2012 ANNUAL REPORT Iowa's Center for Agricultural Safety and Health

Helping Farmers Stay Alive and Well

A PARTNERSHIP OF: The University of Iowa Iowa State University Iowa Department of Public Health Iowa Department of Agriculture and Land Stewardship



Iowa's Center for Agricultural Safety and Health (I-CASH) Annual Report

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I-CASH Staff



Kelley J. Donham Director



Eileen Fisher Associate Director



LaMar Grafft Rural Health and Safety Specialist



Aaron Kline Research Assistant



Kay Mohling Program Coordinator



Julia Venzke Information/Web Specialist

Iowa's Center for Agricultural Safety and Health (I-CASH) Department of Occupational and Environmental Health College of Public Health UI Research Park #124 IREH The University of Iowa Iowa City, IA 52242-5000

Telephone: 319/335-4438 FAX: 319/335-4225

www.public-health.uiowa.edu/icash

Board of Directors and Advisory Council

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Dustin Vande Hoef

Communications Director, Iowa Department of Agriculture and Land Stewardship

I-CASH Mission Statement

The Mission of I-CASH is to enhance the health and safety of Iowa's agricultural community by establishing and coordinating prevention and education programs.

The University of Iowa prohibits discrimination in employment and in its educational programs and activities on the basis of race, national origin, color, creed, religion, sex, age, disability, veteran status, sexual orientation, gender identity, or associational preference. The University also affirms its commitment to providing equal opportunities and equal access to University facilities. For additional information on nondiscrimination policies, contact the Coordinator of Title LX, Section 504, and the ADA in the Office of Affirmative Action, (319) 335-0705 (voice) or (319) 335-0697 (text), The University of Iowa, 202 Jessup Hall, Iowa City, Iowa 52242-1316.

I-CASH Vision Statement

To make Iowa the world's healthiest and safest agricultural environment in which to live and work through creative leadership and collaboration among I-CASH, its partners and Iowa's agricultural community.

2012 I-CASH Advisory Council

Nancy Boettger State Senator, Senate District 29

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Margaret VanGinkel Program Specialist, Iowa State University Extension

> **Gloria Vermie** Director, State Office of Rural Health, Iowa Department of Public Health

2012 I-CASH Annual Report Kay Mohling, Editor

Cover Design by Patti O'Neill, University of Iowa College of Public Health

Opening Thoughts From The Director



Agricultural Medicine: A Growing Professional Specialty "Helping Farmers Stay Alive and Well"

About 50 years ago, my dad and I were cleaning out the cattle loafing shed. We were making good progress until we had a flat tire on one of the spreaders' wheels. While he worked on repairing the tire, I continued with the cleaning. I returned from the field and pulled alongside the spreader, unaware that my father was kneeling down to inspect the tire, and not seeing him, I ran over him. The result was a compound fracture of his lower leg; the open wound exposed to the manure-strewn mud. Rescuing him, transporting him to the hospital, and dealing with the long rehabilitation, I realized our rescue and health care system was not prepared to deal

with agricultural injuries. The ambulance could not get to the scene, and the emergency room doctors were not properly trained in agricultural medicine. The open fracture became contaminated with antibiotic-resistant and anaerobic (soil) organisms. My father developed a life-threatening antibiotic resistant bone infection (osteomyelitis). Dad had a long and complicated recovery, resulting in extensive economic and social stress for the family. As with many of my colleagues who have also experienced a farm-related tragedy, my life was forever changed.

Nearly 40 years ago, my life was redirected again, from a practicing veterinarian to an agricultural medicine professional at the University of Iowa. My primary charge was to develop an educational program in agricultural safety and health. With the help of many I-CASH colleagues and an excellent I-CASH staff, we have made significant advances in agricultural medicine training. Assistance from the Great Plains Center for Agricultural Health and the Heartland Center for Occupational Health & Safety, both NIOSH-funded research and training Centers at the University of Iowa, has further enhanced these efforts. Our goal has been to help assure that health and safety professionals, who serve rural areas, have basic knowledge of agricultural hazards, and how to properly diagnose, treat and prevent agricultural injuries and illnesses. The Agricultural Medicine program at the University of Iowa has the following components:

- Introductory lectures to students in the University of Iowa Carver College of Medicine.
- The graduate course R*ural Health and Agricultural Medicine* is offered to students in the University of Iowa Colleges of Public Health, Medicine, Pharmacy, and Nursing.
- Annual lectures are presented at the 10 Family Medicine Residency Programs in Iowa.
- Annual Agricultural Medicine course for health science students at Des Moines University.
- Graduate Certificate, Master's, and PhD programs are offered in Agricultural Safety and Health.
- The 40-hour "Core Course" for practicing health professionals is offered annually.
- Continuing education is provided for members of the AgriSafe Network.
- The Building Capacity Program provides resources to train new instructors in unserved regions.

The Building Capacity program has become a highlight of our training activities, with more than 600 health and safety professionals trained. Our participating I-CASH partners and staff should take pride in these accomplishments. In October 2012, funding for the Building Capacity program was extended until 2016. Goals for this new phase include revising and updating the course curriculum, providing support for existing programs to help achieve sustainability, creating an "Academy" of agricultural medicine instructors through a train-the-trainer program, and expanding the number of states offering *Agricultural Medicine: The Core Course*.

What does this all mean to a grain or livestock producer? It means there will be more health professionals in our rural communities who know and understand the daily hazards faced by agricultural producers. They will be better prepared to provide prevention information, make an appropriate diagnosis, and provide appropriate treatment. For more information on the Agricultural Medicine Training Program, visit our web site at *nnn.public-health.niona.edu/icash*. For additional information and services, consult our regional Great Plains Center for Agricultural Health at *nnn.public-health.niona.edu/gpcah*.

Kelley J. Donham, MS, DVM Pioneer Professor of Rural Health and Safety Director, Iowa's Center for Agricultural Safety and Health

I-CASH Partner Programs

The following are brief descriptions of activities of the four I-CASH state institutional partners (the Iowa Department of Agriculture and Land Stewardship, Iowa State University, The University of Iowa, and the Iowa Department of Public Health).

