actively engaged, to make their comments and observations, and to ask their questions, and to tell their stories as part of the instructional activity.

Perhaps the safety day camps would have a more profound and lasting impact if instructors attempted to cover less ground in terms of topics and concepts presented. It might be better to address fewer topics with more time for student active involvement along the lines laid out very well in many of the well-designed *goodie bag* materials.

It is also unclear if instructors knew what was in the *goodie bags* or had a hand in making decisions about what should be included among these materials. It seems likely that they did not. A good use of the *goodie bag* materials reviewed in this document is to use them as workshop materials to train safety day camp instructors. The materials

contain not only important content but are models of well-designed teaching methods. The methods are effective not only for the specific content of these materials but for teaching other topics and concepts as well. A series of short two-hour workshops that introduced instructors to these materials and their teaching methods could assist instructors in becoming comfortable and confident in the use of the methods in their own safety instruction sessions. The workshops might also help instructors and those who plan and operate safety day camps to focus less on tight schedules and content covered and more on ways and means to promote students' deeper understanding and application of the safety issues and rules addressed.

Appendix A: Tables and Figures That Summarize the Instructor Characteristics

Completed *Station Instructor Data Sheet FS4JKS Day Camp Evaluation* forms were received from 48 instructors. The data were entered into an Excel file. Portions of the total data file were formed into smaller tables and the results graphed as frequency distributions. Each table and graph that follows is based on a specific item in the *Instructor Data Sheet*. More information about these instructors' data is presented in the results section of this document under the Instructor Characteristics heading.

Table 1: Instructors' Farm Residence and Work Status

Status	Instructors	Percent
Live on Farm	8	16.7
Live/Work	28	58.3
Work Only	6	12.5
Not Work/Live	6	12.5
Total	48	100

Figure 1: Instructors' Farm Residence and Work Status

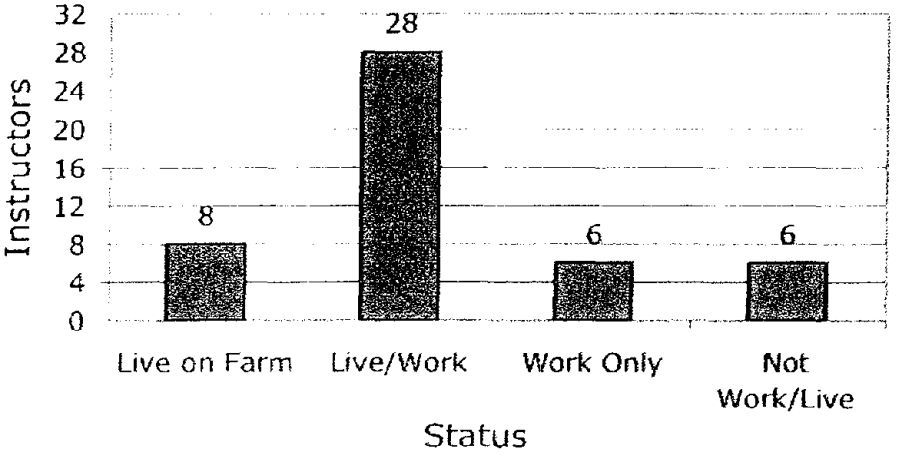


Table 2: Instructors' Farming Experience

Experience	Instructors	Percent
None	1	2.1
A little	4	8.3
Quite a bit	15	31.3
A lot	28	58.3
Total	48	100.0

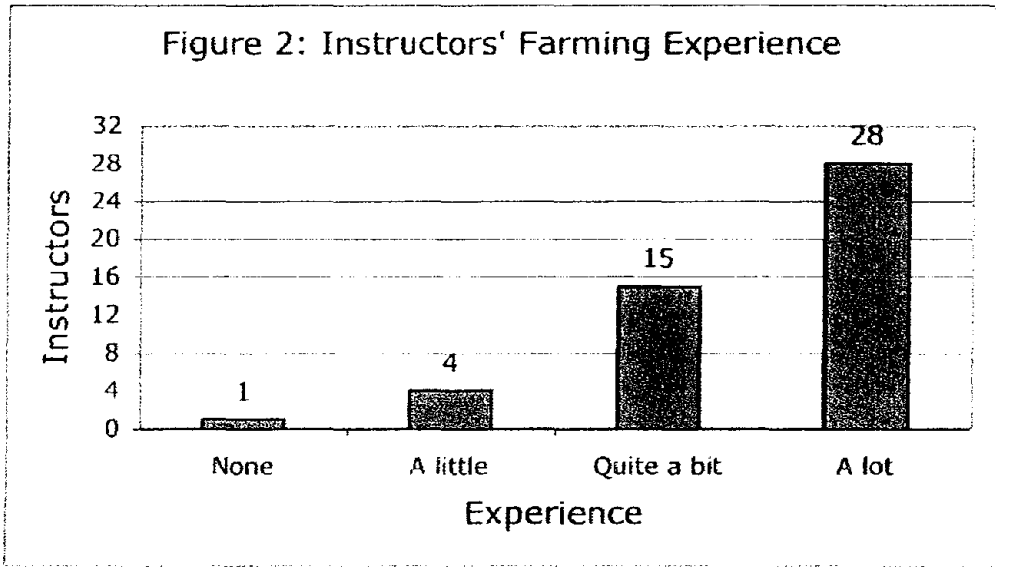


Table 3: Number of Other Settings Where Instructors Teach

Settings	Instructors	Percent
None	4	8.5
One	18	38.3
Two	13	27.7
Three	8	17.0
Four	3	6.4
Five	1	2.1
Total	47	100.0

Figure 3: Number of Other Settings Where Instructors Teach

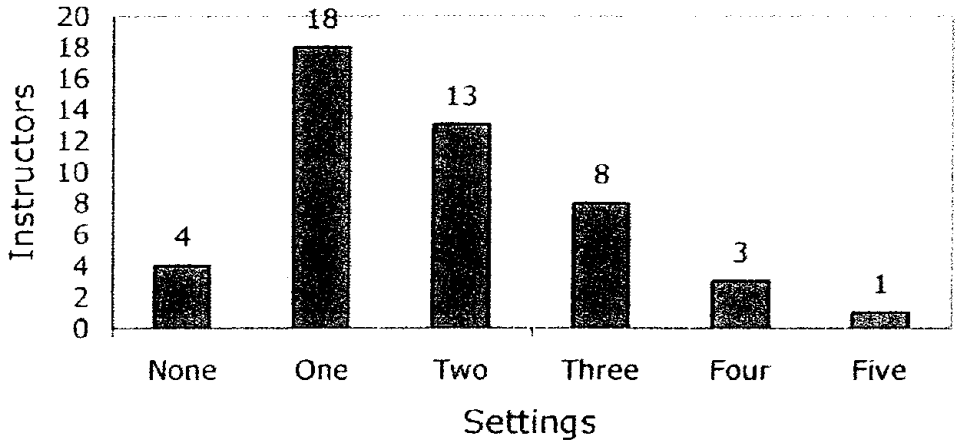


Table 4: Primary Reason Instructors Participated

Status	Instructors	Percent
Reason	6	12.5
Part of my job	5	10.4
Like working with children	23	47.9
Farm safety important	1	2.1
Personal experience with farm safety	2	4.2
No one else could come	3	6.3
Multiple above reasons	8	16.7
Other reasons	48	100.1
Total	6	12.5

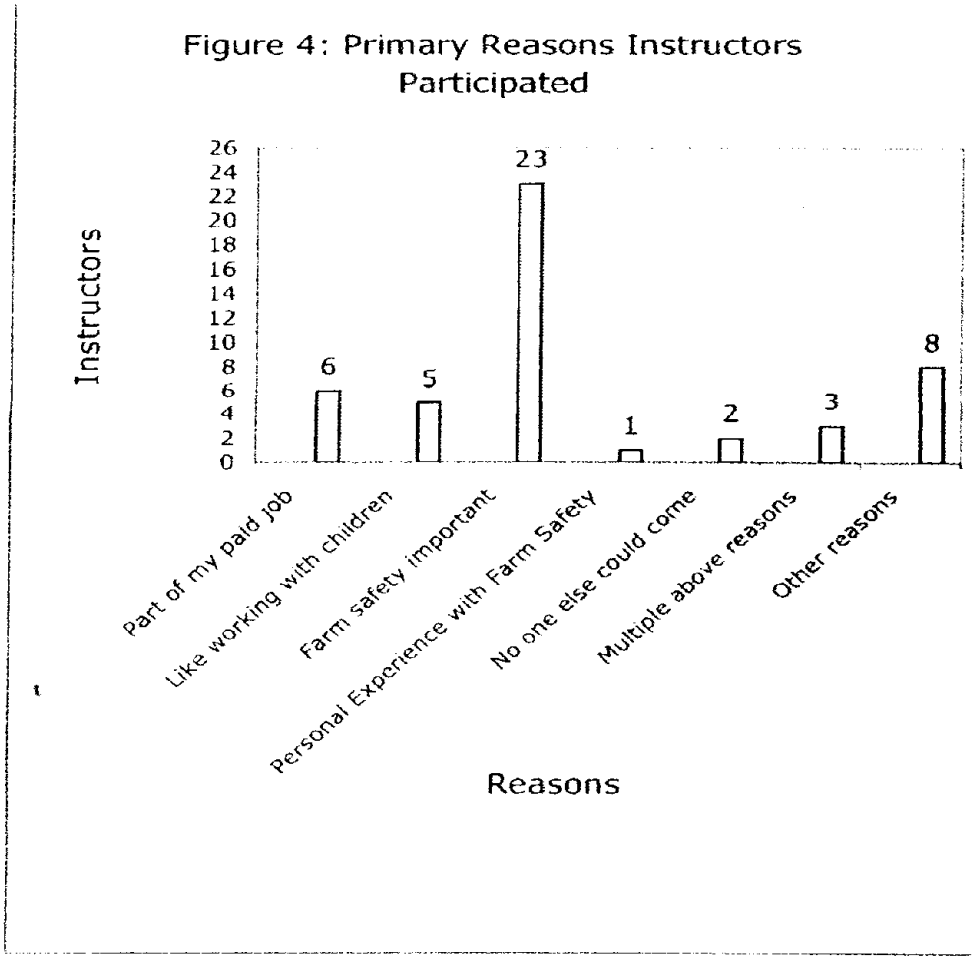


Table 5: Instructors who Reported Having Had a Severe Farm Injury

Injured?	Instructors	Percent
Yes	10	20.8
No	38	79.2
Total	48	100.0

Figure 5: Instructors who Reported Having Had a Severe Farming Injury

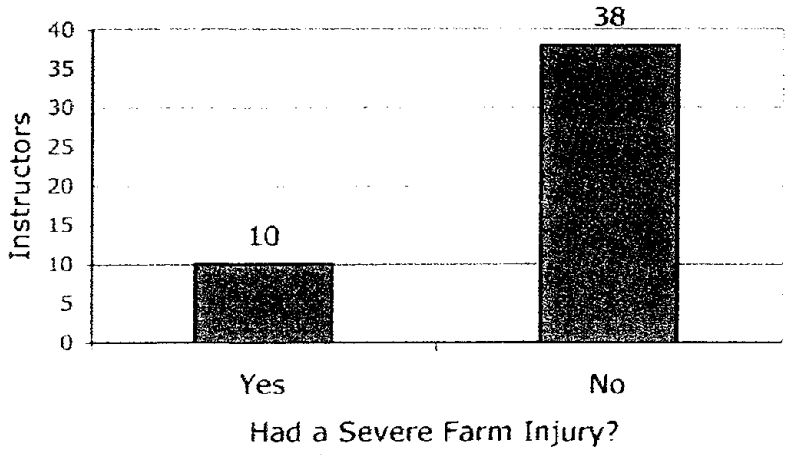


Table 6: Instructors who Know a Person with a Severe Farming Injury

Injured?	Instructors	Percent
Yes	44	91.7
No	4	8.3
Total	48	100.0

Figure 6: Instructors who Know a Person with a Severe Framing Injury

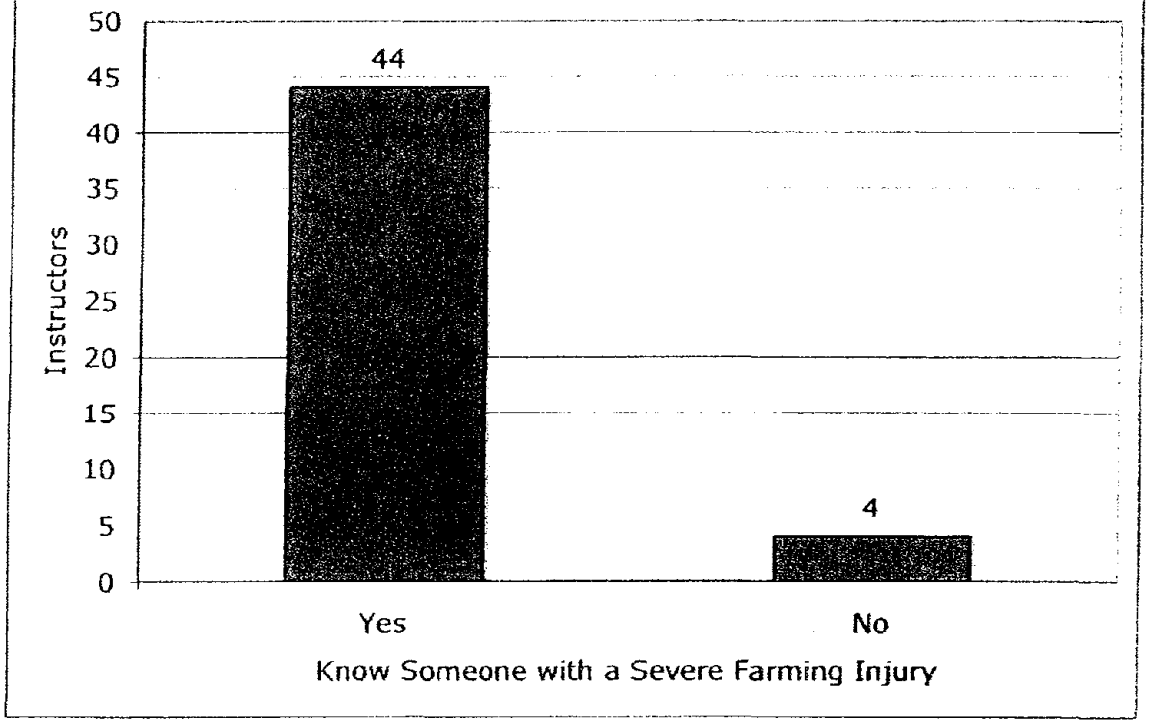


Table 7: Times Instructors Had Taught Topics Previously

No. Times	Instructors	Percent
None	4	8.5
One	9	19.1
Two	6	12.8
Three	2	4.3
Five	2	4.3
Six	1	2.1
Seven	1	2.1
Eight	2	4.3
Ten	5	10.6
Twelve	3	6.4
Thirteen	2	4.3
Twenty	2	4.3
Thirty	3	6.4
Fifty	2	4.3
One Hundred	1	2.1
Two Hundred	2	4.3

