

2013
ANNUAL
REPORT

IOWA'S CENTER FOR AGRICULTURAL SAFETY AND HEALTH

*Helping Farmers Stay
Alive and Well*




I-CASH | Iowa's Center for
Agricultural Safety and Health

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

July 1, 2012 - June 30, 2013

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(Retired October 1, 2012)



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Board of Directors and Advisory Council

2013 I-CASH Board of Directors

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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.

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.

2013 I-CASH Advisory Council

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Iowa Department of Public Health

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2013 I-CASH Annual Report

Kay Mohling, Editor

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

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Opening Thoughts From The Director



Iowa's Center for Agricultural Safety and Health: Building Collaborations and Empowering Communities for Health and Safety

In October of this year (2013), I moved to emeritus status, fulfilling 40 years of service on the faculty of the University of Iowa. It has been my pleasure and honor to serve as the Founding Director of I-CASH for the past 23 years. I would like to take this opportunity to reflect on the history of I-CASH, and thoughts for the future.

In 1985, I launched an idea, (first introduced in Sweden and Finland), for a comprehensive agricultural safety and health (ASH) service for farmers, (which became the non-profit AgriSafe Network in 2003). From 1987 – 1990, the national policy process *Agriculture at Risk* was established, which provided a framework for both state and federal ASH programs. Facilitated by the *Agriculture at Risk* policy process, the 1990 Iowa legislature passed House File 2548, which created I-CASH as a joint venture between the University of Iowa, Iowa State University, the Iowa Department of Public Health, and the Iowa Department of Agriculture and Land Stewardship. I-CASH would cooperate with other public and private entities to support programs for farmer health, safety and rehabilitation.

In 2002, a strategic planning process involving all partners was held to review procedures and make recommendations for the future. A Statement of Principles was adopted which guided I-CASH to listen to constituents; gather and disseminate information supporting science-based intervention and education; facilitate, coordinate, collaborate, and enhance synergism among affiliates; foster growth of existing organizations; develop new programs with compatible aims; and work toward trust, and inclusiveness.

Although I-CASH conducts education, research and service, the heart of the Center has been to expand efforts by our staff, support our partners, and encourage growth in ASH awareness. Through the years, many programs have emerged to join this effort such as Farm Safety For Just Kids, the AgriSafe Network, The Rural Health Clinic of Greater Johnson County, the Building Capacity Program, Certified Safe Farm, SHAUN, Agriwellness, Farm Safety Day Camps, National Education Center for Agricultural Safety, Proteus, and the Easter Seals Rural Solutions Program. The impact we have is the collective and coordinated actions of all, magnifying our effects as George H. W. Bush described, creating a “thousand points of light” to help others. I-CASH partners and affiliates create a thousand points of light in the universe of agricultural health and safety, defining our tag line *Helping Farmers Stay Alive and Well*.

I-CASH has been at the heart of my personal and professional mission of 40 years. I am gratified that our affiliates and stakeholders continue to work with the common goal *Helping Farmers Stay Alive and Well*. Agriculture and its people are changing and the farming population is more diverse than ever. More women are engaged as principle operators, more foreign born workers are present in our large dairy, swine, and poultry operations, and the average age of our principal operators continues to rise. Biological and mechanical technology continues to expand, with unknown consequences. Therefore, new ideas and programs will need to be designed and implemented to meet the next generation of farmers. A search is now in progress to identify a leader to take I-CASH to the next level. In the meantime, Dr. Peter Thorne (Department Head, Department of Occupational and Environmental Health) will be interim director of I-CASH. He will be assisted by a committee comprised of other faculty of the Department, including Fred Gerr, Matt Nonnenman, and Diane Rohlman. I thank all of the I-CASH staff, all the partners and affiliates, and the farm population of Iowa for their service, dedication, and being those points of light in the dark sky.

*Kelley J. Donham, MS, DVM, DACVPM
Pioneer Professor of Rural Health and Safety
Director, Iowa's Center for Agricultural Safety and Health (1989-2013)*

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 and Outreach (ISUEO) and the US Environmental Protection Agency (EPA) conduct the pesticide applicator certification program. The program focuses on all aspects of pesticide safety, including personal protective equipment, restricted entry intervals, reading and understanding pesticide labels, drift management, sprayer calibration, protecting water resources, and properly rinsing and recycling/disposing of pesticide containers. 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, 2013, Iowa had 36,347 certified applicators, which included 13,759 certified commercial applicators, 761 certified commercial handlers, and 21,827 certified private applicators. Certification testing was held at about 3,902 sites in fiscal year 2013. Approximately 295 private and 547 commercial continuing instruction certification training sessions (including satellite downlink sessions) were offered by ISUEO in fiscal year 2013.