Iowa Department of Agriculture and Land Stewardship

Pesticide Applicator Certification

The Iowa Department of Agriculture and Land Stewardship (IDALS) in cooperation with Iowa State University Extension (ISUE) and the US Environmental Protection Agency (EPA) conduct the pesticide applicator certification program. Private pesticide applicators are certified to apply Restricted Use Pesticides, and Commercial Pesticide Applicators are certified to apply General and Restricted Use Pesticides. As of June 30, 2012, Iowa had 36,106 certified applicators. There were 13,546 certified commercial applicators, 668 certified commercial handlers, and 21,892 certified private applicators. Certification testing was held at about 3,887 sites in fiscal year 2012. Approximately 299 private and 1,302 commercial continuing instruction certification training sessions (including satellite downlink sessions) were offered by ISU Extension in fiscal year 2012.

www.IowaAgriculture.gov

The Worker Protection Standard

The Worker Protection Standard (WPS) for agricultural pesticides is a regulation issued by the EPA. The WPS emphasizes educating agricultural employers on farms, forests, nurseries, and greenhouses of the need to train their workers and pesticide handlers regarding the safe use of pesticides. IDALS worked in cooperation with the Iowa Department of Public Health, Proteus Inc., I-CASH, EPA, and ISUE to promote WPS compliance. With matching funds from EPA Region 7 and IDALS, ISUE developed thirteen narrated video modules, with accompanying video scripts, for WPS trainers to use in programs for agricultural workers. An interactive WPS scenario was also developed, allowing workers to decide the best course of action in a possible exposure situation. Each module has a quiz, and trainers may modify the course materials to fit their training needs. These materials have been posted on the Pesticide Safety Videos YouTube website at www.youtube.com/pesticidevideo and to the ISU Pest Management and the Environment (PME) WPS website. www.extension.iastate.edu/pme/WorkerProtect.html

Iowa Department of Public Health

The Iowa Department of Public Health (IDPH) Occupational Health and Safety Surveillance Program (OHSSP) and State Office of Rural Health (SORH) continue collaboration with I-CASH and its partners to promote healthy and safe workplaces for all Iowans, including those living and working in agricultural settings. IDPH personnel continue to serve on the I-CASH Board, Advisory Committee and various planning committees.

IDPH completed the second of a five-year competitive funding agreement with the National Institute of Occupational Safety and Health (NIOSH) for the Iowa State-Based Occupational Health & Safety Surveillance Program (OHSSP). The program includes funding for the Fatality Assessment and Control Evaluation (FACE) program based at the University of Iowa and funding for the SENSOR Pesticide (human pesticide exposures) surveillance in Iowa. Iowa 2011 FACE data was included in the IDPH annual report at *www.idph. state.ia.us/Default.aspx.* Data and reports for both of these programs are available online or by contacting the IDPH OHSSP at 800/972-2026.

Iowa Legislative Code Chapter 135.107 recommended initiation of the Iowa Center for Rural Health and Primary Care (CRHPC), which is coordinated by the Department. It addresses issues and recommends legislation related to rural health care access and agricultural safety. The CRHPC includes an Advisory Committee with governor appointee members. I-CASH serves on the Advisory Committee and partners in the February Legislative Breakfast held at the Capitol building.

IDPH OHSSP and Rural Health personnel are in year two of a statewide collaborative team that participated in the 2011 Children's Safety Network National Rural Injury Prevention Community of Practice. Group members have worked to incorporate the plan into their primary programming and bring more public and policy recognition to the issue of ATV child safety.

IDPH recruited input from a variety of partnering programs in the drafting of the occupational health and safety section of the *IDPH Healthy Iowans: Iowa's Health Improvement Plan 2012-2016*. The final document is at www.idph.state.ia.us/ adper/common/pdf/healthy_iowans/plan_2012_2016.pdf and includes data first reported by I-CASH in Section Five of the Rural and Agricultural Health and Safety Resource Plan (RAHSRP) which can be found at www.idph.state.ia.us/ohds/Rural-HealthPrimaryCare.aspx?prog=RHPC&pg=SORH.

The Department helps to sustain the goal of access to health care and safe work environments in rural Iowa, through scholarships for public health and medical professional attendees at the Agricultural Medicine Occupational and Environmental Health for Rural Health Professionals trainings, and at the Midwest Regional Agricultural Safety & Health (MRASH) conference.

A key component of the IDPH OHSS program is collaborating with existing internal and external programs to analyze and disseminate data findings, impact the development of prevention and intervention strategies for agricultural safety and health, and work with our partners to assure the implementation of effective programming. OHSSP coordinated the Health & Safety Tent of the 2012 Farm Progress Show near Boone, Iowa.

www.idph.state.ia.us

Iowa State University

Extension Farm Safety Program

The Iowa State University Extension farm safety program activities that are directed towards I-CASH goals include the following events:

- ISU Extension organized articles on farm safety issues by involved partners (Farm Safety 4 Just Kids, Iowa Farm Safety Council, Iowa State University, Easter Seals, and Childhood Agricultural Safety Network) and distributed them to Iowa's newspapers during the 68th annual National Farm Safety and Health Week September 18-24, 2011.
- Fifteen safety days or farm safety camps, conducted by extension staff, were held throughout the state reaching 2,274 youth, and providing more than 12,500 participant safety education contact hours.
- ISU Extension contributed to the development and launching of the Farm and Ranch eXtension in Safety and Health (FReSH) community of practice. With 23 states participating, it is dedicated to providing accurate and timely information to individuals involved with agriculture.
- The Tug-of-War with grain safety display educated participants at the 2011 Farm Progress Show.

www.abe.iastate.edu/extension-and-outreach/agricultural-health-safety

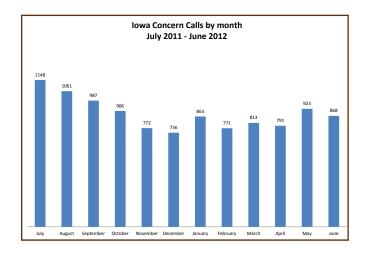
Iowa Concern

Iowa Concern is a part of Iowa State University Extension and offers information and referral, stress counseling, and legal education. The Iowa Concern Hotline received 10,639 calls from July 2011 -June 2012, and approximately 15% of those calls were from farm and rural families. The Hotline continued to receive disaster calls from those impacted by disasters in 2010 and participated in the Department of Human Services' *Project Recovery Iowa* program that works with families in need of stress counseling and assistance.

Farm and rural issues this year varied. Weather concerns were not evident this spring, and farmers were able to plant early. There was plenty of rain early in the season, but drought conditions became an issue in June 2012. Farm and rural families called the hotline about legal concerns such as divorce, contracts, leases, and fence laws. Financial concerns such as the cost of health insurance, and loss of off-farm employment continue to strain rural families. The hotline also received calls regarding information on the Hawkeye Insurance program for their children.