Instructors	47
Mode times taught topic	9
Total all times previously taught topics	913

Figure 7: Times Instructors Had Taught Topics Previously

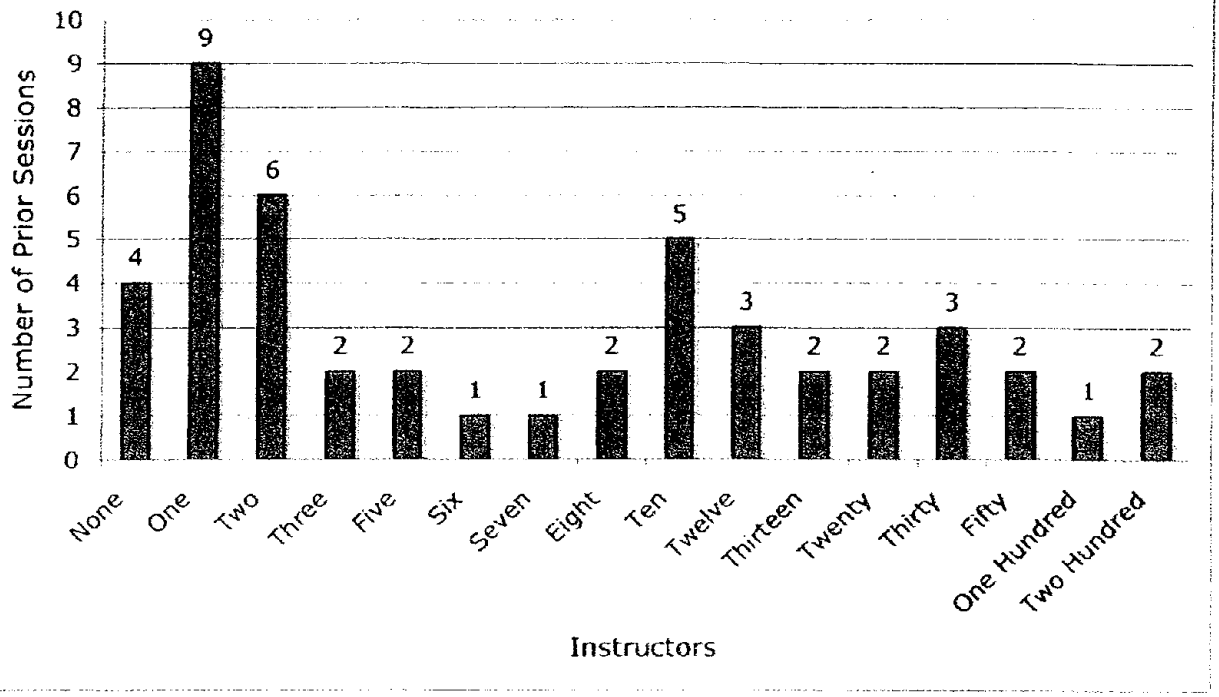


Table 8: Times Instructor Received Written Performance Feedback

Feedback	Frequency	Percent
Never	18	38.3
Rarely	7	14.9
Sometimes	14	29.8
Often	8	17.0
Total	47	100.0

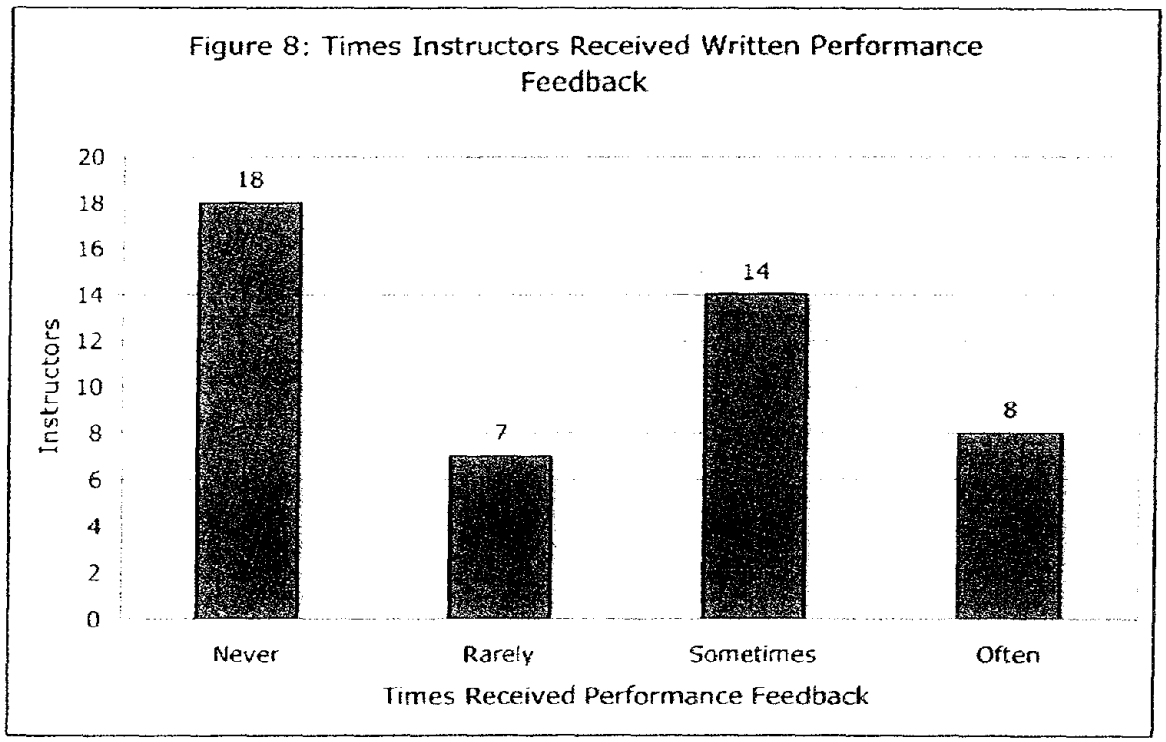


Table 9: Instructors' Mean Ratings of Print Materials Features

Feature	Mean Rating
Price	1.75
Color	2.29
Picture	2.47
Reading Level	2.69
Message Content	2.88

Figure 9: Instructors' Mean Ratings of Print Material Features

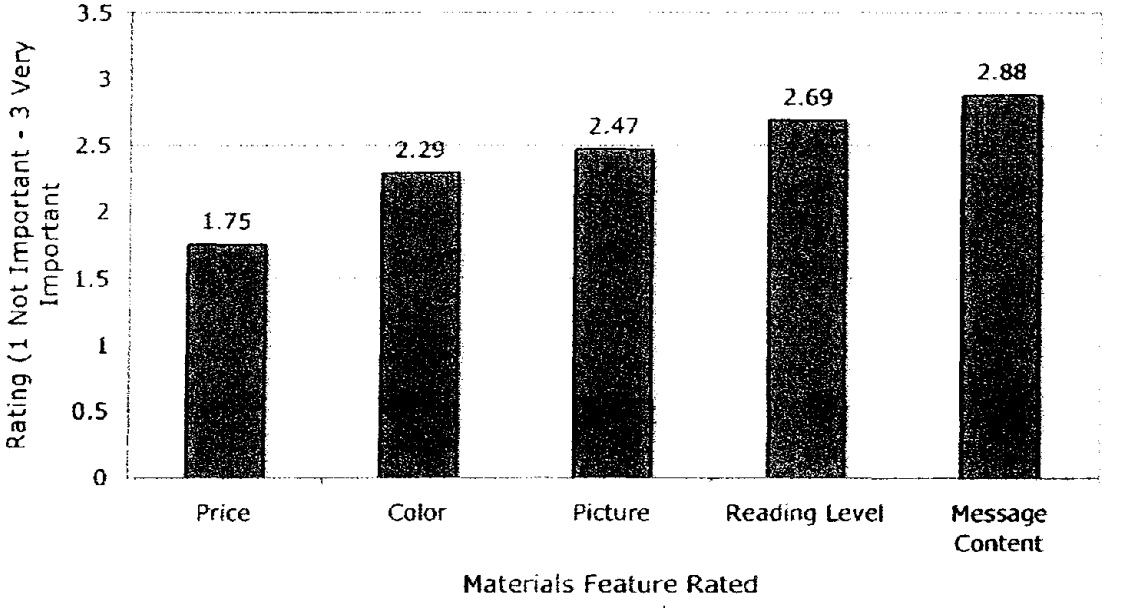
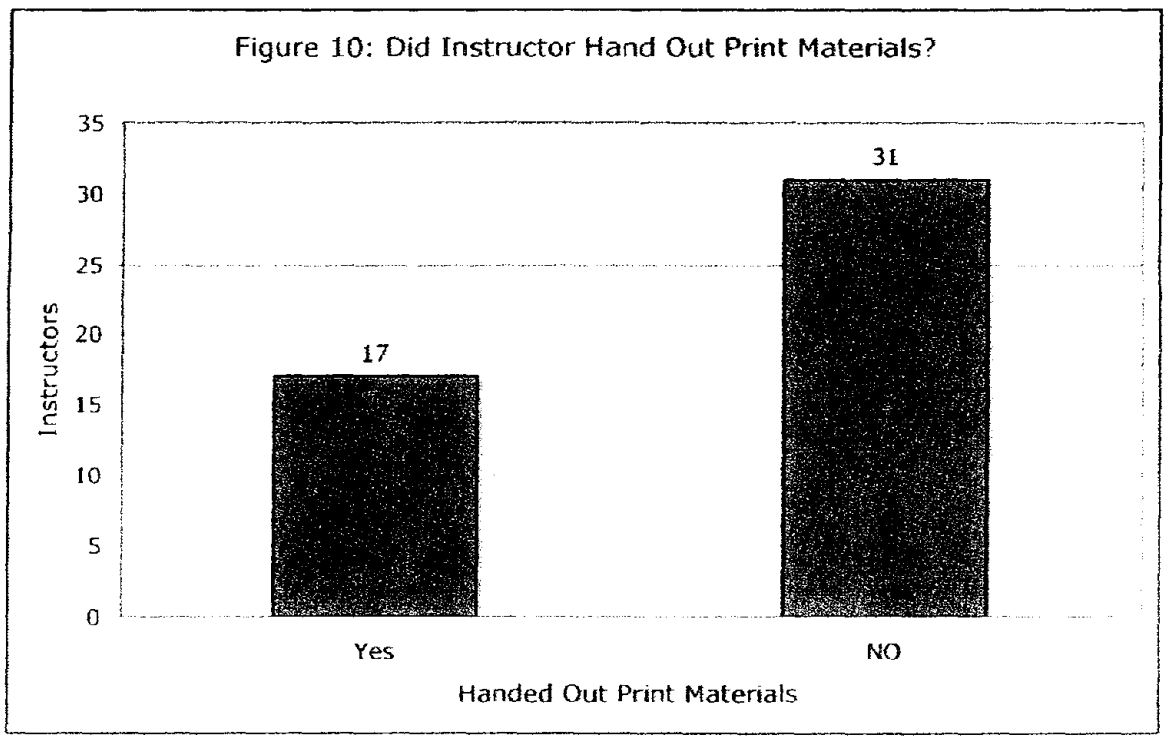
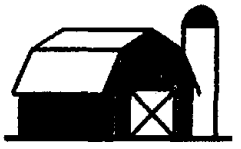


Table 10: Did Instructor Hand Out Print Materials?

Yes	17
NO	31



Appendix B: Station Instructor Data Sheet



Station Instructor Data Sheet

FS4JK Day Camp Evaluation

STATION AT CAMP _____

1. What is your primary job? (*example: equipment dealer, farmer, factory worker*)

   _____

2. Which of the following best describes you? (*circle only one answer*)

   a. **Live on a farm**
   b. **Live and work on a farm**
   c. **Work on a farm only**
   d. **Do not live or work on a farm**

3. How much farm work experience do you have? (*circle only one answer*)

   a. **None**
   b. **A little**
   c. **Quite a bit**
   d. **A lot**

4. Other than farm safety camps, where else do you instruct children? (*circle all that apply*)

   a. **Church**
   b. **Schools**
   c. **4-H**
   d. **Boy/Girl Scouts**
   e. **Other** _____

5. What was the primary reason you participated in today's day camp? (*circle only one answer*)

   a. **Part of my paid job**
   b. **Like to work with children**
   c. **Realize the importance of farm safety**
   d. **Personal experience with farm injury**
   e. **No one else could come**
   f. **Other** _____

6. Have you ever had a severe injury as a result of a farm-related activity? (*circle yes or no*) **Yes** **No**

7. Do you know anyone who has ever had a severe injury as a result of a farm-related activity? (*circle yes or no*) **Yes** **No**

8. How many times have you made this presentation? (*count each event as one time*)

_____ **times**

9. How often do your receive any written feedback on your performance as a station instructor?

Never **Rarely** **Sometimes** **Often**

10. Where did you get your information about the topic you presented? (*circle all that apply*)

a. Personal experience on farm
b. Internet
c. Agriculture safety specialist
d. Farm magazines
e. Other _____
f. Agriculture organizations
g. Brochures/leaflets
h. Research articles
i. Commercial dealers (like farm equipment dealers)

11. Will you (or did you) give the children any printed material today? (*circle yes or no*) **Yes** **No**

If yes, how important was each of the following in selecting the material?
(*check one answer for each feature*)

	Feature	Not Important	Somewhat Important	Very Important
12.	Price			
13.	Pictures			
14.	Color			
15.	Message			
16.	Reading level			

17. How much training have you had in educational techniques for children?

None **Some** **A lot**

18. What specific techniques do you use for children in the middle grades (8-12 years old)? (*examples: games, role play, lecture, nothing specific*)

_____
_____

19. What is the most important specific thing you want the children to remember from your station today?

_____
_____
_____

Appendix C: List of Materials Included In *Goodie Bags* by Camp Location

The following pages list the *goodie bag* materials supplied by the safety day camps. It is these materials that were received, examined, sorted, and then analyzed. Three analyses were performed on all the print materials that were relevant to the major topics addressed at the camps.

The first two analyses were readability analyses used to establish the reading difficulty of the materials.

The second analysis was a critical evaluation of the instructional properties and the cognitive complexity of the text and graphic materials. This analysis was based on Cr. Henry Cole's 40-years of teaching; his 35-years of instructional design, development, and research; and his expertise in applied learning and cognition, areas in which he conducted research and taught graduate level courses for more than 30 years.

