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## Development of an Educational YouTube Channel: A Collaboration Between U.S. Agricultural Safety and Health Centers

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### Abstract

**Objectives**—The National Institute for Occupational Safety and Health (NIOSH) Agriculture, Forestry and Fishing Centers (AFF Centers) collaborated to initiate a joint YouTube channel in order to raise awareness of agricultural, forestry and fishing occupational hazards; provide information to prevent AFF injuries and illnesses; increase the visibility and influence of the AFF Centers; and establish a collaborative model that can be replicated by other organizations.

**Methods**—The collaborators sought to produce a structured channel with high scientific standards. Policies, procedures, and a standard review process were established. Representatives from the AFF Centers coordinated the review process and the procedures by which videos were uploaded to the site. A marketing plan was created including a press release and ideas to promote new videos. Promotions are targeted to agricultural cooperative extension agents, educators, producers, owners, operators, first responders, families and community organizations. Viewership was tracked using YouTube metrics.

**Results**—The site launched in November 2013. Over a six-year period the channel grew from 48 videos to 125 videos with over 10,500 cumulative watch time hours. The channel is promoted by the AFF Centers through email, social media, conference presentations and outreach exhibits. The channel is also publicized during coordinated national outreach events.

**Conclusion**—Each AFF Center benefitted from increased exposure of their content and the collaboration provided an opportunity to achieve labor efficiencies. YouTube metrics demonstrated that coordinated marketing increases views, watch time and subscriptions. In addition, the success of the channel communicates the benefits to collaboration among organizations with common missions.

## Keywords

YouTube; Social Media; Collaboration; NIOSH; Agricultural Safety and Health; Training

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## Introduction

The National Institute for Occupational Safety and Health (NIOSH) Agriculture, Forestry and Fishing Centers (AFF Centers) were established as part of the Centers for Disease Control and Prevention (CDC)/NIOSH Agricultural Safety and Health Initiative in 1990. The initiative established a network of centers, funded on a competitive basis every 5 years, to reduce work-related injuries, illnesses and deaths among agricultural workers, as well as farm family members (CDC/NIOSH, 2014). Farming, fishing and forestry are the most dangerous occupations in the U.S. In 2018, the injury and illness rate in the AFF sector was the highest among all occupations. Fatalities among farmers are 7 times higher than in other occupations, 22 times higher among fisherman and 28 times higher among loggers (BLS, 2018). Estimates of the economic cost of work-related fatalities, injuries and illnesses reached as high as \$2.2 trillion in the U.S. from 2007 to 2015 (Felknor, et al. 2019).

Each AFF Center serves a multi-state region and has its own portfolio of research projects and outreach programs that address emerging and persistent issues (CDC/NIOSH, 2014). Although worker populations and agriculture commodities vary in different regions of the country, areas of overlap in agricultural safety and health research and outreach exist across the Centers. In 2013, a collaboration between nine AFF Centers and the National Children's Center for Rural and Agricultural Health and Safety began with a goal of establishing 21<sup>st</sup> century outreach and training solutions. The concept of developing an AFF Centers' YouTube Channel was born out of this collaboration.

YouTube was developed by three PayPal employees in May 2005. This social media platform immediately became popular with over 1 million views by November 2005 (Allocca, 2018). In 2006, Google acquired YouTube and has managed the tools and resources since that time. Over 500 videos are uploaded to YouTube every minute and the site logs approximately 1 billion viewers each day (Statistica, 2019 August). Statistica also reports that in 2019, 58% of adults over age 56 and 81% of those aged 15–25 used YouTube over a quarterly reporting period that year, outstripping Facebook as the social media platform of choice. The videos were primarily used to acquire informative content (Statistica, 2019 July). Four features that have led to the popularity of YouTube include: 1) It is free; no payment for any content is required, 2) The platform easily uploads user-generated content, 3) As a social network of users and content, the platform creates opportunities for Communities of Practice to evolve and 4) It has structures that support branding such as channels that customize and index content to developers and users (Tan, 2013).

Providing educational opportunities and training to agriculture, forestry and fishing workers and their stakeholders, who often live in rural and remote locations, can be problematic due to factors including distance and time constraints. Research in the U.S. found that YouTube

is accessed by 79% of those in rural regions (Statista, 2019 March), making YouTube an effective means of reaching this target population.

As a social media platform, YouTube can be considered useful for both formal and informal learning (Greenhow & Lewin, 2015). Formal learning is characterized through location and form of instruction and is generally defined as that instruction that occurs in more institutionalized educational settings such as schools, universities, training centers or industrial programs. Informal learning typically occurs as a learner explores a need independently, seeking out resources and considering information on an ‘as needed’ basis. Farmers often seek out resources in informal settings as well as attending formal trainings provided by cooperative extension or insurance companies (Burgus and Duysen, 2017). Providing resources that can be used in both settings extends reach and engages audiences in communities of practice and dialogue.