Iowa Concern continues to receive questions and concerns through the website, which receives approximately 6,000 hits per month. The site has many "Frequently Asked Questions," links to other organizations and agencies, success stories from persons who have accessed mental health facilities, and a "Live Person" chat to talk directly with stress counselors. Iowa Concern is available 24 hours a day by calling 800/447-1985.

www.extension.iastate.edu/iowaconcern



The University of Iowa Projects led by I-CASH core faculty and staff

Agricultural Medicine Training

Agricultural Medicine: Occupational and Environmental Health for Rural Health Professionals was held June 11-15 in Iowa City, IA. Twenty-nine health care professionals from Connecticut, Florida, Illinois, Iowa, Missouri, New Jersey, North Carolina, Oregon, South Dakota, Texas, Utah, Virginia, Indonesia, Israel and The Gambia attended the training. Led by recognized experts in the various topic areas, the training provides information and skills to enable health care professionals to function in the prevention of occupational illnesses and injuries in the farm community. Topics include agricultural respiratory hazards, acute agricultural injuries, skin diseases, physical factors affecting health in agriculture, behavioral health issues, musculoskeletal diseases and ergonomics, health effects of pesticides, zoonotic diseases, cancer in agricultural populations, and agricultural health care delivery.

In addition to the didactic training, the participants toured Amana Farms, followed by a barbeque dinner at the farm. The annual course can be taken for three graduate credit hours from the University of Iowa College of Public Health, and continuing education credits are offered. The 2013 training will be held June 10-14 in Iowa City.

www.public-health.uiowa.edu/icash/education/agmedtraining. html



Students in the Agricultural Medicine course enjoy a tour of Amana Farms, led by Rich Gassman, Amana Farms Crop Manager.

Agricultural Youth Injury Prevention Grants

Since 1990, I-CASH has designated funds for Iowa community grants targeted at prevention of farm-related injury in young people (less than 19 years of age). The purpose of this grant program is to decrease the risk of illness and injury from agricultural exposures to youth living on Iowa farms, or otherwise involved in production agriculture. The following organizations received grant funds in 2012:

Clay County Countrymen 4-H Club partnered with FFA to present farm safety information and distribute farm first aid kits at local elevators. The Club also had a booth and handouts at the Clay County Fair.

Delaware County Chapter Farm Safety 4 Just Kids provided information at Farm Safety Days across the county; topics included ag chemicals, animal safety, and tractor safety.

Lucas County Agricultural Extension District hosted a Farm Safety Day. Topics included ATV safety, livestock handling, and farm first aid. Youth made first aid kits and conducted safety demonstrations.

Monona County Extension held a Farm Safety Day and provided safety glasses for all participants, as well as valuable information on eye protection.

North Linn FFA conducted a farm safety training for students at school. Topics included the importance of lighting and marking, ATV safety, and safety during mowing. Slow Moving Vehicle signs, ATV personal protective equipment, hearing protection, and safety glasses were also distributed.

South Hardin FFA created a PSA and editorial to promote their Farm Safety Day. During the event, students presented information on farm equipment safety, livestock safety, ATV use, crop production and natural resource protection.

Town and Country Farm Safety 4 Just Kids created PSAs and flyers encouraging farmers to be safe during planting and harvest. The flyers were placed in local elevators and covered roadway safety, and ATV sizing and operation.

Wapello County 4-H promoted farm safety at the Wapello County Expo. Youth rotated through various farm safety information stations, learning about grain safety, livestock safety, ATV safety, first aid, PTO safety, fire safety, and safety around water. *www.public-health.uiowa.edu/icash/programs/Youth-Ag-Safety-Grants/index.html*

Alive and Well Updates Listserv

Since 2003, I-CASH has maintained the free listerv *Alive and Well Updates (http://list.uiowa.edu/scripts/ wa.exe?SUBED1=alive-well-updates&A=1*). Originally developed for the AgriSafe Network nurses as a continuing education service, it has become an efficient way for healthcare professionals to receive monthly abstracts from research publications, on rural and agricultural health and safety issues. Upon request, subscribers receive full-text PDFs of the articles from I-CASH's Information Specialist. The listserv has also been utilized by subscribers to post notices about upcoming agricultural safety and health-related events offering continuing education credit.

Subscriptions to this listserv continue to grow; as of June 2012 there were 68 subscribers from various locations across the United States and Canada. www.public-health.uiowa.edu/icash/programs/alive-well updates-listserv.html

Building Capacity of Health and Safety Professionals

I-CASH initiated an educational outreach program in agricultural medicine in 1988. The growth of this program was advanced with funding from the Great Plains Center for Agricultural Health Building Capacity (BC) Project, which began in 2006. The primary goal of the program has been to establish capacity in other regions to train healthcare providers in agricultural medicine, and to establish new AgriSafe providers and clinics. Through the BC project, *Agricultural Medicine – The Core Course* has been presented to over 600 participants from across the United States, and 9 other countries. Funding has been extended for the next four years, and includes the following objectives:

- Revise and upgrade the course curriculum with input from our 40 member BC Advisory Council.
- Write the second edition of the text book *Agricultural Medicine: Occupational and Environmental Health for Rural Health Professionals.*
- Support the programs currently in existence to help achieve sustainability.
- Enhance the train-the-trainer program though the proposed Agricultural Medicine Academy.
- Add two additional states/regions to the current 8 locations that offer the course.

www.public-health.uiowa.edu/icash/education/agmedtraining. html

Certified Safe Farm

Certified Safe Farm

The Certified Safe Farm Program (CSF) is a multifaceted

intervention aimed to reduce injuries and illnesses in farmers, their families, and farm workers. Combining the identification of hazards and their removal, with goal setting and a reward system, the program has shown savings in health care costs, improved health behaviors, and reductions in severe injuries. Following the research phase, there has been translation of the program to pilot projects in Wisconsin and North Carolina, and development of a program in Nebraska.

In order to translate and expand the program nationally, a multistate CSF consortium has been established with members from Iowa, Nebraska, New York, North Carolina, and Wisconsin.

A module for large farms that are under OSHA jurisdiction is also in development. This module will help to assure that, in addition to the general hazards that CSF addresses, these farms will also comply with an OSHA inspection. Amana Farms, Inc. has become the first large farm to become a Certified Safe Farm, and will also be used to apply and test the OSHA compliance module.

www.public-health.uiowa.edu/icash/programs/CSF/index. html

Hall of Fame Award

I-CASH named Mike Schouten of Sioux Center, Iowa the 2011 recipient of its Agricultural Safety and Health Hall of Fame Award. Schouten was recognized during the opening session of the Midwest Rural Agricultural Safety & Health (MRASH) forum in Des Moines on November 16, 2011.