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 cooperates with the Iowa Department of Public Health, Proteus Inc., I-CASH, EPA, and ISUEO to promote WPS compliance. With matching funds from EPA Region 7 and IDALS, ISUEO developed computer flash drives containing WPS compliance and training resources for distribution to agricultural employers, pesticide dealers, and growers throughout Iowa. ISUEO also updated the online WPS Train-the-Trainer course used by agricultural employers and supervisors.

www.extension.iastate.edu/pme/WorkerProtect.html

Iowa Department of Public Health

The Iowa Department of Public Health 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. Highlights this year include the following activities:

- SORH played a key role assisting providers, communities and entities with national health care transformation at the local level.
- IDPH provided sponsorships and scholarships for public health and medical professional attendees at the 2013 Agricultural Medicine Occupational and Environmental Health for Rural Health Professionals training, and at the 2012 Midwest Regional Agricultural Safety & Health (MRASH) Conference.
- OHSSP utilized 17 years of data from their Fatality Assessment and Control Evaluation (IA FACE) program to report on grain handling fatalities in Iowa at the 2012 MRASH Conference.
- OHSSP coordinated the Health & Safety Tent of the 2012 Farm Progress Show held near Boone, Iowa, offering health and safety information and services to over 100,000 attendees. Plans are underway to provide coordination for the 2014 Farm Progress Show Health & Safety Tent.

www.idph.state.ia.us

Iowa State University

Extension and Outreach

Iowa State University Extension and Outreach (ISUEO) farm safety program and activities that are directed towards I-CASH goals include the following events:

- ISUEO organized articles on farm safety issues by involved partners (Farm Safety For Just Kids, Iowa Department of Public Health, Iowa Farm Safety Council, Iowa Fire Marshal Office, Iowa State University, Easter Seals, and International Society for Agriculture Safety and Health) and distributed

them to Iowa's newspapers during the 69th annual National Farm Safety and Health Week, September 16-22, 2012.

- Twelve farm safety camps or safety days were conducted by extension staff throughout the state, reaching 1,558 youth and providing more than 7,600 participant safety education contact hours.
- ISUEO continued to support the Ag Safety and Health eXtension pages hosted by the Farm & Ranch eXtension in Safety and Health (FReSH) Community of Practice. The FReSH Community of Practice, with 90 members, 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 2012 Farm Progress Show.
- ISUEO Pest Management and the Environment program provided pesticide safety education to 15,600 private pesticide applicators.

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

Iowa Concern

Iowa Concern is a part of Iowa State University Extension and Outreach, and offers information and referral, stress counseling, and legal education. The Iowa Concern Hotline received 9,200 calls from July 2012 - June 2013. Approximately 12% of those calls were from farm and rural families.

Farm and rural issues this year varied; the crop situation was generally very good last fall, with high grain prices and yields. The wet weather concerns this spring caused planting delays. Some producers planted their crops much later than last year, and many had to make tough decisions to replant or take insurance payments. As drought conditions emerged in the summer, calls

were received from farm families concerned about crop yields and the stress it was causing within their families. Dairy producers continued to struggle this year with financial issues. Many dairy producers have several family members as part of their operation, which can also increase stress and family conflict.

Farm and rural families also called the Hotline regarding legal issues, contracts, leases, and the fence law. Lease concerns, such as deadlines and rent levels, involved both landlords and tenants. Health insurance costs continue to be a concern for rural families, especially in cases where off-farm jobs were cut back or lost, causing financial concerns and insurance coverage changes. Iowa Concern provided information about the Hawkeye Insurance program to callers.

Iowa Concern continues to receive questions and concerns through the web site, which offers information and links to other organizations and agencies, success stories from persons who have accessed mental health facilities, and a *Live Person* option to talk directly with stress counselors. The website receives approximately 7,500 visits per month and is available 24 hours a day by calling 800/447-1985.

www.extension.iastate.edu/iowaconcern

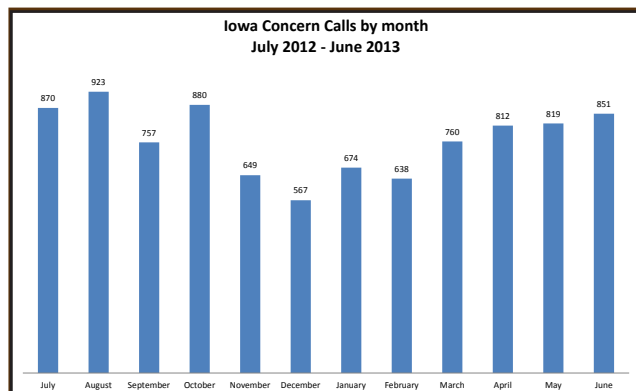
University of Iowa

Projects led by I-CASH core faculty and staff

Agricultural Medicine Training

The Agricultural Medicine: Occupational and Environmental Health for Rural Health Professionals course was held June 10-14 in Iowa City, IA. The training program is sponsored by the University of Iowa College of Public Health, College of Medicine, College of Nursing, Iowa's Center for Agricultural Safety and Health, Great Plains Center for Agricultural Health, and the Heartland Center for Occupational Health and Safety. The course provides information for health professionals who treat and help prevent occupational illnesses and injuries in the farm community. Thirty-eight participants from Alaska, California, Delaware, Illinois, Iowa, Minnesota, Missouri, Nebraska, Nevada, New York, Wisconsin, and the United Kingdom attended the training. In addition to the didactic training, the participants toured Amana Farms, Inc., followed by a barbeque dinner at the farm. The 2014 Iowa training will be held June 9-13 on the University of Iowa campus in Iowa City, IA.

www.public-health.uiowa.edu/icasb/education/ag-med-training/index.html



Agricultural Youth Injury Prevention Grants

Since 1990, I-CASH has designated funds each year for communities to develop farm injury prevention and education programs for Iowa youth. I-CASH is pleased to announce the following recipients for the 2013 Agricultural Youth Injury Prevention Grant program:

AGWSR FFA - A tractor safety certification course for youth age 13-17 was provided in Hardin, Franklin, Grundy, and Butler Counties.