Research on the effectiveness of learning using video content is extensive (Kay, 2012; Allen and Smith, 2012; Lloyd and Robertson, 2012; Rackaway, 2012; Hsin and Cigas, 2013). It has been found that multi-modal content is engaging, memorable and can build background knowledge on a topic and often improves learning regardless of education or literacy level and improves outcomes for those for whom English is not their first language. Importantly, research from deKoning et al. (2009) noted that video and animation improve learners’ ability to retain and transfer new knowledge to novel situations (Mayer, 2008).

The rationale for the AFF Centers’ collaborative to create a YouTube channel, targeting agriculture, forestry and fishing workers and stakeholders, was that it would provide a convenient and cost-effective online environment to disseminate quality health and safety video content with the likelihood of widespread dissemination. Many of the AFF Centers had already created safety and health videos and were hosting them on their websites or a YouTube channel. This collaborative project offered the opportunity to house all these videos on one site and support an aggregated dataset to track the cross-center use of their AFF health and safety resources.

This paper discusses the collaborative process of building a unified YouTube channel to address the ongoing need to provide safety information and training to agricultural populations throughout the regions served by the AFF Centers.

## Methods

### The Committee

In 2013, a committee was formed with representation from the AFF Centers and from the National Children’s Center for Rural and Agricultural Health and Safety, with the intent of establishing a joint NIOSH AFF Centers’ YouTube channel. This working group sought to produce a structured channel with high scientific standards. November 2013 was set as the launch date and monthly conference calls were held to monitor progress.

The committee employed a design and development process aligned with best practices comprised of multiple phases of web product design as shown in Figure 1.

## Channel Objectives

The AFF Centers' YouTube channel was developed with four main objectives: (1) raise awareness of agricultural, forestry and fishing occupational hazards; (2) provide information to prevent AFF injuries and illnesses; (3) increase the visibility and sphere of influence of the AFF Centers nationally and internationally; and (4) establish a model of collaborative work that can be replicated by other organizations. The target audiences for the channel were identified as agriculture, forestry, logging and commercial fishing producers, educators and stakeholders.

## Guidelines

Guidelines were drafted that outlined the channel's structure, including a policies and procedures document, a video submission form with instructions, video review rubric, and a list of potential reviewers including their areas of expertise. A requirement was set that videos must be produced with funds from a NIOSH AFF Center either directly through Center efforts or through Center-sponsored activities by researchers or community partners.

## Submission and Review

In order to ensure high scientific standards and video integrity, a formal submission and review process was established. The process described in Figure 2 was used for videos populated on the channel at the time of launch and for videos submitted after the initial launch.

## Uploading and Maintaining the Channel

The committee found that it is essential to have a designated point person to manage video file upload and maintenance. This ensures consistent quality and proper surveillance of the channel.

Once the video file is reviewed and approved for upload, the video is then uploaded to the YouTube channel. Information from the submission form, such as keywords, video description and affiliations, is transferred to the upload page. Once a video is uploaded, an email is sent to the submitter for final review.

Channel maintenance includes performing updates to videos as requested by the AFF Center that submitted the video, monitoring the comments on videos and sending requests for response to the producer of the video, and updating the channel as required by the YouTube administrators.

A bi-monthly meeting is held with the YouTube AFF collaborative group to discuss concerns with the channel, upcoming promotional events, and methods of improving marketing and video dissemination.

Playlists were created by the site administrator to assist viewers with locating all the AFF Center videos on a specific topic. Playlist topics, as of August 2019, included: injury prevention, 4H, ergonomics, AFF Centers' promotional videos, zoonotic disease, roadway safety, ATVs, agritourism, dairy safety, forestry and logging, needlestick prevention, Right

from the Start safety series, fluorescent tracer video series, hearing protection, ladder safety, heat illness, pesticide safety, grain safety, tractor and machinery safety, child development, livestock safety and respiratory protection.

### **YouTube Channel Metrics.**

The YouTube platform provides analytic tools that gather a variety of metrics that channel administrators use to track viewer activity. Metrics include watch time reports including number of views, audience retention, demographics, playback location, traffic sources, and devices used for access. In addition, interactive metrics are reported including the number of subscribers, likes and dislikes, comments and number of shares.

Administrators can customize the time frame to evaluate views during an event or assess use over the lifetime of the channel. A committee member is charged with reporting channel metrics to AFF Center colleagues during the bi-monthly meeting. YouTube channel metrics, drawn from the platform's analytics section, are reported below in the Results section.

### **Promotion of the Channel and Individual Videos**

Following the official launch of the channel in November 2013, the appearance of the channel was enhanced through the addition of images and a custom logo.