2011 Hall of Fame recipient, Mike Schouten, with I-CASH Director Kelley Donham.

Mike Schouten is the Agriculture Stewardship Center Manager at Dordt College in Sioux Center, IA, where he teaches agricultural safety. Schouten also works with the Northwest Rural Electric Cooperative teaching and promoting electrical safety in agricultural settings, and has assisted the KMEG television station in Sioux City, IA with the development of farm safety public service announcements for the harvest season.

Schouten also serves as the central coordinator for the usage of safety demonstration devices for the Farm Bureau, Iowa State Extension Service, the community hospital, and Dordt College. He provides training to high school students, FFA, and 4-H groups that request to use the equipment for safety demonstrations. Schouten helped students build a dust explosion simulator (with partial funding provided by I-CASH) that has been utilized by many groups to train elevator personnel in dust explosion prevention.

I-CASH created the Hall of Fame Award in 2002 as a lifetime achievement award for individuals or organizations that have made significant and lasting contributions to agricultural safety and health in Iowa. www.public-bealth.uiowa.edu/icash/programs/Hall-of-Fame/ index.html

Midwest Rural Agricultural Safety and Health Forum

The Midwest Rural Agricultural Safety and Health (MRASH) forum was held on November 16-17, 2011 in Des Moines, IA. The opening keynote presentation was Weathering Change: Stress and Behavioral Health by Dr. Lorann Stallones, Director of the Colorado Injury Control Research Center. Her research focuses on the epidemiology of agricultural health, rural injuries, and injuries among underserved populations. The opening day also included the presentation of the I-CASH Hall of Fame Award to Mike Schouten, manager of the Agriculture Stewardship Center at Dordt College, and breakout sessions on rural mental health, play areas on farms and ranches, and ATV safety. The second day of the conference offered plenary sessions on sustaining rural communities in the future, and behavioral health issues.

Rural Health and Safety Clinic of Greater Johnson County

The Rural Health and Safety Clinic of Greater Johnson County has been working on building partnerships within the agricultural community in Johnson, Iowa, Washington, and Keokuk counties. A board of directors was established and the clinic has applied for non-profit status. The Clinic is collaborating with individuals and groups within the four county area, including high school agricultural instructors, area fire departments, organic and local producers, and other interested groups. Several trainings have been hosted at the Clinic, including a rural and roadway safety event for area families, and a grain bin rescue training for area fire departments. The Clinic is on Facebook at wnw.facebook.com/pages/Rural-Health-and-Safety-Clinicof-Greater-Johnson-County/173228392781248



Rural Roadway Safety Committee

I-CASH hosted a media event in rural Iowa City, on September 22, 2011 to introduce the video *Rural Roadway Crashes—They're Preventable*, which provides information on the hazards of driving on gravel and rural hard surface road systems. The video is available by download from the Iowa Department of Transportation website (*www.iowadot.gov/mvd/ods/RuralRoadCrashes. html*). The Rural Roadway Safety Committee continues to promote rural roadway safety through presentations at conferences and dissemination of the video and tips cards. The tips card and video are available upon request for adaptation to other states.

The Committee is also working with Nationwide Insurance to develop a public awareness campaign on rural roadway safety. The Committee will manage the campaign that provides education to farmers, and all who travel on rural roads. I-CASH is also working with the Iowa Department of Transportation and Jan Goldsmith to develop public service announcements that will incorporate footage from cameras mounted on a tractor in Johnson County. For more information call Eileen Fisher 319/335-4224.

www.public-health.uiowa.edu/icash/programs/rural-roadwaysafety-video-project.html

Safe Play Area



The Safe Play Area study is a randomized controlled trial to measure the effectiveness of two interventions promoting the safe play area strategy among farm families. The study has

successfully enrolled 450 farm families, with children age 6 and younger, into two intervention groups and a control group. A process evaluation was implemented in Fall 2011 to determine the receipt, acceptance, and perceived usefulness of the educational materials used in the study. The intervention phase has ended, and a post-survey to measure changes the families have made to reduce the risk of injury to young children on their farm, is now being implemented. The research team will visit 21 farms to document changes made and gather qualitative data from interviews. They will also perform a safety check of the play area. The short-term goal is to measure the effectiveness of the interventions to change attitudes, beliefs and behavior. The long-term goal of this research is to decrease injuries and deaths to children living on, and visiting farms. The study is a collaboration involving a national insurance company, The National Children's Center for Rural and Agricultural Health and Safety in Marshfield, WI, The University of Nebraska, and The University of Iowa.

www.public-health.uiowa.edu/icash/research/safe-play-areas.html

Agricultural Health Projects at other University of Iowa Research Centers

Agricultural Health Study



The Agricultural Health Study is a prospective cohort study of agricultural exposures and chronic disease in Iowa and North Carolina among private pesticide applicators, their spouses, and commercial

pesticide applicators. This is the 20th year of the study. Eligible subjects were enrolled during the first five years; 89,655 in total including 58,562 in Iowa. Phase two began in 1998 and involved recontacting each cohort member to update exposure information, obtain dietary health questionnaire data, and obtain buccal cells. Phase three began in 2005 and ended in 2012; it updated pesticide exposure histories and self-reported diseases. Phase four began in 2011 and includes an update of self-reported disease and several special studies. Many outcomes are yet to be determined, as through 2009, only 9% of the cohort is deceased.

The study has resulted in over 170 peer-reviewed publications evaluating methods, exposure assessment, high pesticide exposure events, environmental pesticide measures, farm work-related injuries, and health outcomes. The study is now widely recognized as the best prospective cohort study of agricultural exposures and disease in the world. More information concerning these publications can be found at the website, as well as information for scientific collaboration. http://aghealth.nci.nih.gov

Center for International Rural and Environmental Health



The Center for International Rural and Environmental Health's (CIREH) International Training and Research in Environmental and Occupational Health (ITREOH) Program, the International

Collaborative Trauma and Injury Research and Training (ICTIRT) Program, and the International Training and Research in Non-communicable Diseases in Romania Program are funded by the NIH Fogarty International Center. In fifteen years more than 100 young professionals have come to Iowa as trainees from Poland, Slovakia, Croatia, Serbia, Macedonia, Romania, Bosnia, China, and The Gambia. Research interests include childhood injuries, domestic violence, traffic and bicycle safety, the establishment of national injury registries, indoor air quality, workplace health promotion, environmental contamination, and pesticide exposure. Additionally, CIREH hosts a fourth program funded by the NIH, called the Minority Health and Health Disparities Research and Training Program (MHIRT) which provides international research internships for 10 American minority students each year from the University of Iowa who are students in the health sciences. The MHIRT program has sponsored 70 students.

www.public-health.uiowa.edu/ cireh

Environmental Health Sciences Research Center



The Environmental Health Sciences Research Center (EHSRC), established in 1990, is one of 23 NIEHS-funded Core Centers of

Excellence, and the only one located in the Midwest.