Benton County Extension - Demonstration items such as vision goggles, “stop, drop, and roll” vests, and safe driving DVDs were purchased to use at a farm safety day in Benton County.

Delaware County Extension - Three FFA chapters partnered to conduct four Safety Day events. Older youth presented safety and health information to younger participants, and local media provided extra awareness of safety concerns to the local community.

Des Moines County 4-H – Local businesses partnered with 4-H to provide a farm safety camp. Older youth helped with the camp and gave presentations at the event.

Dike-New Hartford School - A poster contest focusing on safety with ATVs, lawn mowers, and sun safety, as well as hearing protection, was held.

Guthrie Center FFA - FFA members instructed third graders about the importance of being safe while around ATVs. Grant money was used to provide ATV helmets to those that did not have one.

Howard County 4-H - A traveling parade entry to promote farm safety was used during summer events in the area. The project increased leadership and communication skills of 4-H members, who also assisted with planning and implementing a farm safety day camp.

Jefferson County Extension - A farm scene was built to highlight farm safety hazards. The display was used at a farm safety camp for younger children.

Kossuth FFA/FSFJK - The Kossuth FFA Farm Safety For Just Kids Chapter partnered with local businesses to provide safety information to first grade students using nine interactive stations. A coloring contest was also held in conjunction with the event.

Mitchell County Extension - Mitchell County 4th graders took a field trip to learn about farm safety.



Washington County Extension and 4-H provided “Stay Safe, Take a Break” bags of safety and health items to over 200 farm families.

Grain, PTO, and animal safety were among the topics covered at the event.

Story County Extension - “Ag Awareness Day” was held at the Story County Fair to highlight farm safety and health issues. Farm safety brochures and promotional items were handed out at the event as reminders about the importance of farm safety.

Twin Cedars FFA - A poster contest with real life scenarios was conducted on “Ag Day.” The FFA chapter used Facebook and Twitter to get the safety message out to more people.

Van Buren FFA - Elementary students, along with their families, learned ways to stay safe while on the farm. Safety with machinery, ATVs, lawn mowing, and livestock were topics covered at the event.

Washington County Extension – The “Stay Safe, Take a Break” program took place during harvest season. Bags of protective equipment were delivered to farmers and they were encouraged to stop, stretch, and have a snack during this busy time of year.

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 listserv *Alive and Well Updates*. Originally developed for the AgriSafe Network providers as a continuing education service, it has become an efficient way for healthcare professionals to receive monthly abstracts from recent 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. Subscriptions to this listserv continue to grow. Currently there are subscribers from health and safety organizations across the United States, Ire-

land, and Canada. Titles from recent abstracts include *Male farmers with mental health disorders: A scoping review*, *Exposure to audible and infrasonic noise by modern agricultural tractors operators*, *All-Terrain Vehicles (ATVs) on the Road: A serious traffic safety and public health concern*, *Partnering strategies for childhood agricultural safety and health*, and *The relationship between fatigue-related factors and work-related injuries in the Saskatchewan Farm Injury Cohort Study*.

To subscribe to the Alive & Well Listserv visit the I-CASH website and click on the tab under Programs/Initiatives.

www.public-health.uiowa.edu/icash/programs/alive-well-updates-listserv.html

Building Capacity in Agricultural Safety and Health

Education in agricultural safety and health began at the University of Iowa in 1974 as a series of lectures in the public health course for medical students. The course was modified in 1987 into a continuing education course for Iowa nurses and healthcare providers to work in AgriSafe clinics. As the course began to attract participants from diverse professions, it became evident that there was a greater need for training of this subject matter, and it needed to be available to a larger geographical area.

In 2006, with funding from the NIOSH Great Plains Center for Agricultural Health, the Building Capacity Program in Agricultural Safety and Health (BC) was initiated. The goal of this program is to increase the capacity of various entities across the United States to develop sustainable health and safety training programs in their regions.

In addition to Iowa, training programs have been established in Illinois, Nebraska, North Carolina, North Dakota, Vermont, and Wisconsin. The program has trained approximately 800 participants, and plans for 2014 include the implementation of training programs in Alabama and Texas.

A new component to the program is the Academy of Agricultural Medicine Instructors. Providing agricultural safety and health training through this newly formed Academy will assure quality programming, additional agricultural safety and health training opportunities, and foster sustainability.

www.public-health.uiowa.edu/icash/education/building-capacity.html

www.public-health.uiowa.edu/icash/education/academy/index.html

Certified Safe Farm



The Certified Safe Farm (CSF) program began as an I-CASH research project in 1996. The comprehensive occupational safety and health program involved an on-farm safety audit, an occupational health and wellness screening, and an individually tailored educational program. In Iowa there are now over 600 farms involved in the program. The North Carolina Agromedicine Institute has a CSF program in 22 counties, and the Nebraska College of Public Health has initiated a new CSF program. To provide a coordinated national program, a CSF coalition has been established with representatives from Iowa, Nebraska, New York, North Carolina, Pennsylvania, and Wisconsin.