STRATFORD, WISCONSIN

STUDENT RESOURCE PACKET
FS4JK DAY CAMP
APRIL 25, 2002

Farm safety booklet "It Can't Happen on My Farm"

Bicycle inspection sheet

Bicycle safety certificate

Myths & facts about pedestrian safety

The Wisconsin pedestrian safety quiz

Wisconsin's "Saved by the Belt Club" leaflet

John Deere "Ready Rooster" booklet

Bicycle and in-line skate laws

Project Name: Evaluation of Farm Safety 4 Just Kids Day Camps
Grant Number: 1 R01 OH07534-01
IRB Number: 01-0288-F1V

MAMMOTH CAVE #1

CAMPER "GOODIE BAG"
FS4JK DAY CAMP
MAY 2, 2002

FS4JK brochure "Children – the future of farming"

Coloring book "The Milk Story"

Farm safety booklet "It Can't Happen on My Farm"

Kentucky Dept. of Agriculture "Our Farm & Home Safety Plan"

John Deere "Ready Rooster" booklet

Poster "This Test is No Killer"

Successful Farming excerpt: "So That Kids Might Live"

Note to Participants from Mammoth Cave FS4JK

Sticker "Got Milk"

Magnet "Because We Care"

Magnet (Kraft products)

Pencils from various organizations (total of 4)
- Farmers Rural Electric Coop
- New Farmers National Bank
- AREA Bank
- Got milk?

Ruler "Thanks! FOR WEARING SAFETY BELTS"

Seat belt reminder "Be Cool Buckle Up"

Key chain "Buckle Up or EAT GLASS"

Key chain from bank – Citizens Financial Bank

One set of ear plugs

EASTERN COLORADO

CAMPER "GOODIE BAG"
FS4JK DAY CAMP
APRIL 17, 2002

Pamphlet "Exclusive Interview with an Accident"
10 Commandments of Shooting Safety
10 Tips for a Safer Harvest
Smoke detectors brochure (English version)
Smoke detectors brochure (Spanish version)
"Best Practices for Child Passenger Safety" brochure
"Proper Maintenance" brochure
"Awake at the Wheel" brochure
"No-Zone" brochure
"Farm Safety & Health" brochure
Poison Safety Tips brochure
"Uh oh. Poison!" brochure (English/Spanish)
Farm Safety Guide booklet
Pesticides and Food brochure
Farm Safety Booklet "It Can't Happen on My Farm!"
"My Telephone Book" with 911 information
Key Safety Tips at Highway-Rail Grade Crossings (Operation Lifesaver)
Tips for Professional Drivers (Operation Lifesaver)
Tips for Farm Machinery Operators (Operation Lifesaver)
What You Should Know About Melanoma
Sun Basics
Healthy Lawn Healthy Environment
Pest Control in the School Environment
FS4JK Poster: 101 Farm Safety Tips
Poster: Farm Safety Rules!
Farm Safety Day Activity Book
Student and Parent Exhibit Guide: Discover Your Eye Q!
U.S. Consumer Product Safety Commission Poison Lookout Checklist
Consumer Product Safety Commission "Riding Lawnmowers"
Thunderstorms, tornadoes, lightning...A Preparedness Guide
4-H coloring book and brochure
"Let's All Work to Fight Drug Abuse" booklet
Citizen's Guide to Pest Control and Pesticide Safety
Stay Safe Around Electricity booklet
Watch Out...Storms Ahead! Weather Book

EASTERN COLORADO
CAMPER "GOODIE BAG"
FS4JK DAY CAMP
APRIL 17, 2002

(Continued)

Ruler – Rocky Mountain Farmers Union
Magnet – Rocky Mountain Poison Center
Magnet – Kraft products
One set of earplugs
Key chain – Operation Livesaver "Look Listen Live"
Mechanical pencil – KC Electric Assn.
Temporary Tattoos:
  Emergency 911
  Just Say No Drugs
Stickers:
  Field to Field Yield to Trains
  "It Won't Happen to Me" tractor overturn
  Rocky Mountain Poison Center
  Electricity safety issues
  Kids' safety zone stickers

MAMMOTH CAVE #2

CAMPER "GOODIE BAG"
FS4JK DAY CAMP
SEPTEMBER 19-20, 2002

Brochures:
- Safety Tips for the ATV Rider
- Don't worry, they won't bite (dogs)

Safety Booklet "It Can't Happen on My Farm"
Smart Routes to Bicycle Safety
Precious Cargo – Protecting the Children who Ride With You
Special Notes to Parents & Day Campers:
- Falls and Slips on the Farm
- Emergency Care and Rescue on the Farm

Buckle Up Inside the Truck flyer
Mystery Club Newsletters (2)
ATV Safety Coloring and Activity Book
Pencils:
- Citizens Financial Bank
- South Central Bank
- Edmonton State Bank
- Farm Credit Services
- Glasgow Fire Dept.
- Farm Safety 4 Just Kids
- Buckle Up Kentucky (pencil and ink pen)
- Beef – It's What's for Dinner

Rulers:
- Barren County Farm Bureau Federation (farm scene to color)
- T.J. Samson Community Hospital
- Beef – It's What's for Dinner

Ear plugs (one set)
Keychain – Re-elect Barren County Sheriff
Flower Seeds
Notepad with Pen – "kids aren't cargo" (Barren County Safe Communities)
Coupons – Long John Silvers / A&W
Wrangler Advertisement
Stickers:
- Wrangler
- Safety messages about electricity
- ATV – Safety Saves Lives
- Jr. County Clerk

ASHE COUNTY, NC

CAMPER "GOODIE BAG"
FS4JK DAY CAMP
SEPTEMBER 12, 2002

It Can't Happen on My Farm safety booklet
What You Should Know About Rabies
Fire Safety Activity Book
Hazardous Household Products information sheet
Bicyclists' Rights and Responsibilities
Be Safe on Your Bike (list of safety rules)
Bicycle Inspection Form
Bicycle "Quick Check"
Dog Bites Do's and Don'ts
Gun Safety – letter to parents
Bicycle Brochures:
  Do your kids need bicycle helmets?
  Why knock yourself out on your bicycle?
Band-aids/first aid cream packet
FS4JK ID tag

ALLEGHANY COUNTY, NC

CAMPER "GOODIE BAG"
FS4JK DAY CAMP
SEPTEMBER 11, 2002

It Can't Happen on My Farm safety booklet
Willy's Fire Safety coloring book
Safe Kids are no Accident – a fire safety booklet for kids
Fido! Friend or Foe? Activity book
ABC Always Be Careful on the Farm – NO RIDERS PLEASE!
Bicycle Safety:
- Be Safe on Your Bike – connect the dots (helmet)
- Bicyclists' Rights and Responsibilities
- Be Safe on Your Bike – hand signals
- Be Safe on Your Bike – connect dots (backpack)
- Be Safe on Your Bike – safety rules
- Brochure – Why knock yourself out on your bicycle?
- Bicycle safety and your child questions and answers

Gun Safety – letter to parents
Personal Safety for Children – A Guide for Children
Extension Fact Sheet – Barnyard Animals
What You Should Know About Rabies
Dog Bites Do's and Don'ts
Willy's Far Safety Case Book
Learn Gun Safety with Eddie Eagle
Today's Heroes Coloring Book
Smokey is Counting on You! mini poster
Fire in Nature mini poster
PAWS OFF! Brochure: package and product look-a-likes
Alleghany Rural Community Safety Field Day 2002 brochure
Smokey Bear ruler
Pencils:
- Alleghany County 4-H
- Help Smokey Prevent Forest Fires!

Firetruck eraser
FS4JK ID tag
FS4JK sticker
"If you see a gun..." sticker

Note: Each bag was "tied" with a rubber band and a tag giving a brief explanation of the day camp and the goodie bag. (see green tag attached)

APPENDIX E

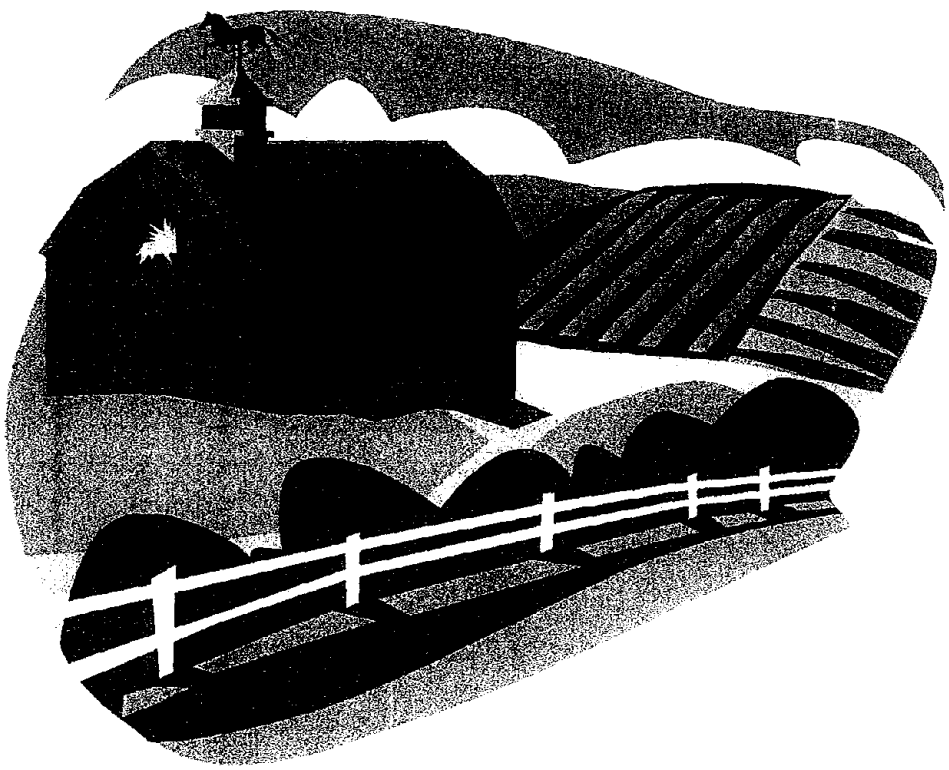
Published Article

*0001. Mazur JM, Cole HP, Reed D, ClaunchD [2005]. Instructional practices at Farm Safety 4 Just Kids (FS4JK) safety day camps J Agric Saf Health 2005 May; 11(2):257-264. http://asae.frymulti.com/abstract.asp?aid=18193&t=1

APPENDIX F

Chapter Camp Leader's Training Manual

EVALUATION OF FS4JK DAY CAMPS



TRAINING MANUAL

"Proving We Make a Difference"

MARCH 2002

FS4JK DAY CAMP TRAINING MANUAL

Table of Contents

UNIVERSITY OF KENTUCKY

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Chandler Medical Center
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Fax: (859) 323-1057
www.mc.uky.edu/Nursing

Greetings from the Day Camp Project Leader!

What a fun venture we are about to embark on! Farm safety day camps have been held for over ten years in some locations. Each year hundreds of volunteers contribute time, money, and energy to produce a day camp that is fun and meaningful for the children in their communities. We suspect that the camps influence the farm safety behaviors of the children who attend camp, their parents, and perhaps even the community as a whole. But we really don't know. We have stories about injuries that were averted because of something learned at the day camps. They are important. But we need more. That is where you and I come in.

You have consented to be part of a research team to determine the effectiveness of our camps. Being a part of that team means you will be the first to know the results, part of the "inside" group that will make recommendations for future day camps, and have state of the art data about your own camp. This may help you obtain funding for future camps.

You will be our "eyes and ears" in your community. People talk to you about farm safety and injuries that occur on farms. They trust you. They ask you for information. I know. I've been in your shoes. It is fun at times. It is frustrating when you hear about an injury that didn't have to happen. It is agonizing when a child or an adult dies from a farm injury. Sometimes it evens happens in our own families. You wonder, "Does my work ever make a difference at all?" The answer, you know, is yes. But how much of a difference? That is what this research will tell us.

I am happy to lead such an excellent and dedicated team. I look forward to our work together over the next three years. Please remember that as a part of the team you can call on me at any time. Questions, frustrations, plans, and dreams: I want to hear them all!

For safety and our children!

Deborah Reed

An Equal Opportunity University

EVALUATION OF FS4JK DAY CAMPS PROJECT
GENERAL OVERVIEW

What's It All About?

The Evaluation of FS4JK Day Camps Project is a three-year research study awarded to the University College of Nursing by the National Institute of Occupational Safety and Health (NIOSH). The project runs from October 1, 2001 - September 30, 2004.

The overall purpose of the study is to examine the effectiveness of community-based farm safety day camps. Specific aims of the study are to evaluate whether the camps positively influence:

- Children's knowledge about farm safety and health, their safety attitudes, and subsequent safety behaviors;
- Parents' attitudes and behavior toward children's farm safety behavior; and
- The local community's attitudes toward children's farm safety.

Who's Involved?

Project staff from the University of Kentucky College of Nursing will work in partnership with the North American Farm Safety 4 Just Kids Organization and local FS4JK chapters. The primary investigator for the project is Dr. Deborah B. Reed from the UK College of Nursing. In addition, an evaluation consultant (Dr. Deborah Helitzer) will assist the chapter leaders during the course of the project.

Five FS4JK Chapters in different regions of the nation will participate in the project over the three-year period. Quarterly conference calls and annual meetings will be conducted to facilitate the progress of the project.

Some Progressive Farmer (PF) day camps are in a similar study. We have PF camps in our study but those camps are not in the PF study. Progressive Farmer knows this and agrees with it. Researchers with the PF study are working with us and we are doing similar things at the camps.

EVALUATION OF FS4JK DAY CAMPS PROJECT
GENERAL OVERVIEW (continued)

How Will We Measure the Effectiveness of the Camps?

No standard instruments to measure the effectiveness of farm safety day camps exist. Therefore, instruments have been developed specifically for this study. Measurement instruments will take the form of camper pretests and post tests, station instructor data sheets, teacher information sheets, and log books maintained by chapter leaders. These instruments must be used by the participating camps.

The first step involves collection of data at the day camps. This data will be collected over a 6-month period in 2002 as the day camps are held. After the camp, the University of Kentucky will conduct follow-up surveys with selected campers and their parents. A baseline survey will be conducted 1-month after the camps are held. Additional follow-up data collection from camp participants will occur three times after the camp on a 6-month cycle: 6-months, 12-months, and 18-months post camp. The University of Kentucky (UK) will do the surveys that take place after the camp. We will give you written tabulations of the results so you can use them to improve your next camp, make reports, and to help secure funds for your next camp or activity. Throughout the three-year period of the project, chapter leaders will gather information in their local communities and send it to UK.