As the channel was developed, a marketing plan was created including a standardized press release and ideas to promote new videos. The channel is promoted by the AFF Centers through email, social media, conference presentations and outreach exhibits. Promotions are targeted to agricultural cooperative extension agents, educators, producers, owners, operators, first responders, families and community organizations. The channel is also publicized during coordinated national outreach events such as Ag Safety Awareness Program Week and National Farm Safety and Health Week. During each of these events, the NIOSH AFF Centers work with stakeholder organizations to develop promotional tool kits. The tool kits include links to the U.S. Ag Centers' YouTube videos with appropriate messaging.

### **Evaluation of End-user and Satisfaction**

A satisfaction survey was placed as a pop-up poll on the channel's main page from January 2017 through February 2020. Viewers coming directly to the channel were invited to take a four-question survey. Questions asked about the participant's occupation, satisfaction with accessed videos, whether the respondent would recommend the channel and an open field question that asked if they had recommendations for improvements to the channel.

## **Results**

U.S. Agricultural Safety and Health Centers YouTube Channel URL: [https://www.youtube.com/channel/UCRgk3ryTcY8Wcvvv\\_ulZgmA](https://www.youtube.com/channel/UCRgk3ryTcY8Wcvvv_ulZgmA)

## Audience

U.S. Agricultural Centers' YouTube Channel viewers are majority male (82.7%) with most viewers falling in the 25–34-year-old age category. Comparing data in the 3<sup>rd</sup> quarter of 2019 with data from U.S. overall viewership, YouTube Channel viewership was 88.2% male compared to the overall U.S. viewership which was 50.4% male, with U.S. overall viewership having a more even distribution among the age categories (Table 1).

## Videos

From the inception of the U.S. Agricultural Safety and Health Centers' YouTube channel in 2013 through August 26, 2019, 125 videos were added to the site. These videos were viewed a cumulative 221,384 times with a total watch time hours of 10,509, accruing 1,064 subscribers. Channel analytics, by year, with percent change per year are shown in Table 2.

Spanish language videos make up 23% of the channel's videos (n=39) and K'iche language dairy safety videos make up 6% (n=7).

The 30 videos with the most watch time hours as of August 2019 are shown in Table 3. Data on the total number of views, average view duration and length of time that the video has been on the channel are also shown in Table 3.

## Promotion of Videos

Promotional efforts associated with national awareness events proved to be a successful method for driving traffic to the channel. An increase in hours watched during these events was reflected in the channel metrics (Figure 3).

## Evaluation of End-user and Satisfaction

Eighty satisfaction surveys were collected. Industry groups with the most representation were agribusiness, agriculture production, K-12 education, and cooperative extension. Satisfaction with the YouTube channel was high with over 96% of users surveyed saying they would recommend the channel to others. Ninety percent of users reported being able to find the information they were looking for.

The majority of responders (76%) did not have any suggestions for improvement to the channel. There were a few requests for videos on specific topics including: endotoxin exposure, roadway safety, animal handling, equipment hazards, accident/injury prevention, direct and indirect costs of injuries/illnesses to the farm operation, and safety measures when using old equipment. Several respondents expressed a desire to use videos for training and safety meetings and a need for videos in Spanish language. A final group of suggestions were for audience-specific videos for firefighters and other farm visitors who may not have knowledge of the hazards present on an agricultural operation.

## Discussion

The development of the U.S. Agricultural Centers' YouTube Channel provided opportunities for collaboration and synergy among the NIOSH AFF Centers across regions serving

various agricultural operations and industry sectors. This national collaboration was made easier and more cost effective in the last decade by advances in availability of remote connections, technology and social media platforms. Importantly, digital video content provides a much-needed resource to reach at-risk farmers, fishers and loggers with clear information on safe and healthy farm practices and address the burden of high injury and fatality rates in agriculture, fishing and forestry.

Over a six-year period the channel grew from 48 videos to 125 videos with over 10,500 cumulative watch time hours. In depth analysis of the channel's reach, video use and additional viewer demographics will be reported in upcoming publications.

Males between 25–34 years old are overwhelmingly the largest group of viewers on the AFF Centers' channel. This age-demographic aligns with that reported for the YouTube audience worldwide. The largely male viewership of the AFF Center channel (82.7% male) is in contrast to Pew Research in 2019 that indicated YouTube viewership is equally split between males and females (<https://www.pewresearch.org/internet/fact-sheet/social-media/>). This discrepancy is likely reflective of the larger number of males working in agriculture (NASS, 2017). [https://www.nass.usda.gov/Publications/Highlights/2019/2017Census\\_Female\\_Producers.pdf](https://www.nass.usda.gov/Publications/Highlights/2019/2017Census_Female_Producers.pdf)

YouTube video views, as shown in Table 2, reflect how many times a video link has been clicked. Views can be an important measure of a video's overall popularity but perhaps a more important metric is the watch time hours as it is reflective of viewer engagement. While the number of views on the AFF Centers' channel year grew substantially from 2014 – 2017, this number leveled off from 2017–2019. In contrast the watch time hours continued to increase when compared to the previous year. These data suggest that the videos on the AFF Centers' channel are engaging viewers longer, but with a static number of views. Improvements in marketing the channel and promoting new videos could improve both of these metrics.