The CSF program works to reduce serious injuries and respiratory disease, promote the increased use of personal protective equipment among farmers, and save medical care costs by preventing occupational injuries and illnesses. The goal is to have coordinated, consistent, and high quality services across the country, as well as to encourage insurance and other agribusiness companies to pay dividends to farms that become Certified Safe Farms.

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

Hall of Fame Award

I-CASH named Eileen Fisher the 2012 recipient of its Agricultural Safety and Health Hall of Fame Award. She was recognized at the Midwest Rural Agricultural Safety & Health conference in Cedar Rapids, IA on November 14, 2012.

Fisher received her Master of Science and PhD degrees from The University of Iowa in Preventative Medicine and Environmental Health, and has held numerous leadership roles that contribute to advancing agricultural safety and health issues on a state and national level.

In 2000, Fisher became the Associate Director of I-CASH, and has been instrumental in successful completion of several farm safety and health projects. The DVD entitled *Rural Roadway Crashes – They're Preventable* included a press conference and provided the opportunity to ride in a large tractor to experience the dangers farmers face each day on rural roads. *Motivating Farm Parents to Create Safe Play Areas* was a project to evaluate the effectiveness of specific interventions that encourage safe play area construction. Fisher was also



Past Hall of Fame recipients Shari Burgus and Carolyn Sheridan (left) and Kelley Donham present the award to Eileen Fisher.

instrumental in founding two anti-smoking organizations and works tirelessly on this important policy. She retired from I-CASH on October 1, 2012.

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-health.uiowa.edu/icash/programs/Hall-of-Fame/index.html

Midwest Rural Agricultural Safety and Health Conference

More than 120 people attended the 2012 Midwest Rural Agricultural Safety and Health Conference held on November 14-16 in Cedar Rapids, Iowa. The theme was *Reaping the Rewards* and was keynoted by Amanda Harney and Brad Husberg of NIOSH. Thanks to a collaboration with the Grain Handling Safety Coalition, the 2012 conference included an expanded program with manure pit and grain rescue demonstrations by Penn State University, Ohio State University, University of Illinois Fire Service Institute, and the National Education Center for Agricultural Safety. The conference concluded with presentations and discussion regarding the research, education and policy needs to adequately address confined spaces safety in agriculture.

In addition to the conference schedule, there were meetings of 7 different organizations held in conjunction with the conference, providing an opportunity for additional networking.

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

Rural Health and Safety Clinic of Greater Johnson County



The Rural Health and Safety Clinic has passed many milestones this year. Now in exis-

tence for three years, it officially became a non-profit organization, allowing the Clinic to receive funding, grants and donations from organizations, businesses, and government agencies. The Clinic focus has been narrowed over the past year into one of safety and health outreach for farmers in a nine-county area, (Benton, Cedar, Iowa, Johnson, Keokuk, Linn, Louisa, Muscatine, and Washington).

The Clinic is building relationships with researchers to create an environment where they can learn firsthand about the safety and health issues that affect farmers. The Clinic is collaborating on two Research-to-Practice pilot grants, provides support for an injury database for farmers, provided outreach using their new trailer at the Farm Progress Show, and trained fire fighters in tractor rollover extrication and grain engulfment rescue.

www.ruralhealthandsafety.org



The Rural Health and Safety Clinic of Greater Johnson County outreach trailer.

Rural Roadway Safety Committee

After addressing safety on gravel roads for the past few years, the Rural Roadway Safety Committee's agenda was influenced this year by a public policy issue. House File 619 was introduced in the Iowa House where it passed and was sent to committee in the Senate. This bill would allow certain all-terrain vehicles (ATVs) on county roads under specific conditions. Under Iowa Legislature procedures, each session spans two years, making it possible for the bill to continue when the Legislature reconvenes in January 2014.

Since ATVs are a major safety concern in rural areas, the committee decided to learn more about the specific provisions of the bill, and what the implications might be. One of the major reasons the bill was introduced was for economic development purposes with the bill sponsors hoping to provide additional recreation opportunities in Iowa. It would have no impact on the agricultural exemption currently in place. They also discovered that there are many key players against the bill for safety reasons, including the Brain

Injury Alliance of Iowa, the Iowa Public Health Association, and the Specialty Vehicle Institute of America, a national group representing ATV manufacturers and dealers.

Committee members met with the Iowa ATV Injury Prevention Task Force and a local Iowa Representative to continue to learn, and to decide upon a strategy to help educate Iowans and legislators about the safety aspects of the issue. One major concern is that ATVs typically have a high center of gravity and a narrow wheelbase, which may be appropriate for off-road riding, but carries a greater rollover risk at the higher speeds used on roadways. Another concern is that most ATV tires are knobby, low-pressure tires designed for off-road, and are not intended for use on roadways. The committee came away from the meetings with a better understanding of the safety aspects of ATVs, and is currently creating a fact sheet for distribution.

Safe Play Areas



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; there are 446 families in six Midwestern states enrolled in the study. The research project, funded by NIOSH, evaluates a program to motivate farm families to create or improve a fenced play area for their children. A safe play area on a farm is a carefully planned designated location, within sight and sound of a responsible adult, away from hazards, and designated by a physical barrier like a fence. These play areas keep children out of the dangerous work site when off-site childcare is not an option.