Comprised of 63 faculty and 25 staff, the EHSRC is at the forefront of research in environmental lung disease, inflammation and innate immunity, oxidative stress, and nanotoxicology. Health concerns such as community and occupational exposures to airborne hazards from concentrated livestock feeding operations, asthma among rural children, and exposure to agricultural chemicals and bioaerosols, are among the many issues currently under study by Center investigators. The EHSRC also operates a pilot grant program and supports career development of junior investigators in the environmental health sciences. *www.ebsrc.org*

Great Plains Center for Agricultural Health



The Great Plains Center for Agricultural Health (GPCAH) serves America's most agriculturally intensive

region: Illinois, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, and Wisconsin. Funded by the National Institute for Occupational Safety and Health/Centers for Disease Control and Prevention in October 2011 for a fifth five-year cycle, GPCAH advances knowledge and facilitates prevention of agricultural injuries and illnesses.

Two research studies and an intervention project were funded: Farm Equipment Roadway Crash Study, Musculoskeletal Disorders among Farmers, and Intervention to Reduce Respiratory Exposures in CAFOs. Data analysis also continues for the Keokuk County Rural Health Study.

In addition to the research and intervention projects, the new GPCAH Community Partnerships program was designed to empower community-based organizations to explore the delivery of new services that would be unavailable without Center support. At the same time, these partnerships foster programs that could not be implemented by the Center without the involvement of community-based partners.

The Building Capacity of Health and Safety Professionals education and translation project will resume the training of health and safety professionals on agricultural hazards and evidence-based methods to prevent disease and injury. A key component is the Agricultural Medicine Core Course which has been adopted widely in the U.S.

The GPCAH Pilot/Feasibility Projects Program funds the development of new and creative research, and community-based outreach projects which show promise of leading to more comprehensive studies; three projects were funded in the Spring.

Outreach opportunities included the annual Midwest Regional Agricultural Safety and Health (MRASH) conference in November 2011, and the *Farm Families Alive & Well* newsletter, which provides additional outreach in the 9-state GPCAH region. *www.public-health.uiowa.edu/gpcah*

Injury Prevention Research Center



Established in 1990, the University of Iowa Injury Prevention Research Center (IPRC) aims to use interdisciplinary research to control and

prevent injuries, especially in rural communities. Over the years, the IPRC has grown to include 66 researchers from 23 departments in five colleges, as well as a wide network of community and government collaborators. In 2012 the IPRC successfully competed for five additional years of support from the CDC to continue its tradition of excellence in research, training, and outreach activities. The Center organization includes four Cores, five Expert Research Teams and four research projects. The Research Core, Training Core, Outreach Core, and Administrative Core provide services to IPRC partners, including a very successful Exploratory Research Program that is funded through institutional support. The five Expert Research Teams are organized around priority research topics (road traffic safety, interpersonal violence, intervention and translation science, rural acute care, and global injury and violence prevention). The Center's four independent research projects address a wide variety of injury topics and include Principal Investigators from Occupational and Environmental Health, Psychology, and Epidemiology, and partner with the Department of Corrections, local schools, and private businesses. The Center's activities constitute a broad, multidisciplinary and collaborative program in research, training, and outreach. www.public-health.uiowa.edu/iprc

Iowa Fatality Assessment and Control Evaluation Program



The Iowa Fatality Assessment and Control Evaluation Program (FACE) is a program carried out by the Department of Occupational and Environmental Health under a subcontract with the Iowa Department of Public Health. Program funding comes from the National Institute for Occupational Safety and Health (NIOSH) at the CDC. The FACE program identifies all occupational fatalities in the state and conducts in-depth investigations of specific incidents. The FACE Program investigators develop recommendations aimed at preventing similar occupational injuries.

Fatal injuries while on the job remain a serious public health concern in Iowa, as well as the entire country. From July 2011 through April 2012 a total of 84 cases have been identified. These fatalities represent 75 males and 9 females ranging in age from 10 to 85; four were less than 21 years of age, and 17 were greater than 65 years of age. Thirtythree percent of the fatalities were to agricultural workers; ATVs were involved in five fatalities. Older farmers (greater than 65 years of age) continue to represent a high percentage of Iowa worker deaths.

The Iowa FACE Program continues to follow NIOSH priorities when identifying cases to investigate. In addition, the Iowa FACE Program has investigated cases involving Amish workers, disabled workers, and violence-related cases. *www.public-health.uiowa.edu/face*

I-CASH Affiliate Programs

The following are brief descriptions of Iowa farm safety and health programs and organizations that are associated with I-CASH and its mission of enhancing the health and safety of Iowa's agricultural community.

AgriSafe Network



The AgriSafe Network is a national nonprofit organization representing rural based clinicians who provide

preventive occupational health services to farmers and seasonal farm workers. AgriSafe assists health professionals in delivering occupational health programs that are effective in improving the lives of farmers. Partnerships with local and state Departments of Public Health, NIOSH, National Farm Medicine Center, agribusinesses, farm commodity groups, and Schools of Public Health, are critical to meeting our mission.

Iowa is one of eight states with an AgriSafe state affiliate. *AgriSafe of Iowa* is led by I-CASH and was formed to facilitate networking with colleagues across the state. The Iowa state affiliate functions include the following:

- Expedite the process of gathering and dispersing current and new information to rural health care providers.
- Represent an innovative model of care that can attract state funding.
- Empower local AgriSafe providers to communicate state specific concerns to colleagues with similar interests and concerns.
- Provide for a unified leadership role in future Iowa occupational health activities.

For more information about AgriSafe of Iowa, contact Kelley Donham at *kelley-donham@uiowa.edu* or Carolyn Sheridan at *csheridan@agrisafe.org*. *www.agrisafe.org*

AgriWellness, Inc.

