

## What are our priorities?

The Great Plains Center for Agricultural Health (GPCAH) is one of 11 agricultural research, education, and prevention centers funded by the National Institute for Occupational Safety and Health (NIOSH). GPCAH's goal is to reduce the burden of workplace injury and illness among Midwest farmers by educating, translating research to practice, and communicating agricultural safety and health information and prevention strategies.

Current priorities are to:

- Reduce traumatic injuries from roadway crashes with agricultural equipment
- Protect livestock workers by reducing exposures to indoor air contaminants

## What do we do?

- Conduct research and surveillance to prevent injuries and illnesses.
- Develop evidence-based safety recommendations for farmers, manufacturers, commodity groups, policy makers, and other stakeholders.
- Identify injury and illness trends to generate interventions to protect farmers.
- Disseminate practical tools to farmers, their advocates, and health care providers to improve awareness and adoption of best practices in safety and health.
- Lead national training for the next generation of agricultural safety and health professionals.

## What have we accomplished?

- Developed and piloted a GPS/video device (*SaferTrek*) to deploy on farm equipment to measure travel distance and identify driving behaviors and frequency of interaction with other vehicles on the road.
- Designed and built a prototype mobile air filtration system with multiple control technologies for dust and bioaerosol removal from swine farrowing barns.
- Evaluated performance of low-cost H<sub>2</sub>S (hydrogen sulfide) monitors for use in livestock operations, communicated findings to agricultural engineers, and recommended new maintenance procedures to farmers.
- Collaborated with extension personnel to provide H<sub>2</sub>S training to over 200 cattle producers, farmworkers, and manure applicators in IA and WI. Provided information on hazards, best practices, and hands-on use of gas monitors. One farmer stated that once he used a monitor, he "realized the nature of the beast and that the odds are against you" without them.
- Partnered with a national insurance company to develop a farm hazard assessment tool for use by insurance agents.
- Translated surveillance findings into risk and prevention posters for regional educators to incorporate into agricultural programs at community colleges and universities. Provided posters to more than 100 regional educators.
- Trained 33 students, professionals, and farmers in the 40-hour *Agricultural Safety and Health: Core Course*. Participant health and safety test scores improved by 28% at the end of the week. (See center figure to right).
- Prepared 12 articles for "Safety Watch" column in *Iowa Farmer Today* and *Lee Agrimedia*, distributed to more than 145,000 households in the region. Topics included livestock handling, manure gas, and personal stories of injury.
- Contributed to 10 news articles and reached more than 8,000 individuals via social media on heat illness prevention, in conjunctions with seven other national agricultural centers.
- Provided funding to Avera Health Clinics to train 380 Hutterite farmers in rural South Dakota on agricultural incident emergency response and cardiopulmonary resuscitation (CPR) (See bottom figure to right).

## What's next?

- Deploy the *SaferTrek* instrument on 15 grain carts in the field to record driver behavior of passenger vehicle traffic.
- Test an air quality filtration system at a large-scale livestock production operation and complete laboratory performance testing of disinfection system.
- Analyze insurance claims data of more than 1,000 agricultural incidents and compare to an emergency trauma reporting system.
- Promote the multi-center web site, "[Telling the Story](#)", which highlights personal accounts and in-depth coverage of agricultural injuries and fatalities.

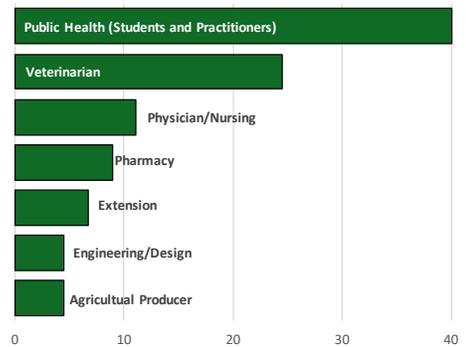
## At-A-Glance

The Great Plains Center for Agricultural Health (GPCAH) conducts research and provides education and outreach to prevent work-related injuries and illnesses among agricultural communities. This snapshot shows recent accomplishments and upcoming work.

### GPCAH serves nine Midwestern states

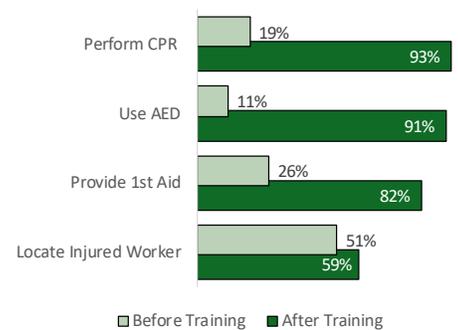


### Professional backgrounds of trained individuals in the *Core Course* (shown as percentage)



Note: 15 trainees reported more than one professional background.

### Percent of Hutterite farmers reporting confidence in performing activities, pre- and post-training.



Source: Gale, M. 2017. Unpublished data, Safe Farming, Safe Living Program. Avera St. Benedict Health Center, Parkton, SD.