The purpose of the study was to determine if educational materials alone, or with an additional \$500 incentive, would motivate farm families to create safe play areas. Overall there was a 16% increase in safe play areas after the study began. Provision of educational materials and incentives can motivate families to create new safe play areas where none previously existed, and can also change risk perception. Incentives may not make a significant difference when it comes to making improvements to existing play structures on a farm. The study is a collaboration involving a The National Children's Center for Rural and Agricultural Health and Safety in Marshfield, WI, The University of Nebraska, The University of Iowa, and American Family Insurance.

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 21st year of the study. Eligible subjects were enrolled during the first five years; 89,655 in total including 58,562 in Iowa. Phase II updated exposure information, gathered dietary health data, and obtained buccal cells. Phase III updated pesticide exposure histories and self-reported diseases. Phase IV began in 2011 and includes an update of self-reported disease, and several special studies. Many outcomes are yet to be determined; through 2011 only about 10% of the cohort is deceased.

The study has resulted in over 185 peer-reviewed publications evaluating methods, pesticide 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. Additional information concerning these publications, as well as information for scientific collaboration is available on the Agricultural Health Study website.

<http://aghealth.nci.nih.gov>

Center for International Rural and Environmental Health



The Center for International Rural and Environmental Health's (CIREH) International Collaborative Trauma and Injury Research and Training (ICTIRT) Program, Development of a West African GeoHealth Hub (GeoHealth), and the International Training and Research in Non-communicable Diseases in Romania Program are funded by the NIH Fogarty International Center. In eighteen years more than 100 young professionals have come to Iowa as trainees from Bosnia, China, Croatia, Hungary, Macedonia, Poland, Romania, Serbia, Slovakia, 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 underrepresented students (minority, low income and rural students) each year from the University of Iowa who are students in the health sciences. The MHIRT program has sponsored 80 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 20 NIEHS-funded Core Centers of

Excellence, and the only one located in the Midwest. Comprised of 65 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 is collaborating on a study of farm exposures and asthma with the Agricultural Health Study. The EHSRC also operates a pilot grant program and supports career development of junior investigators in the environmental health sciences.

www.ehsr.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, the *Farm Equipment Roadway Crash Study*, *Musculoskeletal Disorders among Farmers*, and *Intervention to Reduce Respiratory Exposures in CAFOs*.

In addition to the research and intervention projects,

the new GPCAH Community Partners 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 fulfills the mission to train 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 as well as 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, and the Farm Families Alive & Well newsletter, which provides additional outreach in the 9-state GPCAH region.

www.public-health.uiowa.edu/gpcab

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. The IPRC includes 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 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 Occu-

pational 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 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. During calendar year 2012 a total of 78 cases were identified. These fatalities represent 74 males and 4 females ranging in age from 7 to 84. Four were less than 21 years of age, and 19 were over 65 years of age. During 2012, twenty-nine percent of the fatalities were involved in ag-related work, and 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 follows the NIOSH priorities when identifying cases to investigate. Given the rural nature of Iowa and the high percentage of workers killed in agriculture, the program continues to investigate rural and specifically ag-sector cases. This complements the strengths of the partner Centers in the University of Iowa College of Public Health where the Iowa FACE program staff members are housed.

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 non-profit organization representing rural nurses, doctors, researchers, and other professionals who strive to reduce health disparities among farm families. AgriSafe is a recognized leader in the field of agricultural occupational health care. Today, AgriSafe trained health care providers can be found in over twenty states, and new state affiliates are joining each year.

The recently expanded *Invest in your Health* program empowers college agricultural students to take control of their own health outcomes. AgriSafe is well positioned to expand the college health program in community colleges and universities with their integrated network of AgriSafe health professionals, impacting the lives of future farmers.

In 2012, AgriSafe and the National Education Center for Agricultural Safety (NECAS) joined forces to offer a wide variety of training opportunities, including training on the following topics:

- Integration of occupational programs within the agricultural industry
- Understanding OSHA agricultural standards
- Safe practices for grain handling and rescue
- Personal protective equipment - Head to toe protection
- Respiratory protection and selection
- Ergonomics: Slips, trips & falls and injuries from twisting and lifting

On site training opportunities can be scheduled by visiting the AgriSafe website; monthly training webinars are offered free of charge, and are accessible on the AgriSafe website.

www.agrisafe.org

AgriWellness, Inc.



AgriWellness, Inc. has temporarily suspended regular operations because of insufficient funds. However, the Board members

continue to confer, and Dr. Michael Rosmann handles the day-to-day activities. The organization continues to receive requests for assistance each week from individuals, families, organizations, students and researchers. Dr. Rosmann can be reached at the AgriWellness website or by phone at 712/235-6100.

www.agriwellness.org

Farm Safety For Just Kids



Farm Safety For Just Kids (FSFJK) took on a new look and operating procedure during 2013. The “4” in the name has been replaced with “For” and the red barn logo was replaced with a blue and green image. The biggest change is that all educational materials are now available through the FSFJK website at no cost.