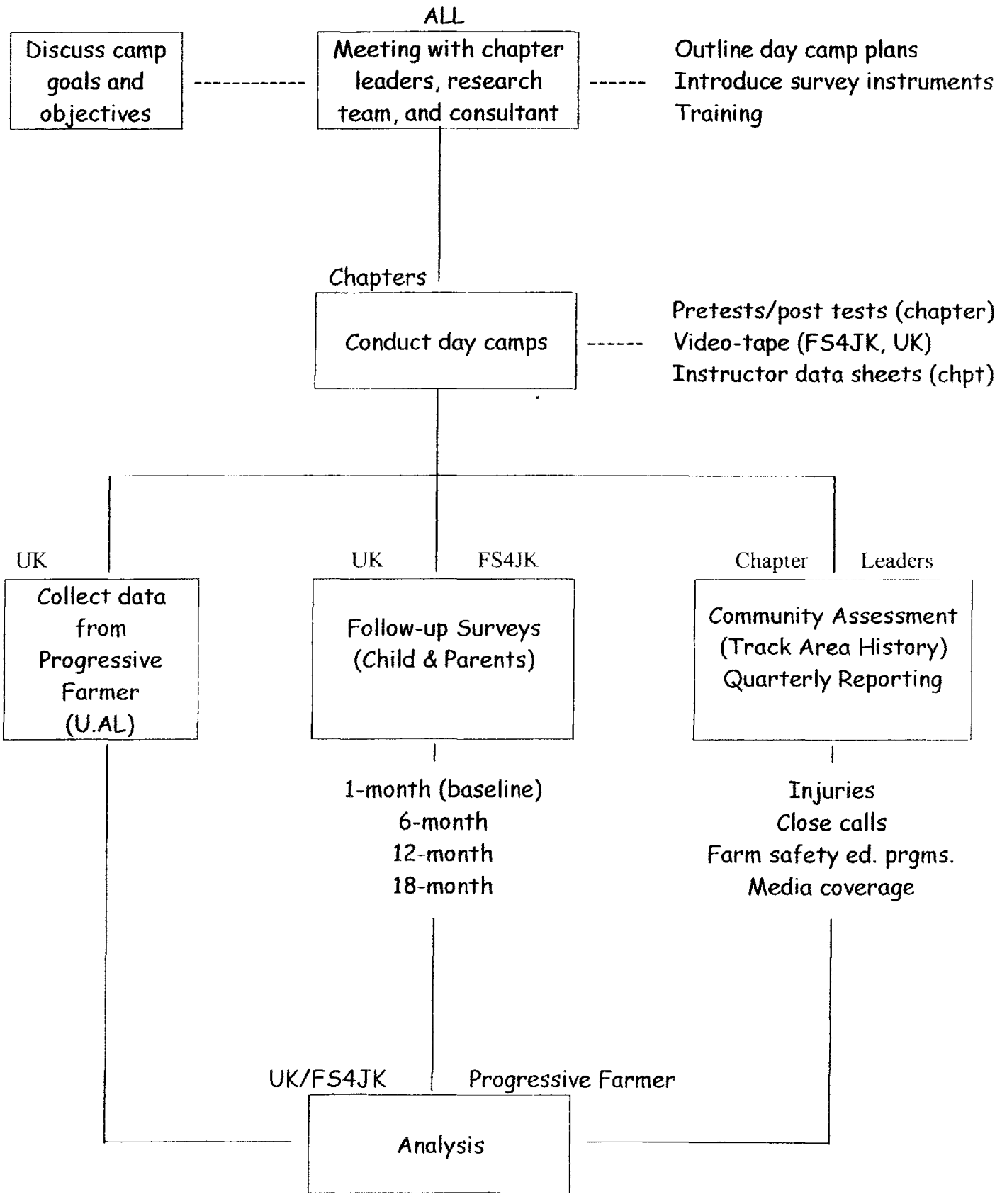
As the data are collected the research team at the University of Kentucky will conduct comparative analyses to determine the extent of any changes in farm safety attitude and behavior in the children, their parents, and the community. These results will always be shared with you.

The procedures are outlined on the Summary of Project Plan on the next page.

How Will What We Do Have an Impact?

Evaluation results will be used to assist FS4JK with refinements of future programs and will assist camp leaders in articulating their goals and objectives of the day camps. The findings will also contribute to the national research agenda in farm child safety knowledge, attitudes, behavior, and injury rates. Your local chapters can use the data for reports and publicity and to help secure funds for future programs.

SUMMARY OF PROJECT PLAN



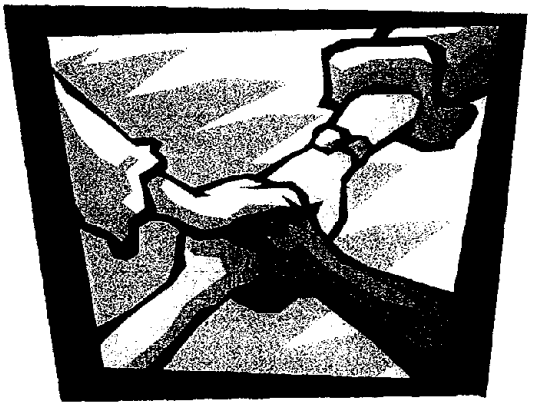
PROJECT RESPONSIBILITIES

A team effort is absolutely essential for the success of the project. The team is comprised of FS4JK Chapters, Chapter Leaders, FS4JK staff, and researchers from the University of Kentucky.

While each team component has its own responsibilities, some responsibilities overlap. Teams will work together to ensure all responsibilities are met to the best of our combined abilities.

Many of the Chapter and Chapter Leader responsibilities outlined for the project are the same responsibilities generally required in hosting a FS4JK day camp. Some new forms have been developed and others enhanced but most responsibilities should be familiar to you. The new forms will be discussed in a later section of the training manual.

FS4JK personnel and researchers at the University of Kentucky will be available for questions and assistance throughout the course of the study. Never hesitate to call us. It is far easier to address a question early than to problem solve (or worse) later! If something happens in your planning or during camp that you did not anticipate, we understand; but please let us know about it as soon as possible.



Chapter Responsibilities

- The Chapter must hold a farm safety day camp between April and September 2002.

- The camp must target children in grades 4-5 as this is the primary age group that will be included in the study. Chapters selected for the project were chosen based on their inclusions of this age group.

- The day camp must include the following stations:
  - Tractors
  - Power Driven Equipment
  - Animals

- The Chapter must ensure that parent letters accompany all day camp consent forms.

- The Chapter must complete and return the following information to the University of Kentucky at the end of the camp day:
  - Names, addresses, and phone numbers of children attending the day camp. This information may be gathered in a number of ways but is essential to the project. We suggest obtaining this information through the Release and Consent forms. These forms are discussed in greater detail later in the manual and copies of the forms are provided for your convenience.
  - Pretests and posttests collected at the day camp.
  - Station instructor data sheets collected at the day camp.
  - The FS4JK Camp Demographic form.
  - The FS4JK Chapter Event Record form. The University will forward this form to the FS4JK national headquarters.

Chapter responsibilities only encompass the first year of the project. Once the camp is held and the required information is submitted, the chapter has no further responsibilities in the project.

Questions and Answers

Questions	Answers
1. What if my camp is a Progressive Farmer camp?	We have made arrangements with Progressive Farmer to share information about PF camps in our study with Progressive Farmers. You should report to them as you would normally do BUT you must use the survey instruments we provide (pre-post tests, instructor data, and demographics).
2. How will I get the information from my camp to you?	EASY! At least one person from either UK or FS4JK will attend your camp. At the end of the camp day you just bundle the information and give it to them! We will do all the counting and send you a nice table of results for your records.
3. What if a child does not want to do the survey?	No child should be forced to participate. There may be children who cannot read or just don't want to do the work. That's ok. Just have the child sit quietly while the other children complete their surveys. You should explain to the group that the test is not for a grade and will not be given to their teachers. It will be used to help us determine if we did a good job.
4. What if a parent wants the child to attend but not be in the study?	Explain the study to the parent and encourage them to call Dr. Reed. If they still do not want the child to participate, make a note of the child's name. Explain that we cannot guarantee the child will not be in a group video but the child will not be in the data set. It is then up to the parent if they want the child to attend the camp or not. NOTE: If you use the permission slip we provide this should not be a problem.
5. My camp has children in grades other than 4-5. Do the other children need to participate too?	The study instruments are specifically designed for children in grades 4-5. These are the only children eligible for the study. You should be sure that groups at the camp are divided so grades 4 and 5 are not mixed with children in other grades as they go through the stations. It is ok, but not the best, to have children in grades 4 and 5 together.

Chapter Leader Responsibilities

The Chapter Leaders' responsibilities encompass the entire three years of the project. The responsibilities go beyond the day camp itself and involve an ongoing monitoring of farm safety events and farm-related injuries/fatalities within their communities.

Specific responsibilities are outlined below:

- Meet with UK and FS4JK personnel on a yearly basis (total of 3 meetings). The first meeting will serve as an organizational meeting and training session for the project. Subsequent meetings will assist in keeping the project on track and analyzing outcomes on a periodic basis. These meetings will usually be held in conjunction with a FS4JK meeting or other agricultural meeting.

- Participate in a group meeting before the camps to discuss goals, objectives, and camp histories. This meeting will be led by Dr. Helitzer.

- Ensure your Chapter understands the evaluation project and their responsibilities in the project. All staffers at the day camp should also be instructed of the importance of the pretest and post-test completion and collection function as well as the station instructor data sheet completion and collection responsibility.

- Gather required information from the day camp. This includes camp attendee contact information, permission slips/consent forms, pretests and post tests, station instructor data sheets completed at the camp, and the day camp demographic form.

- Help with incomplete camp attendee contact information. If names, addresses, and/or phone numbers of camp attendees are incomplete, the Chapter Leader is responsible for obtaining the additional information needed.

- Participate in quarterly conference calls with day camp consultant and other team members. A log should be maintained by each Chapter Leader to address matters discussed, directions to be taken, and factors influencing the project.

Chapter Leader Responsibilities (continued)

- Maintain an ongoing log of activities that indicates community awareness about farm safety. Activities should include the following:

  - Farm safety activities in the community (not necessarily FS4JK activities). Examples include information on a bank marquee, farm rescue training, class programs, and co-op sponsored events. Your community may have others. These activities should be documented on the Community Farm Safety Event Record form.

  - Account of farm-related injuries or fatalities in or near your community you learn about through newspaper articles, radio or television news clips, community contacts, etc.

  - Report farm-related injuries that you know about in your community that happen to children. Children's' injuries should be documented on the Child Injury Record form.

- Prepare and submit quarterly reports. These reports shall include any Community Farm Safety Event Record forms and Child Injury Record forms completed during the quarter, news clippings, log books, and any other factors the Chapter Leader considers important to the study.

SUMMARY OF RESPONSIBILITIES

Responsibility	Who is Responsible?	When is it due?	Done
Ensure Chapter understands the evaluation project and their responsibilities under the project.	Chapter Leader	Prior to camp	
Distribute parent letter with permission slips/consent forms.	Chapter	Prior to camp	
Secure Station instructors for tractor, power driven equipment, and animal stations.	Chapter	Prior to camp and day of camp	
Conduct day camp.	Chapter	Between April 2002 and September 2002	
Collect Release and Consent forms for camp attendees. Review slips/forms for completeness with regard to name, addresses, and phone numbers.	Chapter	Day of camp	
Conduct and collect pretests and post tests.	Chapter	Day of camp	
Distribute station instructor data sheets to all instructors at the tractor, power driven equipment, and animal stations. *	Chapter	Day of camp before camp begins	
Collect station instructor data sheets.	Chapter	End of camp day	

* You can copy and give these to all instructors if you wish, but we MUST collect them for these 3 stations.

SUMMARY OF RESPONSIBILITIES (continued)

Responsibility	Who is Responsible?	When is it due?	Done
Submit pretests, post tests, station instructor data sheets, and camp demographic form to research team member attending the camp.	Chapter Leader	End of Camp day	
Complete FS4JK Chapter Event Record form and submit to Chapter leader	Chapter	One week after camp	
Assist with names, addresses, and phone numbers of camp attendees.	Chapter Leaders	As Needed	
Maintain a log of activities indicative of community awareness about farm safety (farm safety events, farm-related injuries).	Chapter Leader	On-going (3 years)	
Participate in conference calls with day camp consultant.	Chapter Leader	Quarterly over 3-year period	
Meet with FS4JK and UK personnel.	Chapter Leader	Annually	
Prepare and submit reports	Chapter Leader	Quarterly	

CONFERENCE CALLS

Conference calls will be conducted quarterly between the Chapter leaders and the day camp consultant, Dr. Deborah Helitzer. The purpose of these calls is to discuss matters that affect the project, monitor the effectiveness of the project, and keep the project on track.

It is important that every chapter leader participate in every conference call. If a chapter leader is unable to participate in the call, the reason should be documented. A log should be maintained by the chapter leader indicating the date of each call, the length of the call, and whether or not the leader participated in the call. A log sheet has been developed and is shown on the next page. A "notes" section is also provided for the chapter leader to record relevant information discussed during the call.

DAY CAMP EVALUATION PROJECT
CONFERENCE CALL LOG

Date of Call	Length of Call	Key Matters Discussed	Participated in Call (Yes or No)	If No, Document Reason

CONFERENCE CALL NOTES
(Add pages as needed)

Date	Notes

EXPENSES AND REIMBURSEMENT

Incentives

Each Chapter and Chapter Leader will be given incentives for participating in the project. Incentives are based on projected numbers of participants in the camp with a maximum of $300 for the chapter and $500 for the Chapter Leader. Incentives are as follows:

Recipient	1-100 Participants In Grades 4-5	101-250 Participants In Grades 4-5	251 or More Participants In Grades 4-5
Chapter	$100	$150	$300
Chapter Leader	$125	$250	$500

The Chapter will be awarded the incentive the first year only. The Chapter Leaders will receive their incentives each year for the length of the grant (3 years). The amount is based on attendance at the 2002 camp.

How do chapters receive their incentive?

Upon receipt of the required data by the University of Kentucky authorization will be given to the National Office of FS4JK to issue the incentive check. The amount of the incentive will be determined by the number of children in grades 4-5 who participate in the study as evidenced by the pre and post tests.

How do Chapter Leaders receive their incentive?

Chapter Leaders will be paid at the end of each camp calendar year. Before the check is issued all reports must be complete and turned in to the University of Kentucky. Failure to participate in conference calls or submit reports may forfeit or delay payments.

Expense Reimbursement

Chapter leaders will be reimbursed for travel expenses incurred for the project (e.g. annual meeting or other travel specifically requested by the University of Kentucky). These expenses include the following:

- Ground travel (.345 cents per mile)
- Airfare (coach, unrestricted)
- Meals (receipts required, not to exceed $34 per day)
- Lodging (standard room rate)
- Airport parking (economy, long-term)

Miscellaneous expenses may be submitted but are subject to individual approval. Pre-authorization is required for any airfare that exceeds $700. No alcoholic beverages will be covered. Reimbursement will be made upon receipt and approval of expenses.

If airfare or lodging needs to be paid in advance, call FS4JK to book the flight or room for you. Be sure to do this at least 4 weeks prior to the trip date.

There may be unusual cases of expenses that arise. These will be handled on a case by case basis and should be discussed in advance with FS4JK.

CAMP DAY

By the end of the camp day we need:

1. FS4JK Camp Demographic form
2. Complete and signed Release and Consent forms*
3. Teacher information sheets*
4. Completed pretests*
5. Completed post tests
6. Instructor data sheets from tractor, equipment, and animal stations

(* Bundle these items together by class teacher if possible)

Team members from FS4JK or the University of Kentucky will attend your camp. You should give all the required data (items 1-6 listed above) to them before they leave.