YouTube subscribers are individuals who choose to follow a channel and content so that they can stay updated with the latest videos. The addition of new AFF channel subscribers each year has ranged from a high of 273 in 2017–2018, to a low of 83 in 2014–2015. Subscriptions keep the target audience aware of new safety and health videos being added and serve as a reminder to use the resource.

The addition of new videos to the channel has decreased significantly since the initial launch of the channel in 2013–2015. This is indicative of the Centers adding their pre-existing videos at the onset and then having to produce new videos, which can be a time-consuming and costly endeavor. To continue to have a valuable channel, new subscribers must be recruited, and new videos need to be created and effectively marketed.

In order to provide agricultural safety and health information to non-English speaking agricultural communities, AFF Centers added Spanish and K'iche language videos to the AFF Centers' channel. Eight of the top 30 videos, ranked by watch time hours, are Spanish language videos (Table 3), demonstrating the need to provide educational resources and



training in Spanish. Additional non-English language videos are continually sought from the AFF Centers.

Many of AFF Centers' YouTube channel videos are used during formal worker trainings including: grain bin entry, EPA pesticide training (English and Spanish), and dairy working training (English and Spanish), likely accounting for these videos having consistently high watch time hours (Table 3). When used for trainings it is likely that videos are watched to completion, examples are the Spanish language pesticide safety videos that has an average watch time of 9:29 min, significantly higher than the median watch time of videos (excluding gaming videos) of that length of 5:20 minutes. (<https://www.pewresearch.org/fact-tank/2019/12/04/10-facts-about-americans-and-youtube/>) On the YouTube platform, success breeds success. YouTube will place videos with high watch time hours into the thumbnail feed that appear as "suggested videos" on a viewer's screen. YouTube users in the U.S. (81%) said in a 2018 Pew Research survey that they at least occasionally watch the videos suggested by the platform's recommendation algorithm.

(<https://www.pewresearch.org/internet/2018/11/07/many-turn-to-youtube-for-childrens-content-news-how-to-lessons/>)

Regardless of the popularity of any online social platform, access to the internet and broadband service, especially in rural areas where agricultural operations and farmers are located, remains a concern. However, while there still exists a digital divide between urban/suburban residents and their rural counterparts, that gap is narrowing. From 2002 to 2018 internet use in rural communities has grown from 42% to 78%; home broadband has risen from 2% in 2001 to 63% in 2019 (Pew Research Center Survey on Internet Use, 2018). Regardless of on-farm access or type of service, many agencies that provide frequent contact, support and training for farmers such as agricultural cooperative extension and Departments of Agriculture have high speed access and are often consumers of YouTube content for training and information that can be used during face to face farm visits or cooperative extension office training. Additionally, YouTube content can be downloaded and re-used as needed.

Promoting and marketing the AFF Centers' YouTube channel is an ongoing process. Using links to the videos on social media and in educational flyers during national agricultural safety and health initiatives has shown to be a successful way of bringing viewers to the channel (Figure 3). Providing educators, trainers and safety professionals with these resources will further increase viewership and reach of this channel. The pop-up survey that was conducted over a two-year period demonstrated satisfaction with the channel and valuable recommendations for future videos.

## Conclusion

Although the development of a YouTube Channel may not be novel, a national systematic collaboration to centralize agricultural health and safety video content proved to be an innovative strategy for disseminating quality educational resources. Each AFF Center benefitted from increased exposure of their content and the collaboration provided an



opportunity to achieve labor efficiencies. The centers also took advantage of the free metrics provided by YouTube to monitor and evaluate usage over time and during targeted activities, e.g., promotional campaigns. The metrics demonstrated that coordinated marketing increases views, watch time and subscriptions. In addition, the success of the channel communicates the benefits to collaboration among organizations with comparable goals.

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- Northeast Center for Occupational Health and Safety (Bassett Healthcare)
- High Plains Intermountain Center for Agricultural Health and Safety (Colorado State University)
- National Children's Center for Rural and Agricultural Health and Safety (National Farm Medicine Center)
- Western Center for Agricultural Health and Safety (University of California, Davis)
- Southeastern Coastal Center for Agricultural Health and Safety (University of Florida)
- Great Plains Center for Agricultural Health (University of Iowa)
- Southeast Center for Agricultural Health and Injury Prevention (University of Kentucky)
- Upper Midwest Agricultural Safety and Health Center (University of Minnesota)
- Central States Center for Agricultural Safety and Health (University of Nebraska Medical Center)
- Southwest Center for Agricultural Health, Injury Prevention and Education (University of Texas Health Science Center at Tyler)
- Pacific Northwest Agricultural Safety and Health Center (University of Washington)

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## Appendix 1:: YouTube Video Submission Form

Complete this form to submit a video for consideration in the "[U.S. Agricultural Health and Safety Centers](#)" YouTube channel. After submitting the information on this form, external reviewer(s) will be assigned to review the video to ensure that is appropriate for the channel. The information provided on this form will be used to create the description of the YouTube video and will also be given to the reviewers for their reference.