FSFJK currently has 101 chapters in 26 states and 4 Canadian provinces. Chapters and the six outreach coordinators conduct educational programs for children, youth, and their families on farm injury prevention. Highlights this year include the following activities:

- As part of a larger rural road safety project initiated by Nationwide, FSFJK and I-CASH members produced a *Safe Rural Roadways* educational packet designed for youth.
- Ten Farm Family Incentive grants of \$250 each were distributed to families during Farm Safety and Health Week. Successful Farming magazine made the project possible and publicized the program to encourage others to do similar projects.
- FSFJK and the Central States Center for Agricultural Safety and Health are collecting and analyzing data to identify the impact of changing farm demographics on hazards, injury prevention, and communication channels.

www.farmsafetyforjustkids.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 supported by a network of professionals in agricultural production, education, insurance, industry, and government. While the number of Council members is relatively small, the people involved consistently 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) has been working on year two of a Susan Harwood OSHA grant, in partnership with the AgriSafe Network. Currently, a confined space manure pit entry program is being developed to go along with the new confined space manure pit entry and rescue prop. In the past year, NECAS staff have demonstrated the grain bin prop in eight states, training proper grain bin entry procedures and grain bin rescue to fire and rescue services.

www.necasag.org



Photo courtesy of NECAS

NECAS demonstration using the Confined Space Manure Pit Entry and Rescue Prop.

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 Health Care Managers and Providers host remote clinics throughout the state, conducting health histories and basic laboratory examinations, taking vital signals and offering examinations with Physician Assistants and Nurse Practitioners. Patients receive extensive health education and Proteus provides vouchers for other health services with medical professionals.

Through the National Farmworker Jobs Program, Proteus assists farmworkers looking for new stable employment opportunities in Indiana, Iowa, and Nebraska by providing services and financial assistance to help with training. Proteus has nationally trained, bilingual certified staff members to teach pesticide and heat stress prevention training sessions for farmworkers. In 2013, Proteus staff members trained over 1,000 farmworkers.

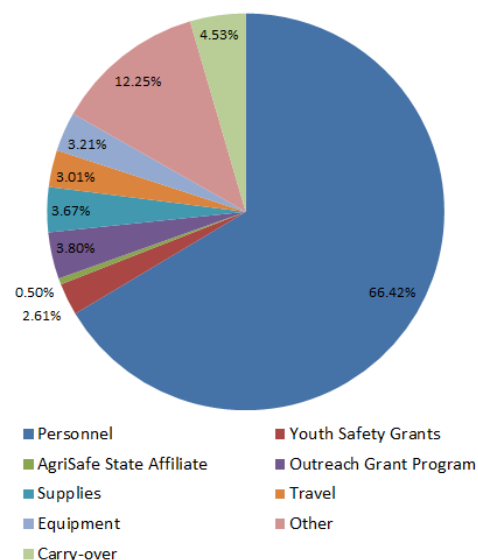
www.proteusinc.net

Financial Report

The I-CASH budget consists of FY 2013 state funds, plus competitive grant and contract funds listed below.

Expense	Budgeted \$	Expenditures \$
Personnel	\$197,706	\$165,156
Youth Safety Grants	\$5,000	\$6,500
AgriSafe State Affiliate	\$1,200	\$1,250
Outreach Grant Program	\$8,500	\$9,445
Supplies	\$1,000	\$9,113
Travel	\$3,000	\$7,482
Equipment	\$0	\$7,985
Other (e.g., computer system support, board meetings, conferences, outreach materials, annual report, telephone, newsletters, recruitment)	\$21,147	\$30,446
Carry-over to FY 13		\$11,254
TOTALS	\$237,553	\$248,631

FY 2013 Expenditures



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

	Annual Total	Project Term
Analyses of Bioaerosol Exposures in the Agricultural Health Study-Lung Study (National Institute of Environmental Health Sciences)	\$ 167,580	10/11/2011 to 06/30/2014
Building Capacity (GPCAH)	\$ 203,850	09/30/2012 to 09/29/2016
ERC Ag (Heartland Center for Occ. Health and Safety)	\$ 120,892	07/01/2008 to 06/30/2014
Intervention to Reduce Exposures in CAFOs (GPCAH)	\$ 225,622	10/01/2011 to 09/29/2016
Motivating Farm Owners to Create Safe Play Areas (National Children's Center for Ag. Health and Safety/NIOSH)	\$ 80,687	10/01/2008 to 09/30/2013
R2P (GPCAH)	\$ 128,350	10/01/2011 to 09/29/2016
Total	\$ 926,981	

I-CASH Presentations/Educational Activities/ Newspaper Publications

July 2012

“Sorting, load out and power washing: Essential jobs, but proceed with caution.” Kelley J. Donham. Iowa Pork Producer Magazine. July 2012.

Farm audit. LaMar Grafft. Successful Farming Initiative, Certified Safe Farm audit. July 2; Fennimore, WI.

Farm audit. LaMar Grafft. Successful Farming Initiative, Certified Safe Farm audit. July 9; Shumway, IL.

“Agricultural trauma.” LaMar Grafft. Presentation at the University of Nebraska Medical Center Agricultural Medicine: Occupational and Environmental Health for Rural Health Professionals course. July 9-12; Omaha, NE.