In addition, the visiting team will collect hard-copy materials used or given to students at the tractor, equipment, and animal safety stations. They will take video footage at these stations and still shots of camp activities.

Goody Bags

We know these are important to your campers. We have provided a tan 4-page booklet designed for parent-child use after the camp. Please be sure campers in the fourth and fifth grades receive this booklet in their bags. If your camp has other grades and you have extra booklets, you are free to use them however you wish. The booklets are part of our follow-up testing; that is why every 4^{th} and 5^{th} grader needs to have them.

You also have a clean copy of the booklet so you can run your own copies to distribute for other functions. You will find this in the protective page that follows.

The Life and Times of a Chapter Camp Leader (CCL)

DATE	ACTIVITY	PROJECT ACTION
April 1, 2002	Camp is just 16 days away! Be sure school has authorized trip, all instructors are lined up, tents are ordered, parking is secure, lunches are ordered	Keep track of any meetings you have, purpose, length of time spent. This should be placed in you logbook. Note unusual things: change in site, instructor change...
April 10	Take Release and Consent forms and pretests to teachers at school. Explain that Release and Consent forms must be completed for child to attend. Ask teacher to be sure each child completes pretest in class sometime the week before camp. Have teacher bring slips and pretests to camp.	Write down number of kids that are expected. Explain importance of pretest to teacher and that camp is part of the evaluation study. Note how many children are not allowed to attend camp or be in study.
April 15-16	Check on all last minute details. It really good to have a checklist by this point in time! Load van with everything you will need. Last minute check of physical site. Call teachers to remind them of paperwork	Be sure all camp volunteers know about research participation and what their role is to be sure all paperwork is completed the day of the camp.
April 17	Look out window to see weather, tune in to local radio station to get news and weather update. If you are lucky, the sun will be shining and all will be well. If not, pray. Better pray anyway. Think positive thoughts! At the camp be sure you get instructor sheets completed and turned in. Get camp roster. Designate who will be responsible for getting post tests done and collected. Be sure to allot enough time for this (at least 15-20 minutes). Explain that someone will need to read test to kids.	Data collection and turn in. Designate someone to review all permission slips if this has not been done prior to camp. THE POST TEST IS CRUCIAL!!

The Life and Times of a Chapter Camp Leader (CCL) - continued

DATE	ACTIVITY	PROJECT ACTION
April 18	Final cleanup and recover! Collect all publicity about the day camp.	Note all publicity in logbook. This includes any activities done at school like poster contests, marquees, banners, etc.
April 19	Send any information about the camp that you have not already turned in.	Review and mail materials
April 24	You are contacted by UK that some campers' information is incomplete.	Collect information
April 25	You get a call from the Red Cross wanting information about farm injuries.	Logbook entry
May 2	You hear that a farm child is in the hospital because of a fall from a horse. Gather all the information you can about the incident. You know a neighbor who is a friend of the child's parents. Ask the neighbor about the child and how the injury happened. Do not go to the hospital and inquire!	Complete farm child tracking form
May 6	The child injury is reported in the local weekly paper.	Clip the article and add to data to send in with your quarterly report.
May 10	You receive a call about the upcoming mail survey that will occur next week.	Be ready to answer questions in the community. You might be asked about the study.
May 17	You see a neighbor in the store whose child attended camp. She wants to know why her child received a survey and what it will be used for.	Explain evaluation. Encourage her to participate!

NOTE: THE FIRST MONTH OR SO IS BUSY. IT WILL DECREASE QUITE A BIT AFTER THAT. IT IS IMPORTANT TO KEEP YOUR LOGBOOK HANDY AND MAKE ENTRIES AS SOON AS POSSIBLE. IT IS EASY TO FORGET IF YOU DON'T DO IT RIGHT AWAY.

DAY CAMP EVALUATION PROJECT

SURVEY INSTRUMENTS

Several survey instruments have been developed to gather the information needed for the study. These instruments include letters, Release and Consent forms, pretests/post tests, forms, and tracking logs. Each instrument has been printed on a different color to facilitate the organization and tracking of the instruments. The key instruments to be used in this study that the Chapters and chapter leaders will need are listed below:

- Release and Consent Form
- Parent Letter
- Teacher Information Sheet
- Day Camp Pretest
- Day Camp Post Test
- Station Instructor Letter and Data Sheet
- FS4JK Day Camp Demographic Sheet

Copies of these instruments are included in this training manual and instructions for their use will be discussed in detail in the sections that follow.

It is critical that Chapters and chapter leaders use these instruments to maintain consistency among the participating chapters and for ease of comparison for analysis purposes.

NOTICE TO PROGRESSIVE FARMER DAY CAMPS

If you are a Progressive Farmer camp and you need to submit the registration forms and other documents to Progressive Farmer (PF):

Still submit the information to us first. Indicate which forms need to be forwarded to PF. We will be glad to do this for you at our expense. You will still need to return left over goody bags, banners and other things you might have from camp, but we will forward documents pertaining to the children and camp information. We know some of the information we need duplicates what is required of you by Progressive Farmer. We have tried our best to keep this to a minimum but because not all the camps in our study are PF camps there will be some duplication.

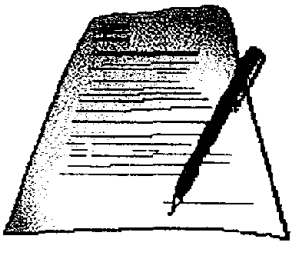
RELEASE AND CONSENT FORMS

Most day camps require a permission form signed by a parent or guardian before the child is allowed to attend camp. Progressive Farmer Day Camps has a form that they require for attendance at their camps. We are working with them so you will not need to complete two separate forms if your camp is a PF camp. If your camp is not a PF camp we have an almost identical form that you may use.

These forms include information about the research we are doing. This is an easy and fast way to inform parents about the research and gain permission for their child to participate in both the camp and the research.

You can use your usual way of getting the Release and Consent forms signed, just let us know what that method is so we have that information for our research. We also need to know, if possible, how many forms went out so we can calculate the "no return" rate. We hope that is very small! If you receive forms that deny permission for the research participation of the child we will need those so we can delete the child's name and any data the child might provide from the research roster.

If you are a PF camp, use the form that has Progressive Farmer Farm Safety Day Camp at the top. If you are not a PF camp use the form "Farm Safety Day Camp". All forms need to be forwarded to UK as part of your materials package. We will retain them for the duration of the project. If you need a copy we can do that for you.



Camp Code _____

Progressive Farmer Farm Safety Day Camps®
2002 Release and Consent Form

1) **I give my permission for the child listed below to attend the *Progressive Farmer* Farm Safety Day Camp®.** I understand that one of the purposes of the *Progressive Farmer* Farm Safety Day Camp® is to teach campers to stay safe around farm sites, farm equipment, and farm animals. During camp, safety barriers will be in place, safety rules will be enforced, and participants will be closely supervised by camp instructors and group leaders. However, I acknowledge that there is the possibility of accidents. I release the coordinators, instructors, volunteers, sponsors, *Progressive Farmer, Inc.*, the Progressive Agriculture Foundation, and the *Progressive Farmer* Farm Safety Day Camp® program from all claims, in the event of injury to my child, unless the injury is the result of gross negligence or willful misconduct on the part of these parties.

2) **First aid will be available at the camp and medical and/or hospital care will be provided in case of serious illness or injury.** I understand that if serious illness or injury occurs, I will be notified. If it is impossible to contact me or the alternate emergency contact provided below, I give permission for emergency treatment as recommended by the attending physician.

3) **I give my permission for photographs or videotapes to be taken of my child** at camp and for these images to be used in the media, on websites, and in promotional materials.

4) **I understand that my child might be asked to complete a written survey before and after the camp** to help evaluate the effectiveness of the *Progressive Farmer* Farm Safety Day Camp® program. Participation in these surveys is voluntary, and my child may choose not to participate. I also understand that to complete the evaluation of the program, **we might be called later by an interviewer from the University of Kentucky** to ask us some questions about the camp and my child's experiences since the camp. This could happen four times over the next two years. I understand that participation in the interview is voluntary and confidential.

I have read and agree to the above information.*

Parent/Guardian Signature_____ Date _____

Please <u>print</u> the following:

Name of Parent/Guardian _____

Name of Camper_____

Age of Camper _____ Grade of Camper _____ Camper is: Boy _____ or Girl _____

Address _____

City _____ State _____ Zip Code _____

Area Code _____ Phone Number _____ _____

Camper's phone number if different from parent/guardian: Area Code_____ #_____

Alternate Emergency Contact _____

Area Code _____ _____ Phone Number _____ _____

Does camper live on a farm now? ___Yes ___ No Teacher's Name _____

* **If you do not give permission for all or part of items 2, 3, or 4,** simply mark through and initial the statement(s) that you do not agree to. However, if you do not agree to item 1, your child cannot attend the farm safety day camp. You are welcome to copy this form or to request an additional copy from the camp coordinator. If you have questions about the evaluation of the *Progressive Farmer* Farm Safety Day Camp® program, call Dr. Deborah Reed (859-257-9636) at the University of Kentucky. If you have questions about the camp, call your local camp coordinator.

Camp Code _____

Farm Safety Day Camps
2002 Release and Consent Form

1) **I give my permission for the child listed below to attend the Farm Safety Day Camp.** I understand that one of the purposes of the Farm Safety Day Camp is to teach campers to stay safe around farm sites, farm equipment, and farm animals. During camp, safety barriers will be in place, safety rules will be enforced, and participants will be closely supervised by camp instructors and group leaders. However, I acknowledge that there is the possibility of accidents. I release the coordinators, instructors, volunteers, sponsors, and the Farm Safety Day Camp program from all claims, in the event of injury to my child, unless the injury is the result of gross negligence or willful misconduct on the part of these parties.

2) **First aid will be available at the camp and medical and/or hospital care will be provided in case of serious illness or injury.** I understand that if serious illness or injury occurs, I will be notified. If it is impossible to contact me or the alternate emergency contact provided below, I give permission for emergency treatment as recommended by the attending physician.

3) **I give my permission for photographs or videotapes to be taken of my child** at camp and for these images to be used in the media, on websites, and in promotional materials.

4) **I understand that my child might be asked to complete a written survey before and after the camp** to help evaluate the effectiveness of the Farm Safety Day Camp program. Participation in these surveys is voluntary, and my child may choose not to participate. I also understand that to complete the evaluation of the program, **we might be called later by an interviewer from the University of Kentucky** to ask us some questions about the camp and my child's experiences since the camp. This could happen four times over the next two years. I understand that participation in the interview is voluntary and confidential.

I have read and agree to the above information.*

Parent/Guardian Signature_____ Date _____

Please print the following:

Name of Parent/Guardian _____

Name of Camper_____

Age of Camper _____ Grade of Camper _____ Camper is: Boy _____ or Girl _____

Address _____

City _____ State _____ Zip Code _____

Area Code _____ Phone Number _____

Camper's phone number if different from parent/guardian: Area Code_____ #_____

Alternate Emergency Contact _____

Area Code _____ Phone Number _____

Does camper live on a farm now? ___Yes ___ No Teacher's Name _____

* **If you do not give permission for all or part of items 2, 3, or 4,** simply mark through and initial the statement(s) that you do not agree to. However, if you do not agree to item 1, your child cannot attend the farm safety day camp. You are welcome to copy this form or to request an additional copy from the camp coordinator. If you have questions about the evaluation of the Farm Safety Day Camp program, call Dr. Deborah Reed (859-257-9636) at the University of Kentucky. If you have questions about the camp, call your local camp coordinator.

PARENT LETTER

The parent letter explains the evaluation project's involvement in the farm safety day camp. Parents are notified that surveys (pre and post tests) will be conducted at the camp, photos and videos of camp activities will be taken, and that this information will be used in a research study to evaluate the effectiveness of the day camp.

The letter also explains that they may be contacted about a month after the day camp by researchers from the University of Kentucky for further participation in the project.

The letter makes it very clear that participation is voluntary and that the child's name, survey results, or any other identifying information will not be released to anyone.

This letter should accompany the Release and Consent forms when they are sent to the parents to obtain approval for their child's participation in the day camp. Return of the Release and Consent form will be an indication that the parent letter was also received.

It is the Chapter's responsibility to ensure that parent letters are distributed with the Release and Consent forms. Ideally, the Release and Consent form should be stapled to the parent letter.

It is not necessary for parents to return the letter. Only the Release and Consent form should be collected.

Parent Letter What If's

What If	Answer
1. I don't send out Release and Consent forms. The school does that for us.	You should take the parent letters to the school and have the teacher distribute them with the Release and Consent form.
2. Parent signs permission slip but adds note that the child cannot be in the study.	List child's name. If possible, pull the Release and Consent form and copy it for us. We will be sure any data with the child's name is not used. Contact the parent before the camp if possible to explain the study. It is important to have every eligible child participate if possible.
3. Parent letters did not go out. Release and consent form was not signed.	If parents did not receive letter or sign the release, their children cannot be in the study. THIS IS CRUCIAL!

UNIVERSITY OF KENTUCKY

College of Nursing
Chandler Medical Center
315 CON/HSLC Bldg.
Lexington, KY 40536-0232
(859) 323-6535
Fax: (859) 323-1057
www.mc.uky.edu/Nursing

Dear Parent:

Thank you for allowing your child to attend the farm safety day camp. As part of the day camp activities your child will complete a survey before and after the camp to help evaluate the camp. This survey will ask questions about farm safety that your child will learn more about at camp. The surveys will be done in a group setting as part of the camp day activities. The surveys are not part of your child's school grade and your child's participation is voluntary. As part of the camp, evaluation researchers from the University of Kentucky College of Nursing will attend the camp and will take photos and videos of portions of the camp activities. These will be used only for research and educational purposes. Your child's name, survey results, or any other identifying information will not be released to anyone.

About a month after the camp you may receive a letter from the University asking you and your child to provide additional information about the camp experience. You and your child do not have to participate in this but your participation would help us with the evaluation of the camp and in making changes to improve the camp for the next group.

If you have questions about the camp evaluation being conducted by the University of Kentucky you may contact the research team at dbreed01@uky.edu or by calling Dr. Deborah Reed at 859-257-9636, or you may call Shari Burgus at Farm Safety 4 Just Kids (1-800-423-KIDS). This camp is one of only five Farm Safety 4 Just Kids camps across the nation participating in this evaluation. As part of such a small group your participation can make a difference in the outcome. Thank you for helping us make the farm a safer place to live, visit, and work!