### INSTRUCTIONS:

1. Upload the video to the Ag Centers' share drive by going to (AFF Center URL)  
Click on the red up arrow in the top left corner to upload.
2. Complete the information below and send this form to email of administrator.

1. **Your name:** Click here to enter text.
2. **Center Name:** Click here to enter text.
3. **Title of video (Limit to 100 characters or less):** Click here to enter text.
4. **Video file name (if different than title):** Click here to enter text.
5. **Length of video:** Click here to enter text.
6. **Date Produced:** Click here to enter text.
7. **Key words:** Click here to enter text.

Be sure to include the names of presenters, the target audience, and any other information you think is important.

8. **Description of video (limit to 5000 characters or less):** Click here to enter text.
9. **General purpose and target audience?** Click here to enter text.
10. **Select the theme(s) of the video** (check all that apply):
  - Respiratory Protection
  - Livestock Safety
  - Tractor and Machinery Safety
  - Child Development
  - Emergency Response
  - Grain Safety
  - Pesticide Safety
  - Heat Illness Prevention
  - Ladder Safety
  - Hearing Protection
  - Other, please describe:

11. **Language(s):** Click here to enter text.

If the video is provided in multiple languages, a separate video submission checklist will need to be included in the language of the video. For example, if you are including a Spanish video, the description of the video needs to be written in Spanish.

12. **Producers and Partnering Organizations, including grant numbers if applicable:**

Click here to enter text.

13. **Is this part of a video series?** If so, please list the other videos in the series and their length.

Click here to enter text.

14. Would you like comments  enabled or  disabled for this YouTube video?

15. The following disclaimer will be used in the description on the video, unless you would like to modify it.

“This video is provided for informational and educational purposes only. The video contents are solely the responsibility of the authors and do not necessarily represent the views of CDC/NIOSH or any other funders. “

- No modifications needed
- Yes, I would like to modify it as follows: Click here to enter text.

16. **Do you have a custom thumbnail for this video? If so, please write the timestamp of the desired thumbnail.**

- Yes, please use the thumbnail at:
- No, please select a thumbnail for me.

17. Provide additional comments or additional remarks here.

Click here to enter text.

## Appendix 2.: U.S. Ag Centers YouTube Review

The primary purpose of this review is to assess the quality of video content submitted for potential upload to the U.S. Agricultural Health and Safety Centers’ YouTube channel, <http://www.youtube.com/usagcenters>. YouTube is reportedly the third most-visited site on the Internet after Google and Facebook and claims nearly 800 million unique users a month. We appreciate your generous help in providing quality assurance for the U.S. Agricultural Health and Safety Centers’ channel.

Reviewers’ names are only used by the YouTube channel administrators in order to clarify any comments or concerns. The identity of the reviewers will remain anonymous to the video producers.

### 1. 1. Your information:

1a. Your name:

1b. Your email:

1c. Area of expertise:

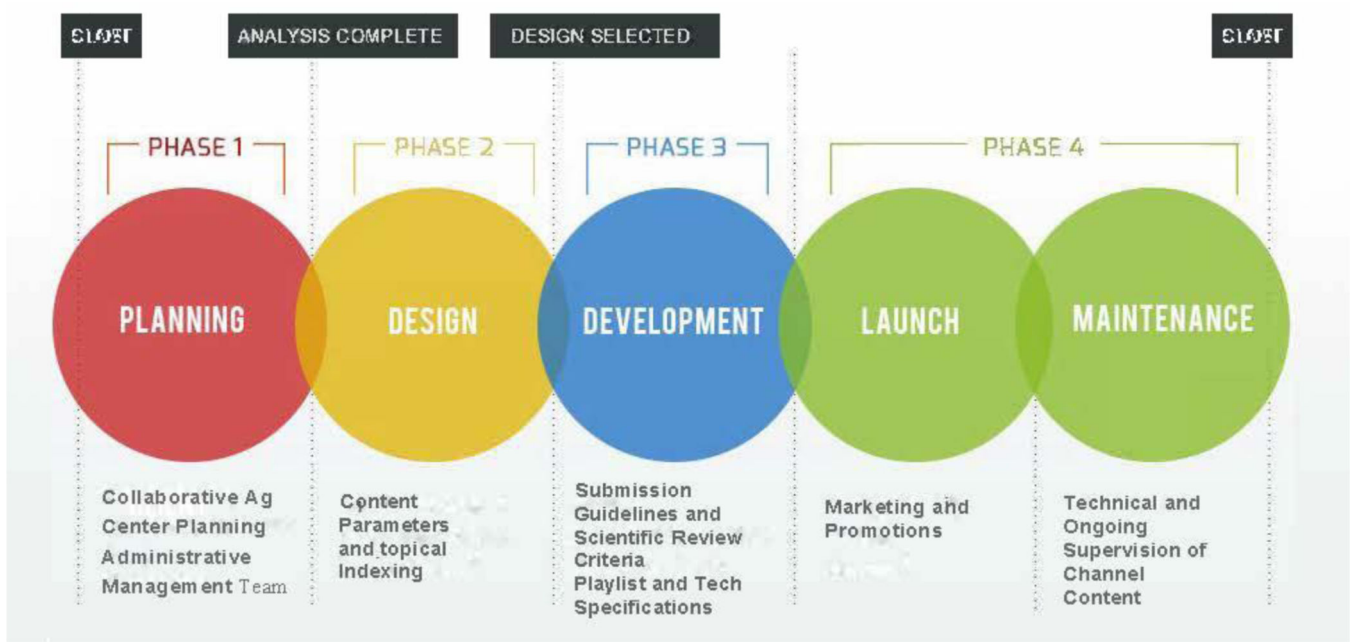
1d. Title of video you are reviewing:

2. **Is the video relevant to persistent and/or emerging issues in agricultural, forestry, and/or commercial fishing?** (Yes/No)
3. **To the best of your knowledge, is the content accurate?** (Yes/No)
  - 3a. Cite specific concerns about the accuracy of the video content (either claims made in the video or visual imagery used). Please note the time-stamp at which problematic content appear.
4. **Is the video content timely/current?** (Yes/No)
  - 4a. Comments/concerns:
5. **Does the video have a professional appearance?** (Yes/No)
  - 5a. If “no”, does the amateur appearance detract from its credibility or perhaps enhance it? For example, an FFA student’s interview with a farmer who was injured while working might be compelling and informative for other young people.
6. **Does the video promote a positive public perception of the U.S. Ag Centers?** (Yes/No/Neutral)
  - 6a. Comments/Concerns:
7. **If produced with NIOSH funds (see Submission Form), does the video promote a positive public perception of NIOSH?** (Yes/No/Neutral/Not produced with NIOSH funds/Other)
  - 7a. Comments/Concerns:
8. **Is the video politically appropriate? (Videos should not be used as lobby tools.)** (Yes/No)
  - 8a. Comments/Concerns:
9. **Do you recommend this video for inclusion on the U.S. Ag Centers’ YouTube channel in its current form?** (Yes/No)
  - 9a. Comments/Concerns:
10. Do you have any additional comments or concerns related to this video?