“Introduction and overview,” “Skin diseases of agricultural workers,” “Zoonotic diseases,” “Case presentations,” “Veterinary pharmaceuticals, biologicals, and antibiotics,” “Physical factors affecting health in agriculture,” and “Cancer in agricultural populations.” Kelley Donham. Presentations at the University of Nebraska Medical Center Agricultural Medicine: Occupational and Environmental Health for Rural Health Professionals course. July 9-12; Omaha, NE.

“Certified Safe Farm training.” LaMar Grafft. Presentation at Amana Farms, Inc. July 26; Amana, IA.

August 2012

“Agricultural safety & health.” LaMar Grafft. Presentation at the University of Iowa Carver College of Medicine. August 20; Iowa City, IA.

“Staying safe at harvest time.” LaMar Grafft. Presentation. August 27; Tama, IA.

“Agricultural safety and health.” The Rural Health and Safety Clinic of Greater Johnson County staff. Demonstrations presented at the Farm Progress Show. August 28-30; Boone, IA.

“Agricultural safety.” LaMar Grafft. Exhibit at the Farm Progress Show. August 28-30; Boone, IA.

September 2012

“Farm Families Alive & Well Newsletter.” I-CASH and GPCAH staff. Vol 18(4). September 2012.

“Building capacity in agricultural safety and health in the world.” Kelley Donham. Presentation at the University of Iowa College of Public Health. September 8; Iowa City, IA.

“Agricultural medicine education, the AgriSafe Network, the Certified Safe Farm: A U.S. model providing structure and service for occupational health in agriculture.” Kelley Donham. Presentation at the Center for Rural Health and Primary Care. September 13; Des Moines, IA.

“Respiratory conditions,” “Skin conditions,” “Veterinary biologicals,” and “Zoonoses.” Kelley Donham. Presentations at Des Moines University. September 29; Des Moines, IA.

October 2012

“Agricultural trauma.” LaMar Grafft. Presentation to the Marengo EMS Department. October 15; Marengo, IA.

“Introduction to agricultural medicine.” Kelley Donham. Presentation at the University of Iowa Carver College of Medicine. October 29; Iowa City, IA.

November 2012

“Grain dust, endotoxin and aflatoxin - What are the health risks?” Kelley J. Donham. Iowa Pork Producer Magazine. November 2012.

“Agricultural trauma.” LaMar Grafft. Presentation at Broadlawn Medical Center. November 1; Des Moines, IA.

“Certified Safe Farm training.” LaMar Grafft. Presentation at Iowa State University. November 7-8; Ames, IA.

“Agricultural safety & health.” LaMar Grafft. Presentation at the University of Iowa Carver College of Medicine. November 12; Iowa City, IA.

“Toward a national agricultural health and safety curriculum: The Iowa consensus process.” Kelley Donham. Presentation to the Building Capacity Curriculum Committee. November 13; Cedar Rapids, IA.

“Certified Safe Farm: 10 years of research to practice.” Kelley Donham. Presentation at the Midwest Rural Agricultural Safety & Health Conference. November 14-16. Cedar Rapids, IA.

“Director’s report, Iowa’s Center for Agricultural Safety and Health.” Kelley Donham. Presentation at the Midwest Rural Agricultural Safety & Health Conference. November 14-16. Cedar Rapids, IA.

“Increased use of personal protective equipment in the Certified Safe Farm program.” Kelley Donham. Poster presentation at the Midwest Rural Agricultural Safety & Health Conference. November 14-16. Cedar Rapids, IA.



“Motivating families to create safe play areas on farms: Baseline data.” Eileen Fisher. Poster presentation at the Midwest Rural Agricultural Safety & Health Conference. November 14-16. Cedar Rapids, IA.

“Overview of Amana Farms/ The Certified Safe Farm program.” Rich Gassman and LaMar Grafft. Presentation at the Midwest Rural Agricultural Safety & Health Conference. November 14-16. Cedar Rapids, IA.

“Reduction in workers compensation claims on a large Iowa farm after completing the Certified Safe Farm program.” LaMar Grafft. Presentation at the Midwest Rural Agricultural Safety & Health Conference. November 14-16. Cedar Rapids, IA.

“Research 2 Practice projects at Midwest agricultural health and safety centers.” Kelley Donham. Presentation at the Midwest Rural Agricultural Safety & Health Conference. November 14-16. Cedar Rapids, IA.

“Research to practice of the Certified Safe Farm: Process and progress.” Kelley Donham. Presentation at the Midwest Rural Agricultural Safety & Health Conference. November 14-16. Cedar Rapids, IA.

“An introduction to agricultural safety and health.” Kelley Donham. Presentation at Iowa State University. November 27; Ames, IA.

December 2012

“Farm Families Alive & Well Newsletter.” I-CASH and GPCAH staff. Vol 19(1). December 2012.

“Psychosocial issues and farmers.” Kelley Donham. Presentation to the University of Iowa College of Nursing, Nurse Practitioner Program. December 7; Iowa City, IA.

“Certified Safe Farm.” LaMar Grafft. Auditor training at Amana Farms, Inc. December 13; Amana, IA.

“Certified Safe Farm.” LaMar Grafft. Auditor training at Amana Farms, Inc. December 17; Amana, IA.