Sincerely:

Deborah B Reed, J

Deborah B. Reed, RN, MSPH, PhD

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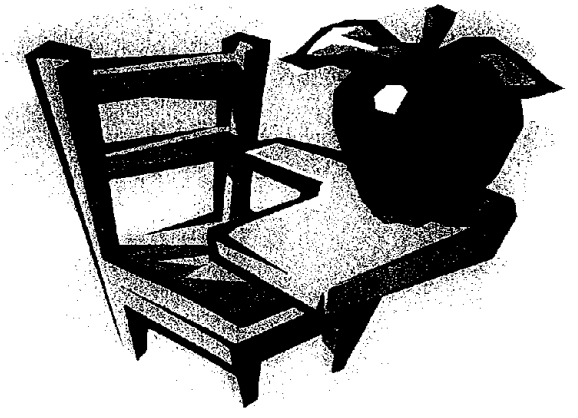
TEACHER INFORMATION SHEET

The teacher information sheet should be given to each teacher bringing a class to the day camp. It contains written directives on administering the pretest. Even if the pretests are not done at school the teachers should complete a teacher information sheet so we will have some idea about the child's preparation and after-camp exposure to farm safety.

The teacher information sheet should be bundled with their students' pretests.



DAY CAMP PRE-TEST

Pre and post tests have been a standard evaluation tool at farm safety day camps for quite some time. The purpose of these tests is to determine if the children's responses reflect an increased knowledge or awareness of farm safety and farm hazards.

A new pretest has been developed for this study to help us evaluate the effectiveness of the day camp. The pretest consists of 37 questions and is designed in such a way that children are given response choices and asked to circle the answers they think best describes them or is the best response. A "Don't Know" option is also provided for many of the questions.

The pretest has been printed on a one-page fold out sheet. This should make it easier than having to deal with four individual pages. The pretest is printed on tan paper.

The pretest is divided into the following sections:

- General information about the child (age, grade, gender, and farm involvement)
- Safety Attitudes
- Tractor Safety
- Animal Safety
- Power Equipment Safety

Administering the Pretest

* Best and Recommended Method - We highly recommend that the teachers give the pre-test to the children who will attend the camp the week before camp if at all possible. Test items should be read to the students. Teachers can turn tests in to the camp leader upon arrival at the day camp.

If pretests cannot be done before arrival at the camp, this is the very first thing the child needs to do after registering. BE SURE TO ALLOW AMPLE TIME (15-20 minutes) AND HAVE PENCILS READY. STUDENTS WILL NEED SUPERVISION. THE PRETEST IS CRUCIAL AND MUST BE FILLED OUT COMPLETELY.

Use pencils! This allows the child more freedom to erase wrong answers.

It is important for the camp staff to review and understand the pretest before the day of the camp. This will facilitate in administering the pretest and answering any questions the children may have.

The group will finish at the same time if you read the items to the group one at a time and let them answer each question. This cuts down on confusion and questions. If also prevents disruption and pressure in the group. By reading the questions to the children, we should get more valid answers.

It is important that the child's first and last name is recorded on the pretest. As the children are completing the pretest, camp staff should walk around and make sure the children have included their name in the space provided on the first page of the pretest.

If the pretest must be administered at the camp, it must be done before any other activities begin. The pretest should also be collected before the children begin any other activities. We anticipate the pretest will take about 15-20 minutes for the child to complete. Be sure to allow enough time for this. If we do not get complete and accurate pretests, we cannot perform the analyses. You will never know if your camp did a good job of teaching safety.

DAY CAMP POST TEST

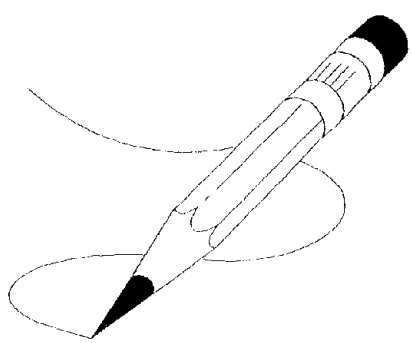
The post test is only slightly different from the pretest. It has fewer questions, says "Post Test" at the top, and is printed on yellow paper. (Remember the pretest is printed on tan paper).

The post test must be completed by the child before the camp adjourns. Adequate time (20 minutes) must be allowed for the child to complete the test in an unhurried manner.

ADULT SUPERVISION IS REQUIRED. Ask the child group leader to guide children through the post test by having the leader read the questions. The group will finish at the same time if you read the items to the group one at a time and let them answer each question. This cuts down on confusion and questions. If also prevents disruption and pressure in the group. By reading the questions to the children, we should get more valid answers.

Use pencils! This allows the child more freedom to erase wrong answers. BE SURE TO HAVE PENCILS READY!

After the children have completed the post test, the post tests should be collected and turned in to the chapter leader.



STATION INSTRUCTOR LETTER AND DATA SHEET

The station instructor data sheet is a goldenrod color. The bold color should help camp staff track the form and keep it separate from other instruments collected at the day camp.

As the name depicts this data sheet is to be completed by the station instructors at the tractor, power driven equipment, and animal safety stations. We must have data sheets from these three stations. If you want to get them from other stations also, you may copy the sheet and use it. Please do not use the goldenrod color for any stations except tractor, equipment, and animal safety. You may send us all the station instructor sheets you collect and we can analyze them for you if you wish.

In some cases the questions call for the instructors to circle the answer that best reflects them. In other instances the instructors are asked to write in their answers. Information gathered in this form includes farm experience, teaching experience, reasons for participation in the camp, teaching techniques used, and sources of teaching material.

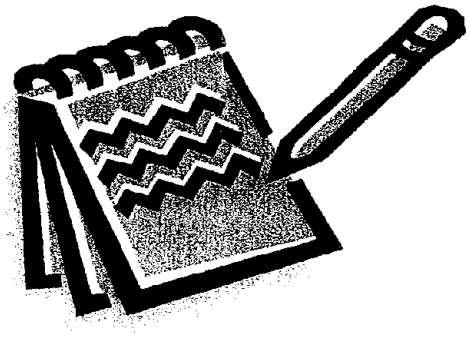
Every instructor at each of the three focus stations (tractor, power driven equipment, and animal safety) should be asked to complete one of the data sheets. For example, if there are two instructors at the tractor station, you should collect two station instructor data sheets from that station.

The data sheets should be distributed to the station instructors at the beginning of the camp before the campers arrive. The cover letter to the data sheet thanks the instructor for his/her participation and explains how the information gathered will be used in the study to evaluate the effectiveness of the day camp.

Station instructors should be instructed to complete the data sheet and turn it in to a staff member before leaving the camp. Explain to the station instructors that it is not necessary to place their names on the data sheets.

We suggest that Chapters prepare a list of all the instructors involved in the three focus stations (tractor, power driven equipment, and animal safety) for use in making sure all data sheets are collected. As the data sheets are turned in, names could be highlighted or checked off as having collected the required information. For names that are not checked off, Chapters should try to contact the instructor before they leave the camp or as soon as possible thereafter.

We also suggest that the camp staff responsible for distribution and collection of these data sheets review and understand them prior to the day of the camp. This will facilitate answering questions and knowing the importance of the information gathered. Make sure you have enough of the data sheets available for the number of instructors you anticipate in each of the three focus stations (tractor, power driven equipment, and animal safety). 15 copies are included in this training manual for your use.



UNIVERSITY OF KENTUCKY

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Dear Instructor:

Thank you for sharing your knowledge, time and interest in protecting children from harm. Without our station leaders we would not be able to have a camp. As part of the formal evaluation of the day camp, please take a few minutes to complete this survey and return it to the camp leader before you leave today. You do not need to place your name on the survey. The surveys will be used by Farm Safety 4 Just Kids and the University of Kentucky in evaluating the camp. The camp leader will receive a full report. If you would like to have a copy of the report please contact the camp leader or me after the camp.

Sincerely,

Deborah B Reed,

Deborah B. Reed, RN, MSPH, PhD

Room 553 CON/HSLC Building
College of Nursing
University of Kentucky
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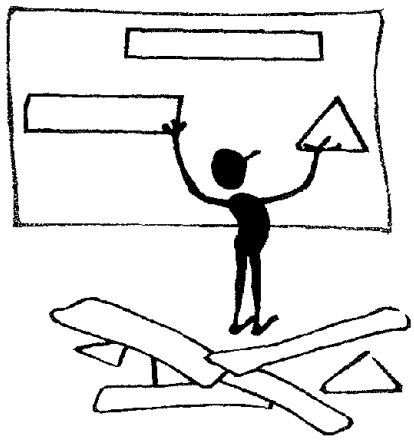
FS4JK DAY CAMP DEMOGRAPHIC FORM

This form is designed to gather information about the day camp itself and covers such areas as camp attendance, size of camp staff, number of training sessions, length of camp, training formats, weather, and charges to campers. The form also asks for an overall impression of the camp wherein strengths and areas for improvement should be documented and provides a space for recording any unusual circumstances or factors that could influence the effectiveness of the camp. An example of the latter is the day camp held last year by the Mammoth Cave FS4JK Chapter on September 11th. While the children were not told about the attack on the World Trade Center during the camp, the staff and instructors struggled with keeping the information from the children and coping with the news themselves. More common examples would be a sudden thunderstorm or lunch being late.

The demographic form should be completed by a Chapter member attending the camp. This could be the chapter leader or another member designated by the chapter leader.

Each line item should be addressed and the form completed in its entirety. In some instances you will only need to circle the best response. In other cases, you will need to write in the answer.

The form should be turned in to the chapter leader at the end of the day camp. The chapter leader will turn in the completed form to the research team visitors.

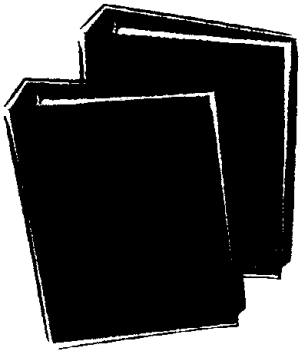


CHAPTER LEADER INSTRUMENTS

Chapter leaders will serve as the "eyes and ears" of the research team across the three years of the project to track the natural history of the community. Journals kept by the leaders will include stories of farm injuries and close calls, reports of purchase of protective equipment, reports of other farm safety training and other data that might influence the community regarding farm safety issues.

Three forms have been developed to assist the chapter leaders in tracking events in their communities over the three-year period: the Community Farm Safety Event Record form, the Child Injury Record form, and the chapter leader log book. There may be other forms as the study progresses and we hear back from you.

Chapter leaders will be asked to submit completed forms to the University of Kentucky research team on a quarterly basis. You will receive a reminder about two weeks before the forms are due, along with a prepaid envelope for the return of data.



Chapter Leader Log Book

The log book is designed to assist the chapter leader keep track of anything in the community that relates to farm safety. Items to be tracked include farm-related injuries and deaths, close calls, comments received from the community about the day camps or other safety events, farm safety awareness programs, and anything else the chapter leader considers significant to the study.

The log book is less detailed than the Community Farm Safety Event and Child Injury Record forms but should also reflect such occurrences. The log book should be the chapter leader's primary tool for tracking farm safety issues in their communities.

The log book asks for the following:

- Date
- Topic
- Source(s)
- Comments/Summary
- Effect on Community
- Additional Report or Documentation

An example is given on the next page of what a log book entry would consist of and look like.

LOGBOOK

Date	Topic	Source(s)	Comments/Summary	Effect on Community	Additional Report or Documentation
7/4/02 	*Death – teen at parade*	*Newspaper, TV, many reports and conversations.*	*Teen fell off wagon during parade and was crushed under wheel.*	*Much publicity.* *Teen well known.* *Happened in public view.* *Flag half-staff.* *Many people at funeral.* *Possible new policy for parades.*	*News clippings.* *Child injury record form.*

Community Farm Safety Event Record

This form should be used by the chapter leader to record farm safety events held in their communities during the three-year period. Such events should not be limited to FS4JK events. Examples include information on a bank marquee, class programs, farm rescue programs, and co-op sponsored events.

The following information should be documented for each event:

- ✓ Name of the event
- ✓ Date of the event
- ✓ Who sponsored the event
- ✓ Who the event was open to (age groups, gender, just members of a certain group)
- ✓ Which safety areas were covered by the event
- ✓ Which media types advertised the event
- ✓ Which media types covered the event

If possible, any materials related to the event should also be gathered and attached to the form. Examples of event materials include newspaper clippings, brochures, advertising flyers, and photographs.

Child Injury Record Form

This form is to be used by the chapter leader to track farm-related injuries to children in their communities. The following information should be documented:

- ✓ Date of injury
- ✓ Age of injured child
- ✓ Gender of injured child
- ✓ If the child attended the 2002 FS4JK day camp
- ✓ The primary cause of the injury

The child's name is not required and should not be reflected on the form. However, if a newspaper clipping is available that discusses the injury, it is all right if the child's name appears in the newspaper article. Newspaper articles should be attached to the form whenever possible.

Two separate spaces (boxes) are provided on the form for the chapter leader to describe the type of injury sustained and how the injury occurred.

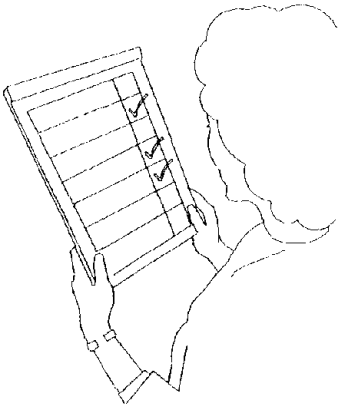
The second page of the form calls for the chapter leader to check either "yes", "no", or "don't know" to a series of eight questions.

NOTE: DO NOT CONTACT THE FAMILY IF THIS WAS A SERIOUS INJURY OR DEATH. USE DISCRETION. If you know the child or family and feel comfortable contacting them, that is fine; otherwise, you may record information that you feel comes from a reliable source. If you contact someone for information, you should explain your role in the project and how this information may be of benefit to others. (Hospitals will not give out any information other than confirm patient's presence and condition.)

QUARTERLY REPORTS

Reports must be prepared and submitted to the University of Kentucky on a quarterly basis. These reports shall include:

- ✓ Log book entries completed during the quarter;
- ✓ Community Farm Safety Event Record forms completed during the quarter;
- ✓ Child Injury Record forms completed during the quarter;
- ✓ Newspaper clippings; and
- ✓ Any other information the Chapter Leader considers important to the study.



FARM SAFETY RESOURCES

There are many available resources with information on farm safety. Attached you find website addresses and contacts for farm safety organizations.

Many of these websites listed offer free products that can be requested or downloaded. Exploring these websites can give you more information and tools to help you plan your day camp. It would also be good for the children attending the day camps to explore these sites after the day camp.