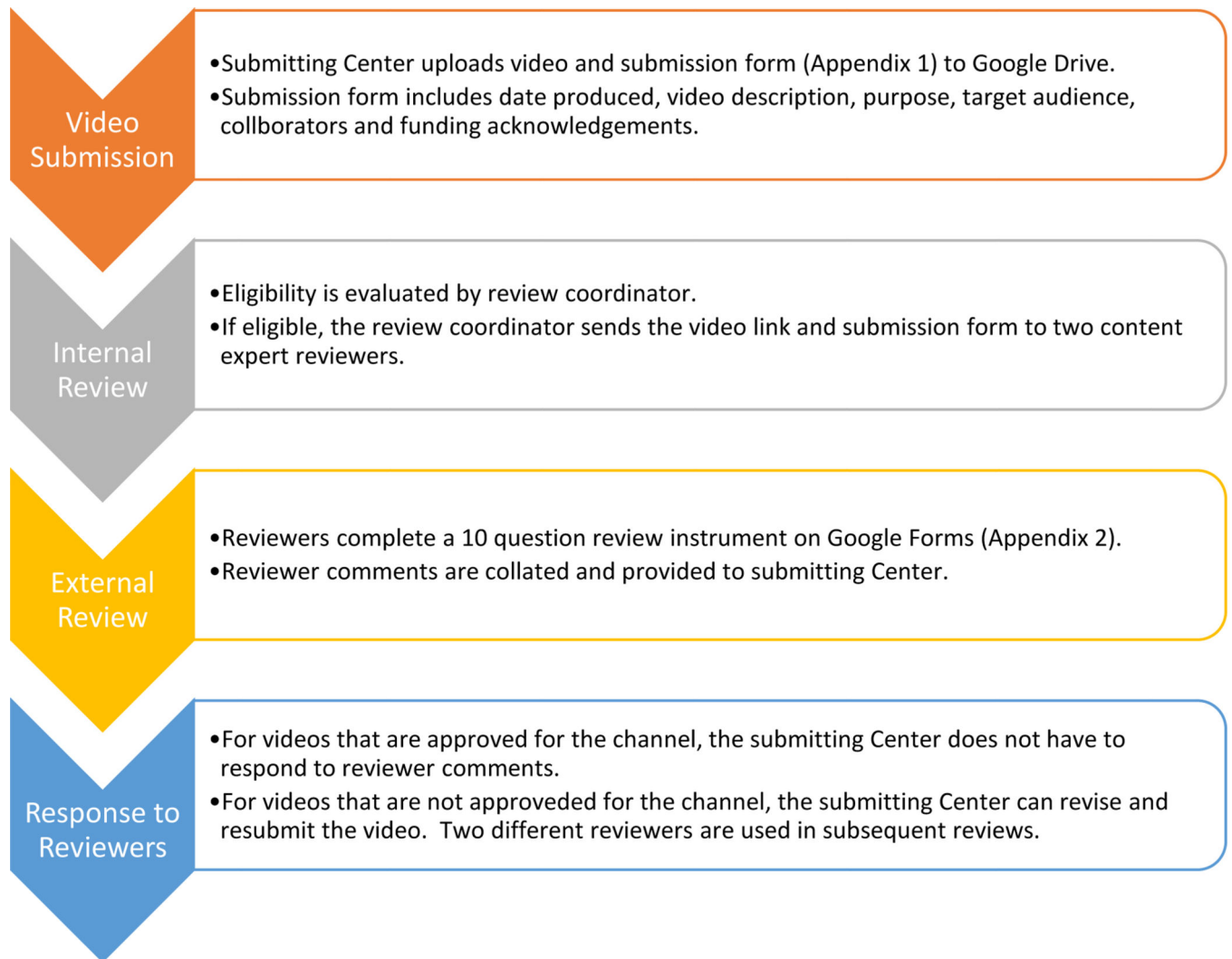
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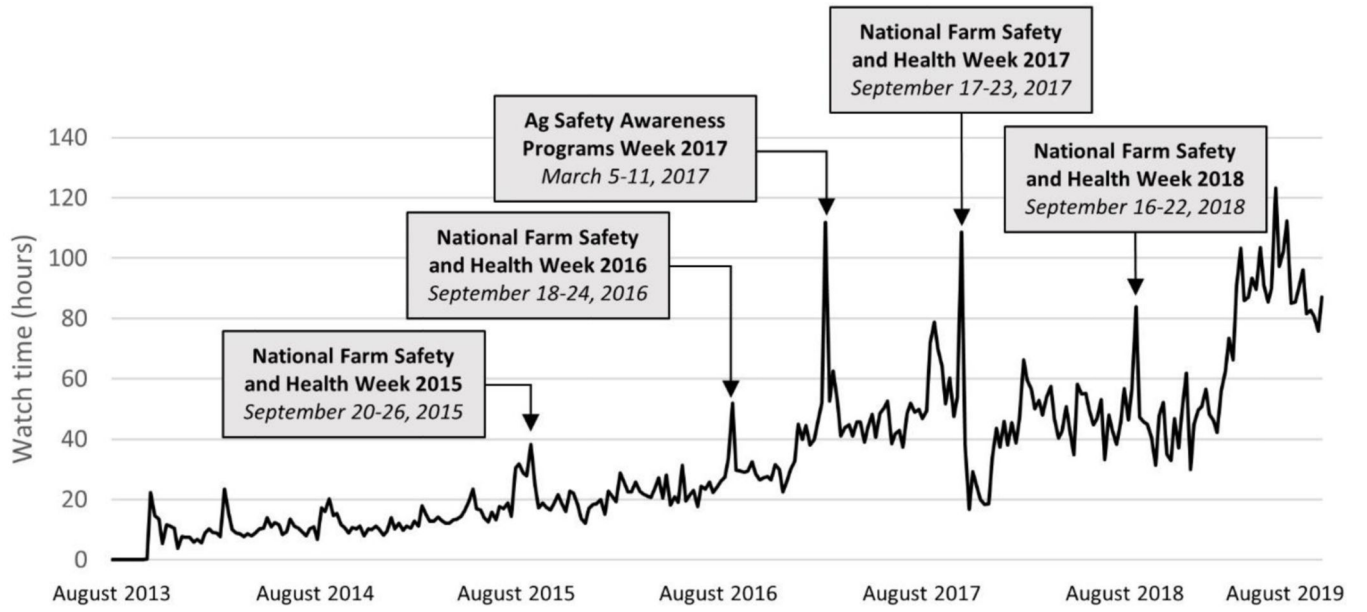


**Figure 1.** Phases of Web Product Design with Indicators from YouTube Channel Development. (Felke-Morris, 2014; Entero, 2019)



**Figure 2.**  
YouTube Video Submission and Review Process.





**Figure 3.** U.S. Agricultural Center YouTube Videos. Watch Time Hours by Date. Arrows correspond to national agricultural safety and health promotions.

