

**Determining the Usefulness of Dairy Stockmanship Videos to  
School-Based Agricultural Educators**

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## **Introduction/Need for Research**

Agricultural and farm safety continues to be a major concern, especially for youth working on farms. In 2014, the National Children's Center for Rural and Agricultural Health and Safety (NCCRAHS) reported that one child (under the age of 18) dies every three days in an agricultural related incident and 33 children are injured on farms daily (2016). Although alarming, these numbers are much improved from the numbers reported in previous decades. Much of the decline can be credited to the work of organizations such as the Center for Disease Control and Prevention and National Institute for Occupational Safety and Health (Hard & Robinson, 2014). While agriculture continues to be one of the most dangerous occupations in the United States (UMASH, 2019), additional research and education efforts can prevent these numbers from rising.

Given that production agriculture courses are quite popular among school-based agricultural education (SBAE) students and that many youth engage in livestock related projects through FFA, it seems logical that instruction about agricultural and farm safety would take place in the SBAE classroom. However, relatively limited research has been conducted in this area. One study of Wisconsin SBAE teachers found that extension agents were the most often used resource on farm safety (Chapman, Schuler, Wilkinson, & Skjolaas, 1995). The study concluded more teaching must occur around hazard recognition and prevention and more resources and time were needed (Chapman et. al.). Another surveyed Texas SBAE teachers in their first two years of teaching; this study found that teachers received some training around general health and safety, but few were CPR or First Aid certified (Hubert, Ullrich, Murphy, & Lindner, 2001). Teachers identified videos and study guides as the most useful teaching tools (Hubert et. al.).

The Upper Midwest Agricultural Safety and Health Center (UMASH), a multidisciplinary collaboration of five leading research and health care institutions, recognizes the valuable role SBAE teachers play in educating the next generation of farmers (UMASH, 2019). If SBAE teachers incorporate occupational safety and health topics into the classroom, it will be possible to keep generations of farmers, farm families and workers safer and healthier (UMASH). As such, UMASH offers free agriculture safety and health resources to educators.

## **Methodology**

This segment of descriptive research was part of a larger study related agricultural and farm safety instruction in school-based agricultural education (SBAE). Particularly, this research sought to determine teacher interest in utilizing instructional videos related to dairy stockmanship and to identify additional curricular resources needed. This research is relevant to "Vibrant, Resilient Communities," given that farm safety largely affects small, rural communities. The target population for this study was all SBAE teachers in Region III of the National Association for Agricultural Educators (NAAE). This region includes the states of Illinois, Iowa, Minnesota, Nebraska, North Dakota, South Dakota and Wisconsin. A total of 1203 teachers were invited to participate in a survey distributed online using Qualtrics.

## Results/Findings

A total of 414 teachers accepted the invitation to complete the survey, although only 380 complete responses were recorded. This represented a nearly 32% response rate. Of the teachers who responded, 337 (88.9%) reported providing instruction regarding animal safety and were asked to review three short videos on dairy stockmanship. Table 1 highlights teachers' responses regarding the usefulness of the videos.

Table 1  
Usefulness of UMASH Dairy Stockmanship Videos

Video	n	Definitely Not <i>f</i>	Probably Not <i>f</i>	Uncertain <i>f</i>	Probably Yes <i>f</i>	Definitely Yes <i>f</i>
#1: Predictable Animal Behavior	325	3	20	31	166	105
#2: How a Cow Uses Her Senses	325	5	14	28	158	120
#3: Working with the Pressure Zone	321	4	20	29	162	106

A total of 83.4% of teachers indicated that video #1: Predictable Animal Behavior and video #3: Working with the Pressure Zone would probably or definitely be useful, with just over 86% and 87% of teachers, respectively, reporting interest in using the videos in their SBAE program. Similarly, 85.5% of teachers indicated that video #2: How a Cow Uses Her Senses would probably or definitely be useful. Nearly 90% of teachers indicated interest in using that video. The majority of teachers indicated that they would utilize the videos in an Animal Science course, although some teachers suggested they would be useful in other courses as well, including basic courses such as Exploratory courses or Intro to Ag. Others suggested it would be appropriate for more specialized courses such as Vet Science or Animal Management and Reproduction. When teachers were asked what additional resources would be beneficial to use in conjunction with the UMASH Dairy Stockmanship videos, the top three requests consistently were discussion prompts, a complete unit of instruction, and note taking guide.

## Conclusions/Implications/Impact

Results suggest animal safety is a relevant and widely taught concept within SBAE programs in NAAE Region III. Teacher educators should explore if, and how, beginning teachers are prepared for providing instruction in this area. Not surprisingly in a strong dairy producing region, teachers found UMASH dairy stockmanship videos useful and indicated high levels of interest. Consistent with prior research, teachers in this study would like instructional resources aligned with the videos. Discussion guides, lesson plans, or note taking guides may increase the likelihood of teachers using the video resources. In response, UMASH partnered with University of Minnesota Agricultural Education faculty, staff, and students to create free instructional resources, available on the UMASH website, for each stockmanship video. Additional research is needed to determine how effective these, and other, agricultural safety resources are at changing behaviors or improving safety practices of young people. Nonetheless, it is promising to see a high number of teachers interested in utilizing them within their programs.

## References

- Chapman, L. J., Schuler, R. T., Wilkinson, T. L. and Skjolaas, C. A. (1995). Farm-work hazard prevention efforts by school-based agricultural education instructors. *Am. J. Ind. Med.*, 28: 565-577. doi:10.1002/ajim.4700280411
- Hard, D. L., and Robison, W. A. (2016). A Summary of NIOSH Childhood Agricultural Injury Prevention Extramural Research under the Childhood Agricultural Injury Prevention Initiative: A Quindecennial (1997–2011) of Progress. Retrieved from: <https://www.cdc.gov/niosh/docs/2014-121/pdfs/2014-121.pdf>
- Hubert, D. J., Ullrich, D. R., Murphy, R. H., and Lindner J. R. (2001). Texas entry-year agriculture teachers' perceptions, practices, and preparation regarding safety and health in agricultural education. *Journal of Agricultural Safety and Health*. VOL. 7(3): 143-154. doi: 10.13031/2013.5440
- National Children's Center for Rural and Agricultural Health and Safety (NCCRAHS). (2016). 2016 Factsheet: Childhood Agricultural Injuries in the United States. Retrieved from: <https://www.marshfieldresearch.org/Media/Default/NFMC/PDFs/2016-Child-Ag-Injury-Fact-Sheet.pdf>.
- Upper Midwest Agricultural Safety and Health Center. (2018). Agricultural Education Teacher Resources. Retrieved from: <http://umash.umn.edu/aged/>