AgriWellness, Inc., which has provided administrative assistance to the seven-state network of farm crisis hotlines/helplines and follow-up service for over a decade, temporarily suspended active operations during late 2011 due to lack of funds. The Board of Directors continues to hold regular telephone conferences, and administrative services are provided by Dr. Michael Rosmann at the Harlan, IA office and Susan Helgeland, the Board President, at Fargo, ND. The need for behavioral healthcare supports for the agricultural population is currently increasing, due to drought conditions which are affecting farms throughout the Midwest. Trainings in rural behavioral health were offered in North Dakota and Iowa during 2012. www.agriwellness.org

Farm Safety 4 Just Kids



After starting the non-profit organization in 1987, Marilyn Adams retired from Farm Safety 4 Just Kids (FS4JK) during 2011. As of 2012, FS4JK has

110 chapters in 27 states and 4 Canadian provinces, as well as 9 state outreach coordinators. Chapters and outreach coordinators conduct educational programs for children, youth, and their families on injury prevention from farm hazards.



FFA students with the Red Brownville FS4JK Chapter demonstrate pinch point safety at Farm Fest in Gilfillan, MN.

FS4JK is working with the Central States Center for Agricultural Safety and Health to identify the differences in risk perception and preferred communication channels among farm demographic groups. Surveys, interviews, and focus groups are taking place to categorize this information. FS4JK also worked with the University of Missouri on a project, funded by Great Plains Center for Agricultural Health, encouraging people to blog about farm safety and health issues.

In 2012 an ATV safety educational packet was produced in English and Spanish, and the 2011 FS4JK Chemical Educational packet was a Blue Ribbon Award winner from the American Society of Agricultural and Biological Engineers. FS4JK and Successful Farming magazine awarded ten farm families/groups \$250 to complete a safety or health project on their farm or within their community. *www.fs4jk.org*

Iowa Farm Safety Council

The Iowa Farm Safety Council is a volunteer organization that has worked to make rural Iowa a safer place to live, work, and raise a family for over 60 years. The Council is a grass roots effort supported by a network of professionals in agricultural production, education, insurance, industry, and government. This year the Council's ongoing efforts to promote good safety and health practices resulted in a presence at the Iowa Power Farming and Machinery Show. They also held an open discussion with several insurance companies at the annual meeting, talking about combine fires. While the number of members in the Iowa Farm Safety Council is relatively small, the people involved have consistently turned out to staff events and continue to bring the safety and health message to farmers and their families.

www.abe.iastate.edu\safety/ifsc.html

National Education Center for Agricultural Safety



The National Education Center for Agricultural Safety (NECAS) is dedicated to preventing illnesses, injuries, and deaths among farmers and ranchers, agricultural and horticultural workers, their families, and their employees.

In the past year NECAS has been on the road with a new grain engulfment simulator, teaching grain safety to farmers and agribusiness personnel, and grain bin rescue to rural volunteer firefighters. The theme for the 2012 National Farm Safety and Health week promotion was "Agricultural Safety and Health-A Family Affair" and focused on safety of the whole family on the farm. NECAS is building a new mobile manure pit entry and rescue trailer which will be on the road in early 2013. For more information visit the NECAS website or Facebook at *wnm.facebook.com/necasag. wnm.necasag.org*

Proteus Inc.



Proteus provides primary health care services to approximately 1,300 migrant and seasonal

farmworkers in Iowa every year through the Migrant Health Program. Proteus's bi-lingual Community Health Aides and Providers host remote clinics throughout the state. They conduct health histories, and vital exams such as blood pressure, temperature, height and weight, blood profiling, cholesterol, and diabetes. Proteus provides vouchers for other health services with medical professionals.

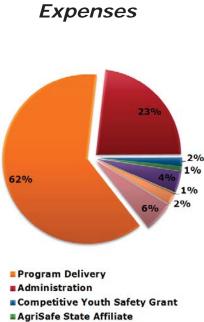
Through the National Farmworker Jobs Program, Proteus assists over 100 farm workers looking for new stable employment opportunities every year in Iowa and Nebraska. Proteus provides services and financial assistance to help with training in order to obtain fulltime employment.

Proteus has 5 nationally trained, bilingual certified staff members to teach pesticide training sessions for farmworkers. In 2010 and 2011, Proteus trained over 300 farmworkers to be certified under the EPA Worker Protection Standard. *www.proteusinc.net*

Financial Report

The I-CASH budget consists of FY 2012 state funds, plus competitive grant and contract funds listed below. The following table and chart depict the state appropriated expenditures divided into three areas: 1) personnel expenditures for programming and administration; 2) program delivery contracts; and 3) general expenses.

PERSONNEL EXPENDITURES				
	Budget Dollars	Actual Dollars		
Program Delivery	154,432	153,543		
Administration	57,112	57,017		
Total Personnel Expenditures	211,544	210,560		
PROGRAM DELIVERY CONTRACTS				
Competitive Youth Safety Grant	4,000	4,000		
AgriSafe State Affiliate	1,200	2,000		
Outreach Grant Program	10,325	10,000		
Total Program Delivery Contracts	15,525	16,000		
GENERAL EXPENSES				
Supplies	1,000	690		
Travel	3,000	4,974		
Other: Includes computer system support, required semi- annual board meetings, conferences, outreach materials, annual report, telephone, and newsletters	14,480	14,110		
Carry-over deficit to FY12		(785)		
Total General Expenses	18,480	18,989		
TOTAL BUDGET	245,549	245,549		



Actual FY 2012

- Outreach Grant Program
- Supplies
- Travel
- Other

Grants and contracts that I-CASH faculty and staff have received to conduct intervention and research activities in Iowa

	Annual Total	Project Term
Amana Farms, Inc.	\$ 32,285	10/01/2011 to 09/30/2012
ERC Ag (Heartland Center for Occ. Health and Safety)	\$ 122,000	07/01/2008 to 06/30/2013
GPCAH R2P	\$ 143,450	10/01/2011 to 09/29/2016
GPCAH Rural Road Crashes	\$ 18,900	07/01/2010 to 09/29/2011
GPCAH Swine Worker Exposure	\$ 164,122	09/30/2006 to 09/29/2011
<i>Motivating Farm Owners to Create Safe Play Areas</i> (National Children's Center for Ag. Health and Safety/NIOSH)	\$ 82,808	10/01/2008 to 09/30/2013
Total	\$ 563,565	

I-CASH Presentations/Educational Activities/ Newspaper Publications

July 2011

"Shine some light on the 'Black Box' of pesticides." Kelley Donham. Iowa Pork Producer Magazine. July 2011.

