

Farm equipment on public roadways pose a hazard to not only the operator but also the rural driving population. Between 1994-97, there were 430 fatal motor vehicle crashes (MVC) involving farm equipment on US roadways. California, Wisconsin, Kentucky, Texas, Indiana, and Minnesota lead the nation in number of fatal MVCs involving farm equipment.

Based on the number of farms in each of these states, the leading states were California, Indiana, and Wisconsin. Rates per 10,000 rural roadway miles were 30.7 for California, 21.32 for Wisconsin, and 20.91 for Indiana. Based on the number of wheeled tractors per farm, the leading states were California, Texas, and Kentucky. Kentucky had the most incidents per 1,000,000 licensed drivers with 7.95; Minnesota had 6.97/1,000,000; and Indiana 5.03/1,000,000.

From the 430 fatal MVCs, 281 cases involved farm equipment vs a motor vehicle in transport. In 51.6% of these cases, the farm equipment driver was not injured. 30.6% of the farm equipment drivers were killed. This suggests the driver and passengers of a motor vehicle in such an incident are in danger of losing their lives. Over half of these incidents involved a motor vehicle rear-ending the farm equipment. Interventions must focus on all rural drivers as well as farmers.

PS.23 *A Cost Model for Traumatic Injuries in Mining*—Sacks HK, Pana-Cryan R

A cost model for traumatic injuries in mining has been developed as a tool to assist in focusing injury prevention research. Assigning a relative cost to an injury event provides a useful method for ranking research projects. It also provides compelling evidence for employers and employees to invest in preventative measures. The starting point for the model is the Mine Health and Safety Administration's (MSHA) injury and illness database. The database provides information on the victim's age, occupation, injury severity and time lost from work. The model, based on a societal perspective, calculates lost earnings and non-market loss (also known as home production) as a proxy for lost production. It also calculates medical costs. Earnings are derived from union contract data and commercial wage surveys. Future earnings estimates are adjusted for the employment cost index, discount rate, and life cycle salary growth. Medical costs are based on the days lost from work and the degree of injury. Aggregated data from the National Council on Compensation Insurance (NCCI) detailed claims information reports were analyzed. The analysis showed that medical costs are linearly related to days lost and benefit class. The model assigns a cost to each lost time injury in the MSHA database.

PS.24 *Experiences of Widows Following a Farm-related Fatality*—Scheerer A, Brandt V

Farming families have been identified traditionally with a strong family bond resulting from both living and working

together. When a farming fatality occurs, surviving family members are left to deal with not only the tragedy of losing a loved one, but also the loss of a coworker. The stress confronting farming families may contribute to serious consequences for their business, their relationships with each other, and the mental health of the individual members. These issues were explored through in-depth personal interviews with farming widows in Kentucky.

Families who experienced a farming fatality were identified through the Kentucky Fatality Assessment and Control Evaluation (FACE) Project, a statewide surveillance system for occupational fatalities. Eligible candidates for interviews were families in which the death had occurred between one and five years prior to the interview (1994-1998). Interviews with seven widows were selected for analysis. NUDIST software was used to organize and code the data into meaningful themes and groups.

Similar themes were found among the respondents as they described the consequences of the fatality on their family and business. Economic issues were an underlying consideration in many aspects of their experience. Even though none of the widows lost their farm or home because of financial difficulties, they did make changes in the amount or type of commodities so that it was manageable without hiring outside help. To maintain income, it was necessary to continue with chores such as caring for livestock and tending to crops which left little time for personal bereavement. Respondents discussed the changes in their farm and family, their coping mechanisms and support systems. In developing resources for families in similar circumstances, it is important to understand how intertwined their lives are with the farm environment and economics of the business.

PS.25 *Injuries Relating to Tobacco Farming in Kentucky*—Struttman TW, Caudill D, Reed DK

Agriculture is one of the most hazardous occupations in the United States. Although the investigation of agricultural injuries by segmenting a particular commodity is not new, none have concentrated on tobacco production. In 1997, tobacco production in the U.S. was reported at 1,747,702,321 lbs. Kentucky produced 30.4% of this on over half its 82,273 farms.

Tobacco farming is labor intensive, involving several phases of production, each exposing the farmer and farm family to different modes of injury. In two agricultural regions, 2,911 agricultural injury cases were identified through emergency departments between 1992 and 1999. Of these cases, 703 were related to tobacco production.

Analysis of the tobacco injuries shows the median age was 31 years. More than half of the injuries occurred in August and September. Falls were the leading cause of injury,



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ABSTRACTS

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