WEBSITES AND REFERENCES

- 1987 Census of Agriculture (includes state and county information)
  http://www.nass.usda.gov/census/census97/profiles/agrimenu.htm

- Access Unlimited--Working to Set You Free
  http://www.accessunlimited.com

- American Farm Bureau
  http://www.fb.com/

- American Lung Association Fact Sheet: Occupational Lung Disease
  http://www.lungusa.org/diseases/occupational_factsheet.html

- Amputee Coalition of America
  http://www.amputee-coalition.org/

- Breaking New Ground
  http://abe.www.ecn.purdue.edu/ABE/Extension/BNG/index

- Farm Safety 4 Just Kids
  http://www.fs4jk.org/

- Farm Safety and Health Information Clearinghouse
  http://www.bae.umn.edu/%7efs/index.html

- Gempler's Alert
  http://www.gemplers.com/alert.htm

- Indiana Hand Center
  www.indianahandcenter.com

- John Deere Safety
  http://customer.johndeere.com/ag/equipment/safety/
  (click on the "Safety" pull down menu to access safety messages, brochures, posters, videos, and related materials)

- The Kentucky Community Partners for Healthy Farming ROPS Project
  http://www.cdc.gov/niosh/nasd/docs4/ky01001.html

- Kentucky Injury and Prevention Center
  http://www.kiprc.uky.edu

- The National Ag Safety Database (NASD)
  http://www.cdc.gov/niosh/nasd/nasdhome.html

- The National Children's Center for Rural and Agricultural Health and Safety
  http://research.marshfieldclinic.org/children/

- The National Database Assistive Technology Information
  http://www.abledata.com

- The National FFA Organization
  http://www.ffa.org

- National Safety Council
  http://www.nsc.org/

- NIOSH Centers for Agricultural Disease and Injury Research, Education, and Prevention

  - Deep-South Agricultural Health and Safety Center
    http://hsc.usf.edu/publichealth/eoh/agcenter/

  - Great Plains Center for Agricultural Health
    http://www.public-health.uiowa.edu/gpcah/

  - High Plains Intermountain Center for Agricultural Health and Safety
    http://www.HICAHS.colostate.edu/

  - The National Farm Medicine Center
    http://www.marshfieldclinic.org/nfmc/

  - The New York Center for Agricultural Medicine and Health
    http://www.nycamh.com/

  - Pacific Northwest Agricultural Safety and Health Center
    http://depts.washington.edu/pnash/home.htm

  - Southeast Center for Agricultural Health and Injury Prevention
    http://www.mc.uky.edu/scahip/products.htm

  - Southwest Center for Agricultural Health
    http://swcenter.uthct.edu/

  - UC Agricultural Health and Safety Center at Davis
    http://agcenter.ucdavis.edu/agcenter/

- North American Guidelines for Children's Agricultural Tasks
  http://www.nagcat.org/

- Rehabilitation Engineering and Assistive Technology Society of North America
  http://www.resna.org/

- Trace Research and Development Center
  http://www.trace.wisc.edu/

- VICNET Disability Page
  http://www.vicnet.net.au/disability/

- Virtual Assistive Technology Center
  http://www.at-center.com/

- National FFA Organization. (1996). *Bridging horizons: An advisor's guide to FFA involvement for members with disabilities.* National FFA Center, 5632 Mt. Vernon Memorial Highway, Alexandria, VA 22309.

- Sheppard, K., Hancock, J., & Martinson M. (Eds.) *Those of us dislabeled: A guide to awareness and understanding.* (Available from the Human Development Institute & Kentucky AgrAbility Project, phone number: 859-257-8104

APPENDIX G

Questions and Response Frequencies Across Time for Hypothesis 5

Note: some of the 18-month items contained response options of 'N/A' and 'Refused'; for the purpose of this analysis, these responses have been recoded to missing. This may have impacted the percent of 'Yes' responses since in previous surveys only 'Yes' and 'No' were given as possible answers (thus, some of the 'No' responses in prior surveys may have chosen N/A or refused at 18 months)

H_5	Camp attendance by children will positively influence their parents' attitudes and behavior toward children's farm safety behavior.

A = Attitude *B = Behavior*

Rank in order which is most likely to cause you to implement more farm safety rules or practices (Attitude item Q23 at 1-month parent survey).

The percentage of parent respondents who listed each of the possible choices as the 'most likely' is given below:

a. Information pamphlets about farm risk and safety precautions: 8%
b. A serious injury to yourself or family member: 69%
c. A serious injury to another farmer you know: 6%
d. Someone's constant insistence that a change be made: 2%
e. Attending a safety training course: 14%

Item type	Parent Surveys	1-Mo	6-Mo	12-Mo	18-Mo
A	How much influence did camp have on your decision to improve animal confinement areas for safety reasons?				None 15 (20%) A little 15 (20%) Some 32 (42%) A lot 14 (18%)
A	Because of your child's camp attendance, how much do you know about children's safety on farms?		Less 1 (<1%) Same 95 (26%) A little more 205 (56%) A lot more 68 (18%)		
A	Because of your child's camp attendance, how much general knowledge about farm safety do you have?		Less 1 (<1%) Same 114 (31%) A little more 207 (56%) A lot more 46 (13%)		
A	Because of your child's camp attendance, how much attention do you pay to farm safety?		Less 2 (1%) Same 105 (28%) A little more 139 (38%) A lot more 123 (33%)		Less 0 (0%) Same 49 (17%) A little more 134 (48%) A lot more 98 (35%)

When a summary score is created by adding together the three similar items asked of the parents at 6 months, the mean score is 8.8 (SD = 1.8), with a range from 3-12. Higher scores indicate a greater degree of change due to the child's camp attendance.

A = Attitude *B = Behavior*

Item type	Parent Surveys	1-Mo	6-Mo	12-Mo	18-Mo
A	If I'm in a hurry to get a farm task done, it's better to ask a child to do the job rather than wait until someone with experience is available.		Strongly agree 8 (2%) Agree 7 (2%) Not sure 12 (3%) Disagree 129 (35%) Strongly disagree 211 (57%)		
A	The only safety rule needed on a farm is to "Be careful".				Strongly disagree 193 (68%) Somewhat disagree 47 (17%) Not sure 7 (2%) Somewhat agree 21 (7%) Strongly agree 15 (5%)
A	A child who grew up on a farm doesn't need to be told all the safety dangers on the farm.				Strongly disagree 244 (86%) Somewhat disagree 29 (10%) Not sure 1 (<1%) Somewhat agree 3 (1%) Strongly agree 6 (2%)
A	A child that doesn't live on a farm wouldn't learn much of value from a FS4JK farm safety day camp.				Strongly disagree 173 (61%) Somewhat disagree 64 (23%) Not sure 17 (6%) Somewhat agree 17 (6%) Strongly agree 12 (4%)

When a summary score is created by adding together the three similar items asked of the parents at 18 months, the mean score is 4.6 (SD = 2.1), with a range from 3-15. Lower scores indicate stronger disagreement with the statements listed.

A = Attitude *B = Behavior*

Item type	Parent Surveys	1-Mo	6-Mo	12-Mo	18-Mo
B	Have you made any changes related to farm safety since the day camp or last survey? (including rules for when child visits a farm)	Yes 50 (12%) No 381 (88%)			Yes 56 (20%) No 226 (80%)
B	Since the last survey have you made new work rules about safety?		Yes 106 (29%) No 257 (71%)		
B	Have you made *any* safety rules or decisions for any of your children as a result of what the child who attended camp learned at the farm safety day camp?			Yes 159 (49%) No 167 (51%)	
B	Have you made any *farm* safety rules or decisions for any of your children as a result of what the child who attended camp learned at the farm safety day camp?			Yes 149 (46%) No 177 (54%)	
B	Have you adopted new farm safety rules related to tractors, animals, or power equipment in the last 6 months?			Yes 68 (21%) No 258 (79%)	Tractor: Yes 130 (46%) No 153 (54%) Animal safety: Yes 141 (50%) No 142 (50%) Power equipment: Yes 151 (53%) No 132 (47%)
B	Since the last survey have you improved animal confinement areas for safety reasons?		Yes 103 (29%) No 251 (71%)	Yes 58 (18%) No 267 (82%)	Yes 88 (54%) No 76 (46%)

There are more reported positive changes in safety behavior over time. This could be due to additional changes made by the parents as more time elapsed and could also be due to the more involved families remaining in the study over time (i.e., less attrition among the group of families more affected by the day camp messages).

PROHIBIT

Parent Surveys	1-Mo	6-Mo	12-Mo	18-Mo
Is there anything on the farm you have prohibited your child from doing or being around since the farm safety day camp?	Yes 65 (15%) No 368 (85%)			
Have you prohibited your child from doing certain farm tasks since last survey?		Yes 33 (9%) No 334 (91%)	Yes 78 (24%) No 247 (76%)	Yes 105 (37%) No 177 (63%)
Have your prohibited your child from being around certain places on the farm since the last survey?		Yes 73 (20%) No 295 (80%)	Yes 106 (33%) No 219 (67%)	
Have you prohibited your child from being around others doing farm work since the last survey?		Yes 55 (15%) No 312 (85%)	Yes 70 (21%) No 256 (79%)	

As with the Behavior items displayed in the previous table, there is an increase over time in the percent of parents reporting that they prohibited their child from doing certain farm work tasks.

PERMIT

Parent Surveys	1-Mo	6-Mo	12-Mo	18-Mo
Is there anything on the farm you now permit your child to do or be around since the farm safety day camp?	Yes 21 (5%) No 410 (95%)			
Which of the following most influences your decision to give your child a task to do on the farm?	Strength/size 53 (14%) Mental maturity 219 (59%) Time pressures 2 (1%) Child's request 82 (22%) Lack other help 16 (4%)			
Which of the following influence your decision about what your child does on a farm?			<u>Know of a child injured</u>: Yes 203 (67%) No 100 (33%) <u>Had injury in family</u>: Yes 177 (58%) No 126 (42%) <u>Heard stats about farm inj</u>: Yes 247 (81%) No 58 (19%) <u>What child learned at camp</u>: Yes 276 (90%) No 29 (10%) <u>What other families allow</u>: Yes 114 (38%) No 189 (62%)	<u>Know of a child injured</u>: Yes 204 (73%) No 76 (27%) <u>Had injury in family</u>: Yes 162 (58%) No 118 (42%) <u>Heard stats about farm inj</u>: Yes 223 (79%) No 59 (21%) <u>What child learned at camp</u>: Yes 258 (92%) No 23 (8%) <u>What other families allow</u>: Yes 98 (35%) No 183 (65%)
How much farm work is child who attended camp doing compared to amount of farm work your older children were doing at the same age?			More 31 (10%) Less 65 (22%) Same 90 (30%) No older child 115 (38%)	
Because of your child's camp attendance, how much do you base your child's farm work on strength and ability?		Less 12 (4%) Same 172 (50%) Little more 101 (30%) A lot more 56 (16%)		

The parents answered very consistently between 12- and 18-months about the influences on their decision as to what their child does on the farm. Parents indicated feeling most influenced by what the child learned at camp, followed by statistics they had heard about farm injuries. After this, knowing of a child who was injured was next most influential, followed by an injury in the family. Parents were least influenced by what other families allowed children to do.

PERMIT (continued)

Parent Surveys	1-Mo	6-Mo	12-Mo	18-Mo
Because of your child's camp attendance, how much do you base your child's farm work on age?		Less 12 (4%) Same 175 (51%) Little more 99 (29%) A lot more 55 (16%)		Less 4 (1%) Same 91 (33%) Little more 98 (36%) A lot more 82 (30%)
Because of your child's camp attendance, how much do you allow your child to do additional farm tasks?		Less 24 (7%) Same 210 (62%) Little more 95 (28%) A lot more 10 (3%)		
Have you permitted your child to do additional farm tasks in last 6 months?			Yes 70 (22%) No 255 (78%)	Yes 105 (37%) No 177 (63%)
Have you permitted your child to be around places on farm in the last 6 months that were previously prohibited?			Yes 21 (6%) No 305 (94%)	Yes 41 (15%) No 241 (85%)
Have you permitted your child to be around others that were doing farm work in the last 6 months more than you previously allowed?			Yes 38 (12%) No 288 (88%)	
I can give my child additional farm tasks if he/she's been to a FS4JK camp.				Strongly disagree 27 (10%) Somewhat disagree 49 (17%) Not sure 46 (16%) Somewhat agree 127 (45%) Strongly agree 33 (12%)
How much did child's attendance at camp influence your decision to give child additional farm tasks?				None 129 (46%) Some 122 (44%) A lot 28 (10%)
How much did child's attendance at camp influence your decision to allow child to play or be around places they were previously prohibited?				None 157 (57%) Some 77 (28%) A lot 40 (15%)

Between 6- and 18-months, there was a slight increase in the percentage of parents who said that because of their child's camp experience, they based what they allowed their child to do more on age. Parents also indicated at 18-months that they were more likely to allow their child to do things that were previously not allowed than what they allowed at 12-months (this may be a result of the child being 6 months older).

INSTRUCTION

Parent Surveys	1-Mo	6-Mo		12-Mo	18-Mo
If a child has watched someone do a farm task several times, I would expect that child to know how to do it without giving step by step instructions. (agree-disagree scale)		Strongly agree Agree Not sure Disagree Strongly disagree	2 (1%) 17 (5%) 21 (6%) 158 (44%) 164 (45%)		
Has your child received any instruction about farm tasks since the camp?		Yes No	147 (40%) 218 (60%)		
Was this instruction on a new task?		Yes No	85 (58%) 61 (42%)		
Was this instruction done by a family member?		Yes No	139 (95%) 8 (5%)		
How much emphasis on safety was included in the instruction?		Major amount Some Very little	89 (61%) 55 (38%) 2 (1%)		
Who is primarily responsible for assigning chores and training your child in doing chores on the farm?		Self Spouse Other, older child Other relative Other person	157 (49%) 113 (35%) 1 (<1%) 43 (13%) 9 (3%)		

Nearly half of the children were instructed about farm tasks after the camp; parents were most frequently responsible for this instruction.

SUPERVISION

Parent Surveys	1-Mo	6-Mo	12-Mo	18-Mo
Since the last survey have you increased supervision while your child does farm work?		Yes 148 (41%) No 216 (59%)	Yes 87 (27%) No 238 (73%)	Yes 133 (67%) No 66 (33%)
When your child does farm work, how much supervision does the child usually receive?		Direct supervision 193 (54%) Check periodically 58 (16%) No supervision 4 (1%) Never farm work 102 (29%)		
How often do you supervise your child's farm activities?			Never 19 (6%) Sometimes 146 (47%) Frequently 90 (29%) Always 53 (17%)	
How much influence did farm safety day camp have on your decision to increase supervision while your child does farm work?				A little 20 (17%) Some 57 (51%) A lot 35 (31%)

Parents indicated increased supervision at all waves, but this was most pronounced at 18-months (again, could be due to the N/A's and Refused responses being recoded to missing for this survey). Parents responded that children generally were supervised at least part of the time when performing farm work.