"Introduction and overview", "Physical factors affecting health in agriculture", "Zoonotic diseases", "Skin diseases of agricultural workers", "Veterinary pharmaceuticals, biologicals, and antibiotics", "Cancer in agricultural populations" and "Case presentations." Kelley Donham. Presentations at Agricultural Medicine: Occupational and Environmental Health for Rural Health Professionals – The Core Course. July 11-15; Omaha, NE.

"Agricultural trauma." LaMar Grafft. Presentation at Agricultural Medicine: Occupational and Environmental Health for Rural Health Professionals – The Core Course. July 12; Omaha, NE.

August 2011

"Helping to keep farm families alive and well in agriculture: A brief history of the Institute of Agricultural Medicine at the University of Iowa." Kelley Donham. Presentation at the Rotary Club. August 24; Coralville, IA.

September 2011

"Farm Families Alive & Well Newsletter." I-CASH and GPCAH staff. Vol 17(4). September 2011.

"It's too damned hot for man or beast!" Kelley Donham. Iowa Pork Producer Magazine. September 2011.

"General environmental hazards in agriculture: Focus on confined animal feeding operations (CAFOs)." Kelley Donham. Webinar presentation for the North Dakota Agricultural Medicine: Occupational & Environmental Health Core Course. September 9.

"Teaching agricultural medicine." Kelley Donham. Presentation to faculty in the Department of Occupational and Environmental Health, College of Public Health, The University of Iowa. September 9; Iowa City, IA.

"A historical perspective of intervention, education, and research." Presentation at the University of Iowa, College of Public Health, Occupational and Environmental Health Seminar. September 20; Iowa City, IA.

"Rural roadway safety." I-CASH staff, Dave Patterson, and Pete Ungaro. Media event and premiere of educational video. September 22; Iowa City, IA.

Certified Safe Farm inspection. LaMar Grafft. September 27; Johnson County, IA.

October 2011

"Skin diseases of agricultural workers." Kelley Donham. Webinar presentation for the North Dakota Agricultural Medicine: Occupational & Environmental Health for Rural Health Professionals Core Course. October 7.

"Skin cancer and precancerous lesions in agricultural populations." Kelley Donham. Webinar presentation for the North Dakota Agricultural Medicine: Occupational & Environmental Health for Rural Health Professionals Core Course. October 21.

"Acute agricultural injuries" and "Farm tour and Certified Safe Farms program assessment." LaMar Grafft. Presentations at the Agricultural Medicine and Occupational Safety Training. October 25-28; Burlington, VT.

"Physical environmental factors: Vibrations, heat, cold, noise", "Prevention of agricultural illnesses and injuries", "Acute agricultural injuries", "Farm tour and Certified Safe Farms program assessment", and "Case presentations." Kelley Donham. Presentations at the Agricultural Medicine and Occupational Safety Training. October 25-28; Burlington, VT.

"Agricultural trauma." LaMar Grafft. Presentation at the Radiology Conference. October 29; Iowa City, IA.

November 2011

"Crashes between motor vehicles and farm equipment on our rural roadways." Kelley Donham. Iowa Pork Producer Magazine. November 2011.

"Agricultural safety." LaMar Grafft. Presentation at Agricultural Safety Day. November 1-2; Peosta, IA.

"Prevention of illness and injury in agricultural populations", "Personal protective equipment in agriculture: An overview", and "Case presentations." Kelley Donham. Presentations at the 2011 Agricultural Medicine: Occupational & Environmental Health for Rural Health Professionals Core Course. November 5; Devils Lake, ND.

"Agricultural safety & health." LaMar Grafft. Presentation at the University of Iowa Carver College of Medicine. November 14; Iowa City, IA.

"Existing play areas on farms and ranches in Upper Midwest: A randomized control trial." Eileen Fisher and Risto Rautiainen. Presentation at the Midwest Rural Agricultural Safety and Health Forum. November 16-17; Des Moines, IA.

"Prevention of needlestick injuries in livestock producers" and "Building capacity in agricultural medicine." Kelley Donham. Presentations at the Midwest Rural Agricultural Safety and Health Forum. November 16-17; Des Moines, IA.

"Rural road crashes...they're preventable." Eileen Fisher and Jan Goldsmith. Poster presentation at the Midwest Rural Agricultural Safety and Health Forum. November 16-17. Des Moines, IA.

December 2011

"I-CASH Annual Report" I-CASH staff. December 2011.

"Farm Families Alive & Well Newsletter." I-CASH and GPCAH staff. Vol 18(1). December 2011.

January 2012

"Certified Safe Farm." LaMar Grafft. Training at Amana Farms, Inc. January 16; Amana, IA.

"Brief history and description of agricultural health", "Agricultural respiratory diseases", "Zoonotic diseases", and "Veterinary biological & therapeutic occupational hazards." Kelley Donham. Presentations at the North Carolina Agricultural Medicine: Occupational & Environmental Health for Rural Health Professionals Core Course. January 20; Greenville, NC.

Certified Safe Farm inspection. LaMar Grafft. January 23; Johnson County, IA.

"Agricultural respiratory health hazards from organic dust exposures." Kelley Donham. Presentation to the Family Medicine Residency Program at Mercy Medical Center. January 25; Mason City, IA.

Certified Safe Farm inspection. LaMar Grafft. January 25; Johnson County, IA.

"Accidents hurt, safety doesn't: Insurance & OSHA." Kelley Donham. Presentation at the Iowa Pork Congress. January 26; Des Moines, IA

February 2012

Fatality investigation. LaMar Grafft. February 7; Richland, IA.

"I-CASH." LaMar Grafft and Eileen Fisher. Display at Legislative Breakfast. February 9; Des Moines, IA.

"Lock-out tag-out." LaMar Grafft. Training presentation at Amana Farms, Inc. February 9; Amana, IA.

March 2012

"Agricultural medicine: A growing professional specialty to care for agricultural producers, their families, and workers." Kelley Donham. Iowa Pork Producer Magazine. March 2012. "Farm Families Alive & Well Newsletter." I-CASH and GPCAH staff. Vol 18(2). March 2012.

"Confined space." LaMar Grafft. Training presentation at Amana Farms, Inc. March 15; Amana, IA.

"Building capacity in agricultural medicine training" and "Agricultural medicine education, the AgriSafe Network, and the Certified Safe Farm: A U.S. model providing structure and service for occupational health in agriculture." Kelley Donham and Sue Brumby. Presentations at the International Congress on Occupational Health. March 21-22; Cancun, Mexico.