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**Table 1.**

Comparison of U.S. Agricultural Center YouTube Channel Viewership compared to Overall U.S. Viewership (3<sup>rd</sup> Quarter 2019)

U.S Ag Center YouTube Channel			U.S YouTube – General Viewership <sup>1</sup>		
	Male %	Female %		Male %	Female %
<b>Total</b>	88.2%	11.8%		50.4	49.7
<b>Age</b>	Male	Female	<b>Age</b>	Male and Female	
<b>18–24</b>	4.4	2.8	<b>15–25</b>	23.3	-
<b>25–34</b>	39.8	7.7	<b>26–35</b>	20.4	-
<b>35–44</b>	29.0	6.5	<b>36–45</b>	19.3	-
<b>45–54</b>	5.5	1.0	<b>46–55</b>	19.0	-
<b>55+</b>	1.3	1.9	<b>56+</b>	17.0	-

<sup>1</sup>Date source - <https://www.statista.com/statistics/296227/us-youtube-reach-age-gender/>

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**Table 2.**

Year to Year Analytics - U.S. Agricultural Center YouTube Channel August 2013 – August 2019

Year	Views	Change <sup>*#</sup> %	Watch Time Hrs	Change <sup>*</sup> %	Subscribers Added	Change <sup>*#</sup> %	Videos Added	Change <sup>*#</sup> %
<b>2013–2014</b>	12,371	-	432	-	175	-	48	-
<b>2014–2015</b>	18,392	49	708	64	83	(53)	31	(35)
<b>2015–2016</b>	33,544	82	1160	64	139	67	11	(65)
<b>2016–2017</b>	56,677	69	2136	84	196	41	16	33
<b>2017–2018</b>	49,884	(12)	2481	16	273	39	11	(31)
<b>2018–2019</b>	50,516	1	3592	45	198	(27)	8	(27)
<b>Total</b>	<b>221,384</b>	-	<b>10,509</b>	-	<b>1064</b>	-	<b>125</b>	-

\* Percent change from previous year. Data collection beginning August 26, 2013 through August 26, 2019.

# Parentheses indicate percent reduction from previous year.

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**Table 3.**

Top 30 videos with the highest number of watch time hours from August 2013 – August 2019.

Video Title	Watch time (hours)	Views	Average View Duration	Time on Channel (months)
Following Grain Bin Entry Procedures Saves Lives	1894	66138	1:40	70
EPA Pesticide Safety (Spanish)	1794	11345	9:29	32
How to Use a Chainsaw Safely - Part 1	1111	8581	7:46	44
EPA Pesticide Safety (English)	659	6153	6:25	32
Gen. & Outside Worker Safety (Dairy Part II, Sec 1)	513	6965	4:25	70
Dairy Animal Care (Safety Training Part I, Sec 1)	474	8794	3:14	68
How to Use a Chainsaw Safely - Part 2	464	3262	8:32	44
Fatal Tractor Rollover	212	6839	1:51	60
Milking Barn Safety (Safety Training Part I, Sec 2)	197	5352	2:12	68
Feeder Safety (Dairy Safety Training Part II, Sect 3)	185	4182	2:38	69
Milker & Calf Care Safety (Training Part II, Sec 2)	172	2555	4:02	60
Livestock Safety for Kids	170	2863	3:34	70
Entrenamiento de Seguridad de Lechería Seguridad general en la lechería y la del cuidador de v	166	1380	7:13	56
Entrenamiento de Seguridad de Lechería 2.3 - Seguridad del alimentador de vacas con cre	164	2168	4:31	54
Entrenamiento de Seguridad de Lechería 1.1 - El Cuidado de los Animales en los corrales	156	1941	4:49	54
Right from the Start - Safety Basics	122	3222	2:16	67
Right from the Start - Dairy Cows Part 1	104	2591	2:23	66
ROPS Program for Wisconsin Tractors	99	3383	1:44	67
Entrenamiento de Seguridad de Lechería 1.2 - Seguridad en la Sala de Orden	91	1718	3:10	54
Feeding and Safety (Dairy Training Part I, Sec 3)	77	2334	1:59	69
Ag Respiratory Protection - Choosing the right mask	74	1850	2:24	69
Segunda Parte: Co	62	1891	1:58	42
Right from the Start - Beef Cattle	59	1127	3:09	61
Heat Illness 4 of 6: Fainting and Heat Stroke. Desmayo y golpe por calor.	58	1573	2:13	59
Riding Uphill, Downhill, Traversing, and Other Advanced Techniques on your ATV	54	1115	2:53	24
Control of Hazardous Energy for lockout/tag out	54	1894	1:41	32
Lawn Mower Fatality -- Economic and Social Costs	49	1167	2:31	70
Cuarta Parte: Co	45	1819	1:29	42
Right from the Start-Horses Part 1	45	736	3:40	68
Right from the Start-Dairy Cows Part 2	44	1142	2:17	66