NO EXTRA RIDER

Parent Surveys	1-Mo	6-Mo	12-Mo	18-Mo
Since the last survey have you adopted a "no extra rider" rule related to tractor riding?		Yes 129 (36%) No 229 (64%)	Yes 77 (24%) No 248 (76%)	Yes 102 (54%) No 88 (46%)
How much influence did farm safety day camp have on your decision to adopt a "no extra rider" rule related to tractor riding?				None 2 (2%) A little 8 (10%) Some 21 (25%) A lot 52 (63%)
How many times in the last month has there been an extra rider on a tractor on your farm?				None 190 (67%) 1-2 times 27 (10%) 3-4 times 8 (3%) 5+ times 9 (3%) Not have farm 49 (17%)
How often do you allow any of your children to ride as a passenger (on someone's lap) on a riding lawn mower?				Never 205 (72%) Rarely 57 (20%) Sometimes 20 (7%) Often 1 (<1%)
A short ride on the tractor with an adult is okay.				Strongly disagree 118 (42%) Somewhat disagree 66 (23%) Not sure 16 (6%) Somewhat agree 76 (27%) Strongly agree 7 (2%)
If your child was visiting a farm and someone on the farm you trust invited your child to ride on the tractor with them, how likely is it you would let the child ride?				Definitely not allow 127 (45%) Somewhat unlikely 79 (28%) Somewhat likely 72 (26%) Definitely would allow 4 (1%)

The percentage indicating they did not allow an extra rider on the tractor went from 36% (at 6-months) to 24% (at 12-months) to 54% (at 18-months). The apparent jump from 12- to 18-months could be due to increased safety behaviors by the parents as well as removal of N/A responses and Refused responses from the analysis.

PARENT'S OWN BEHAVIOR and ATTITUDE *(A = Attitude; B = Behavior)*

Item type	Parent Surveys	1-Mo	6-Mo	12-Mo	18-Mo
A	How effective do you feel the day camp was for increasing your knowledge of farm safety and safety behavior on the farm?	Very effective 98 (24%) Somewhat effective 220 (53%) Not effective 99 (23%)			Very effective 121 (43%) Somewhat effective 146 (52%) Not effective 15 (5%)
A	How much influence did camp have on your decision to: Repair or replace safety shields? Install roll bars on tractors?				<u>Influence to replace shields</u>: None 1 (4%) A little 8 (30%) Some 9 (33%) A lot 9 (33%) <u>Influence to install ROPS</u>: Some 2 (40%) A lot 3 (60%)
A	Farming is more dangerous than jobs in industry or manufacturing.				Agree 175 (62%) Disagree 106 (38%)
A	Accidents are just one of the occupational hazards of farming that must be accepted if you are going to be in the business.				Agree 105 (37%) Disagree 176 (63%)
A	Compared to other farmers I am very conscientious about avoiding accidents.				Agree 238 (88%) Disagree 32 (12%)
A	During a normal work week, it's common for me while doing farm work to experience a number of close calls" that under different circumstances might have resulted in personal injury or property loss.				Agree 30 (11%) Disagree 235 (89%)
A	To make a profit, most farmers take risks that might endanger their health.				Agree 128 (46%) Disagree 151 (54%)

Compared to the 1-month survey, parents were even more positive in responding to the effectiveness of the camp in increasing knowledge of farm safety at 18-months.

For the 5 final parent items listed in the above table, a factor analysis was done to determine whether the items would load together in a single factor or not (note: the FA was done after reverse-coding the middle item so that its polarity would be perhaps similar to the others). The result was that the two-factor solution was optimal. After a varimax rotation, the 2nd, 4th, and 5th do load together on one factor (with loadings ranging from .63 to .73), while the other two load on a second factor (although their factor loadings have opposite signs (.70 and -.71), indicating that it

may be difficult to relate the middle item to any of the other 4, even after reverse-scoring it). The reliability measure (KR 20) for the 3-item subscale was 0.39; the KR 20 for the full 5-item scale (with the 3rd item reversed) was 0.25. If the FA is rerun on the original 5 items (without reversing the third one), the results are about the same: items 2, 4 and 5 form one factor while 1 and 3 form the other (after varimax rotation). The factor loadings are all exactly the same as the FA described above except that the two items in the second factor now both have positive signs. The KR 20 for the full 5-item scale based on these original items was 0.23 (nearly the same as the KR 20 that resulted with the third item was reversed).

PARENT'S OWN BEHAVIOR and ATTITUDE -- continued *(A = Attitude; B = Behavior)*

Item type	Parent Surveys	1-Mo	6-Mo	12-Mo	18-Mo
B	Did you read any of the farm safety literature that your child brought home from the farm safety day camp?	Yes 324 (75%) No 106 (25%)			
B	Have you requested any additional farm safety information or accessed any farm safety websites from the resources your child brought home?	Yes 15 (3%) No 416 (97%)	Yes 25 (7%) No 344 (93%)	Yes 28 (9%) No 298 (91%)	Yes 28 (10%) No 248 (90%)
B	Have you made any changes in your own behavior related to safety on the farm in the last 6 months?		Yes 58 (16%) No 311 (84%)	Yes 92 (28%) No 234 (72%)	
B	When doing farm tasks did you use a seatbelt on a tractor before/since the camp?		Before: Yes 47 (14%) No 281 (86%) Since: Yes 65 (20%) No 255 (80%)		
B	When doing farm tasks did you use hearing protection before/since the camp?		Before: Yes 64 (19%) No 270 (81%) Since: Yes 101 (31%) No 225 (69%)		
B	When doing farm tasks did your remove keys from equipment before/since the camp?		Before: Yes 124 (37%) No 207 (63%) Since: Yes 154 (48%) No 169 (52%)		
B	Since the last survey have you repaired or replaced safety shields?		Yes 40 (11%) No 317 (89%)	Yes 31 (10%) No 294 (90%)	Yes 33 (33%) No 66 (67%)
B	Since the last survey have you installed roll bars on tractors?		Yes 10 (3%) No 346 (97%)	Yes 12 (4%) No 314 (96%)	Yes 9 (8%) No 102 (92%)

The percentage of parents requesting additional information about farm safety remained pretty constant over the course of the study, ranging between 3% and 10%. Compared to the earlier surveys at 6- and 12-months, those who responded at 18-months had a higher prevalence of indicating they had repaired/replaced safety shields and/or roll bars on tractors.

The McNemar test for matched data (a nonparametric analog to the paired ttest) was used to determine whether there have been any changes in the prevalence of parents' use of seatbelts, hearing protection and key removal (when not using equipment), when comparing the time before the camp to the time since (see the above table for rates before and since for each of these three safety behaviors).

The result was that for tractor seatbelt use, there was a significant increase in usage (from 14 to 20%) when comparing before to since the camp; for hearing protection, the change in the prevalence of use when comparing before to since the camp (from 19% to 31%) also was significant, as was the change in the prevalence of removing keys from machinery not in use (from 37% to 48%).

APPENDIX H

Quarterly Report Guides Provided to Chapter Leaders

QUARTERLY REPORT SUMMARY SHEET

Chapter Name _____

For quarter ended _____

Number of entries in logbook _____
(*Attach logbook sheets*)

Number of newspaper clippings collected _____
(*Attach clippings*)

Number of farm safety events held in community
other than FS4JK events (e.g. pesticide disposal day) _____
(*Complete and attach a "Community Farm Safety Event Record" for each event*)

Number of farm-related injuries to children in community _____
(*Complete and attach a "Child Injury Record" form for each injury reported*)

Number of calls/requests you or your chapter has
received for additional information on farm safety,
where to obtain such information, invitations to
present farm safety messages, etc. _____
(*These types of things should be recorded in your logbook*)

Presentations made by the chapter at local groups or gatherings _____
(*Attach programs or brief description of presentation*)

Communications from agencies your chapter had not had
prior contacts with _____
(*Attach list of agencies & nature of their contact*)

_____ _____
Chapter Leader Date

What Should I Include in My Quarterly Report?

Farm Safety Messages

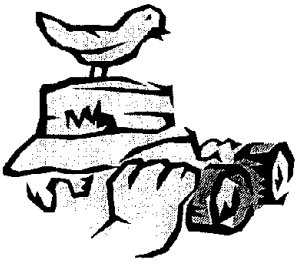
This could be a specific safety message like "One seat, one rider" or something general like "Farm Safety Week".

Look for these at banks and store marquees, flyers posted in stores, clips in a newspaper, etc. If a brochure, flyer, or newspaper ad, send copies with your quarterly reports.

Close Calls

Things you overhear at the grocery or other places while you're out:

"Jimmy fell off the wagon but didn't get hurt."



Invitations

Keep track of invitations your chapter receives from other organizations asking you to participate in various programs. (e.g., Lions' club, cooperative extension office, schools, Farm Bureau). Only include those who contact you; **do not** include contacts you initiate or solicit on your own.

Report the invitation even if you or your chapter did not attend.

REQUESTS FOR FARM SAFETY INFORMATION

Requests for specific farm safety information, websites of other farm safety organizations (FS4JK, John Deere, etc.). Such requests may be in the form of phone calls, e-mails, or written requests. It is not necessary to give every detail of the requests; we just need to know how many requests you/your chapter received and whether the person/organization making the request was a new contact.

Farm Injuries

Farm-related injuries you hear about from local newspapers, radio, or television. Key here is "local". Only track newspapers that are available to most people or families who attended your day camp. Do not use the internet unless you only search in locally-available newspapers.

If your information comes from a newspaper, clip the article and document the name of the newspaper and date the article appeared.

If the injury involves a child, complete the "Child Injury Record" form found in your training manual. Submit these forms along with your quarterly report.

LOCAL FARM SAFETY ACTIVITIES

Types of activities could include tractor safety sessions, pesticide training, farm safety day camps, farmers joining to help another farmer, etc. You may find out about such activities through local newspapers, radio, television, or local organization publications.

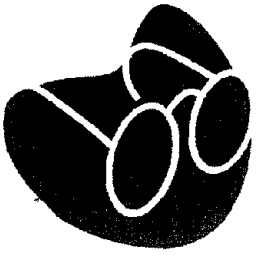
For each type of event, complete a "Community Event Record" form found in your training manual. If there is a newspaper clipping or publication which provides the needed information, you may simply attach that to the form and say "See Attached".

Look at the "Community Event Record" form carefully and make sure you tell us as much of the information requested as possible. If you don't know and are unable to find out, state that on the form.

OTHER

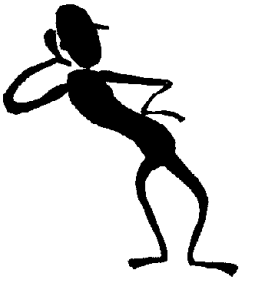
Anything you feel might influence safety on farms. For instance, ATV training or a new push from tractor dealers to retrofit tractors with ROPS.

Any reports or conversations from other station instructors, parents, etc. like "Jill wants a helmet now to ride her horse" or "I had a call the day after camp to trim trees on 3 farms for electrical lines."



Thanks for being our eyes and ears. We could not do this without YOU!

If you have any questions, please call us. We want to make this as easy as possible for you.
Our number: 859-257-9636



APPENDIX I

List of Presentations and Publications

EVALUATION OF FS4JK DAY CAMPS
Grant # 1 R01 OH07543-01
List of Presentations

Date	Title	Authors	Method of Presentation		Conference	Location	Comments
9/17/2002	Evaluation of FS4JK Day Camps	Reed	Oral Presentation	Invited	NIOSH Annual Review of Child Ag Injury Prevention Programs	Morgantown, WV	
9/25/2003	Evaluation of FS4JK Day Camps	Reed-Claunch	Oral Presentation	Invited	NIOSH Annual Review of Child Ag Injury Prevention Programs	Morgantown, WV	
10/23/2003	An Evaluation of Actual Instructional Practices at Just-For-Kids Safety Day Camps	Mazur-Cole-Reed	Oral Presentation	Peer Reviewed	Fifth International Symposium Future of Rural Peoples	Saskatoon, SK Canada	
10/23/2003	FS4JK Day Camps - Who Learns the Most?	Claunch-Reed-Rayens-Burgus-Slusher	Poster Discussion	Peer Reviewed	Fifth International Symposium Future of Rural Peoples	Saskatoon, SK Canada	
10/24/2003	Survey Research Lessons Learned from Children	Reed-Claunch-McCallum-Burgus-Slusher-Reynolds	Poster Discussion	Peer Reviewed	Fifth International Symposium Future of Rural Peoples	Saskatoon, SK Canada	
2/19/2004	Children's and Parental Response to an Educational Farm Safety Intervention	Popielarczyk-Reed-Claunch-Westneat	Student Poster	Peer Reviewed	Southern Nurses' Research Society National Conference	Louisville, KY	Honorable mention
3/12-3/13	Evaluating FS4JK Day Camps - Do They Work?	Claunch-Reed	Poster Display	Invited	FS4JK National Leadership Conference	Johnston, IA	
3/13/2004	The Game Plan: The Research Conncection	Reed	Oral Presentation	Invited	FS4JK National Leadership Conference	Johnston, IA	
3/13/2004	FS4JK Day Camps - Safety Teams Making a Difference	Claunch-Reed	Oral Presentation	Invited	FS4JK National Leadership Conference	Johnston, IA	
3/15/2004	Children, Parents and Communities: What can we expect? What have we learned?	Reed	Oral Presentation	Invited	Improving Agricultural Health and Safety Programs Through Evaluation Conference	Columbus, OH	
3/16/2004	Evaluating FS4JK Day Camps - Do They Work?	Claunch-Reed	Poster Presentation	Peer Reviewed	Improving Agricultural Health and Safety Programs Through Evaluation Conference	Columbus, OH	
6/21/2004	Pitfalls and Pearls of Conducting Research with Interagency and Volunteer-led Organizations	Reed-Claunch-Slusher-Burgus	Oral Presentation	Peer Reviewed	NIFS Conference	Keystone, CO	
6/23/2004	Evaluation of the Effects of Farm Safety Day Camps - Case Study	Reed	Oral Presentation Workshop	Invited	NIFS Conference	Keystone, CO	
7/22/2004	Evaluation of Community Based Farm Safety Education for Children	Reed-Claunch-Rayens-Slusher	Oral Presentation	Peer Reviewed	Sigma Theta Tau 15th International Nursing Research Congress	Dublin, Ireland	
7/27/2004	Farm Safety Day Camps - How Do Children Learn?	Claunch-Reed	Oral Presentation	Invited	International Seminar on Occupational Health & Safety in Agriculture	Dublin, Ireland	
9/17/2004	Evaluaton of FS4JK Farm Safety Day Camps	Reed	Oral Presentation	Invited	NIOSH Annual Review of Child Ag Injury Prevention Programs	Pittsburgh, PA	
9/17/2004	Evaluation of Community Based Farm Safety Education for Children	Reed-Claunch-Rayens-Slusher	Oral Presentation	Invited	UK College of Nursing Research Symposium	Lexington, KY	
2/3/2005	Farm Exposure, Work Practices, and Perceived Danger (Children/Parents)	Amshoff-Popielarczyk	Student Poster	Peer Reviewed	SNRS	Atlanta, GA	

EVALUATION OF FS4JK DAY CAMPS
Grant # 1 R01 OH07543-01

List of Publications

Instructional Practices at Farm Safety 4 Just Kids (FS4JK) Safety Day Camps
Mazur JM, Cole HP, Reed DB, Claunch DT: [2005]. Journal of Safety and Health 11(2): 257-264.

Characteristics of Instructors at Farm Safety 4 Just Kids Day Camps
Reed DB, Claunch DT, Cole HP, Mazur JM: [in press]. Health Education Journal.