"Veterinary pharmaceuticals, biologicals, antibiotics, and needle sticks", and "Rural environmental health problems." Kelley Donham. Presentations at the Wisconsin Agricultural Medicine: Occupational and Environmental Health for Rural Health Professionals: Session 1. March 22; Marshfield, WI.

"Physical factors affecting health in agriculture." Kelley Donham. Webinar presentation for the North Carolina Agricultural Medicine: Occupational & Environmental Health for Rural Health Professionals Core Course. March 23.

"Motivating families to create safe play areas on farms." Eileen Fisher. Presentation at the Women in Agriculture Conference. March 23; Moline, IL.

April 2012

"Agricultural medicine: The Iowa model." Kelley Donham. Presentation at the First Agricultural Health Symposium of Turkey. April 6; Sanliurfa, Turkey.

"Farm tour and Certified Safe Farm audit tool" and "Case presentations/problem solving." LaMar Grafft. Presentations at the North Carolina Agricultural Medicine: Occupational & Environmental Health for Rural Health Professionals Core Course. April 19-20; Greenville, NC.

"Introduction to prevention in agriculture theories - What does & doesn't work", "Practical applications & use of personal protective equipment in agriculture", and "Case presentations/Problem solving." Kelley Donham. Presentations at the North Carolina Agricultural Medicine: Occupational & Environmental Health for Rural Health Professionals Core Course. April 20; Greenville, NC.

"Agricultural trauma." LaMar Grafft. Lecture to Grand Mound Fire Department. April 21; Grand Mound, IA.

"The Johnson County Regional Agricultural Safety and Health Clinic." Kelley Donham. Presentation at the Kiwanis Club. April 27; Iowa City, IA.

May 2012

"Upgrading your biosecurity program considering methicillin-resistant staphylococcus aureus." Kelley Donham. Iowa Pork Producer Magazine. May 2012.

"Certified Safe Farm." LaMar Grafft. Presentation at Iowa State University. May 3; Ames, IA.

"The Rural Health and Safety Clinic of Greater Johnson County." Kelley Donham. Presentation to the Johnson County Board of Supervisors. May 8; Iowa City, IA

"Agricultural safety & health." LaMar Grafft. Presentation at the University of Iowa Carver College of Medicine. May 21; Iowa City, IA.

"Agricultural trauma." LaMar Grafft. Presentation at Marengo Memorial Hospital. May 22; Marengo, IA.

"Certified Safe Farm: Translating 10 years of research to practice." Kelley Donham. Webinar. May 22.

"Grain safety." LaMar Grafft. Presentation to the Midwest Grain Coalition. May 30-31; Bloomington, IL.

June 2012

"Farm Families Alive & Well Newsletter." I-CASH and GPCAH staff. Vol 18(3). June 2012.

"The Great Plains Center for Agricultural Health." Kelley Donham. Webinar. June 6.

"Agricultural Medicine: Occupational and Environmental Health for Rural Health Professionals - Core Course." I-CASH staff. Continuing education course. June 11-15; Iowa City, IA.

"Agricultural medicine education, the AgriSafe Network, and the Certified Safe Farm: A U.S. model providing structure and service for occupational health in agriculture." Kelley Donham and Eileen Fisher. Abstract presented at the International Society for Agricultural Safety and Health. June 24-28; Burlington VT.

"Confined space program at Amana Farms." LaMar Grafft. Presentation at International Society for Agricultural Safety and Health. June 24-28; Burlington, VT.

"Motivating families to create safe play areas on farms: Baseline data" and "Rural road crashes – they're preventable." Eileen Fisher. Presentations at International Society for Agricultural Safety and Health. June 24-28; Burlington, VT.

"Structure and service for occupational health." Donham, Rautiainen, Fisher, Grafft, Mohling, Spencer, Sheridan. Presentation and paper at the International Society for Agricultural Safety and Health. June 24-28; Burlington, VT.

"Working with a large Iowa farm." LaMar Grafft. Presentation at International Society for Agricultural Safety and Health. June 24-28; Burlington, VT.

"Safety in grain bins." LaMar Grafft. Presentation at the Jefferson County Fair. June 29; Fairfield, IA.

I-CASH Publications

Burgus S, CV Schwab, M Shelly. 2012. Assessing rural coalitions that address safety and health issues. *Journal of Extension 50(2).*

Culp K, S Tonelli, S Ramey, K Donham, L Fuortes. 2011. Heat-related illness in Hispanic farmworkers. *American Association of Occupational Health Nurses Journal* 59(1):23-32.

Donham, KJ. Challenges to occupational and community health and the environment in animal production and housing. In A Aland & T Banhazi (Eds.) *Livestock housing: Modern management to ensure optimal health and welfare of farm animals.* Wageningen Pers. (In press)

Donham KJ, AK Kline, KM Kelly, JL Lange, RH Rautiainen. Respirator and hearing protection use in the Certified Safe Farm Program. *Journal of Agromedicine*. (In Press)

Gillette JC, CA Stevermer, RH Miller, WB Edwards, and CV Schwab. 2012. Lower extremity joint moments during carrying tasks in Children. *Journal of Applied Biomechanics* 28:156-164.

Leedom Larson KR, EA Wagstrom, KJ Donham, AL Harper, BM Hanson, MJ Male, and TC Smith. 2012. MRSA in pork production shower facilities: An intervention to reduce occupational exposure. *Journal of Agricultural Safety and Health* 18(1):5-9.

O'Shaughnessy PT, T Peters, K Donham, R Altmaier, C Taylor, and K Kelly. Assessment of swine worker exposures to dust and endotoxin during hog load-out and power washing. *Annals of Occupational Hygiene*. (In Press)

Schwab, CV, and HM Hanna. 2012. Master Gardeners' safety precautions for handling, applying, and storing biochar. Iowa State University Extension publication. ISU Extension, Ames, IA

Wall R, R Litchfield, and CV Schwab. 2011. The Mystery Club: Preparing for race day. Iowa State University Extension publication Pm-2069b. ISU Extension, Ames, IA. [English]

Wall R, R Litchfield, and CV Schwab. 2011. El Club Misterio: Nos Preparamos para el dia de la carrera. Iowa State University Extension publication Pm-2069b(s). ISU Extension, Ames, IA. [Spanish]

Wall R, R Litchfield, and CV Schwab. 2011. Les Club des Mystéres: Préparation pour la course. Iowa State University Extension publication Pm-2069b(f). ISU Extension, Ames, IA. [French]



Iowa's Center for Agricultural Safety and Health Department of Occupational and Environmental Health College of Public Health The University of Iowa UI Research Park, #124 IREH Iowa City, Iowa 52242-5000