January 2013

“Introduction and overview,” “Veterinary biological & therapeutic occupational hazards,” and “Physical factors (vibration & thermal energy).” Kelley Donham. Presentations at the East Carolina University Agricultural Medicine: Occupational and Environmental Health for Rural Health Professionals course, (Session 1). January 17-18; Greenville, NC.

February 2013

“Intensive livestock production systems: Occupational and environmental concerns.” Kelley Donham. Presentation at Grinnell College. February 6; Grinnell, IA.

“Introduction and overview.” Kelley Donham. Webinar for the Vermont Health Task Force Agricultural Medicine and Occupational Safety Training. February 6.



“Certified Safe Farm.” LaMar Grafft. Auditor training. February 6-8; York, NE.

“Grain safety.” LaMar Grafft. Presentation at the Grain Safety Training. February 22; Bloomington, IL.

“Grain safety.” LaMar Grafft. Presentation at the Grain Safety Training. February 28; Pearl City, IL.

March 2013

“Farm Families Alive & Well Newsletter.” I-CASH and GPCAH staff. Vol 19(2). March 2013.

“Agricultural safety & health.” LaMar Grafft. Presentation at the University of Iowa Carver College of Medicine. March 4; Iowa City, IA.

“Grain safety.” LaMar Grafft. Presentation at the Grain Safety Training. March 27; Will County, IL.

“Grain safety.” LaMar Grafft. Presentation at the Grain Safety Training. March 28; Jacksonville, IL.

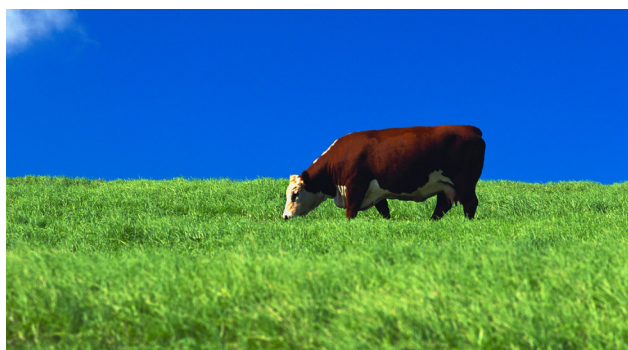
April 2013

“Introduction to prevention in agriculture theories,” “Practical applications & use of personal protective equipment in agriculture,” “Case presentations.” Kelley Donham. Presentations at the East Carolina University Agricultural Medicine: Occupational and Environmental Health for Rural Health Professionals course (Session 8). April 4-5; Greenville, NC.

“Physical environmental factors: Vibrations, heat, cold, noise.” Kelley Donham. Webinar for the Vermont Health Task Force Agricultural Medicine and Occupational Safety Training. April 10.

“Acute agricultural injuries.” LaMar Grafft. Presentation at the Vermont Health Task Force Agricultural Medicine and Occupational Safety Training. April 16-19; Middlebury, VT.

“Cancer in agricultural populations,” “Prevention of agricultural illness and injuries,” “Introduction to farm tours and Certified Safe Farm program assessments,” and “Case presentations.” Kelley Donham. Presentations at the Vermont



Health Task Force Agricultural Medicine and Occupational Safety Training. April 16-19; Middlebury, VT.

“Introduction to farm tours and Certified Safe Farm program assessments,” and “Clinical experience: Farm tours – Assessing farm health and safety issues.” Kelley Donham and LaMar Grafft. Presentations at the Vermont Health Task Force Agricultural Medicine and Occupational Safety Training. April 16-19; Middlebury, VT.

“Iowa’s Center for Agricultural Safety and Health 1990 - 2003: A brief retrospective.” Kelley Donham. Presentation at the Iowa’s Center for Agricultural Safety and Health Spring Meeting. April 23; Ames, IA.

May 2013

“Confined space fatalities an increasing reality in agriculture.” Kelley J. Donham. Iowa Pork Producer Magazine. May 2013.

“Agricultural safety & health.” LaMar Grafft. Presentation at the University of Iowa Carver College of Medicine. May 28; Iowa City, IA.

June 2013

“Farm Families Alive & Well Newsletter.” I-CASH and GPCAH staff. Vol 19(3). June 2013.

“Agricultural medicine: Occupational and environmental health for rural health professionals - Core course.” I-CASH staff. June 10 – 14; 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. Presentation at the International Society for Agricultural Safety and Health. June 23-27; Sandusky, OH.

“Working with a large Iowa farm.” LaMar Grafft. Presentation at the International Society for Agricultural Safety and Health. June 23-27; Sandusky, OH.

“Grain safety.” LaMar Grafft. Presentation at Safety Training. June 28; Champagne, IL.

I-CASH Publications

Donham, KJ. 2013. Challenges to occupational and community health and the environment in animal production and housing: A North American perspective. In A Aland and T Banhazi (Eds.), *Livestock housing: Modern management to ensure optimal health and welfare of farm animals* (pp. 455-481). The Netherlands: Wageningen Academic Publishers.

Donham KJ. Health risks to veterinarians and associated personnel: Handling pharmaceuticals and biologicals. *The Bovine Practitioner* (In press)

Donham KJ, AK Kline, KM Kelly, JL Lange, and RH Rautiainen. 2013. Respirator and hearing protection use in the Certified Safe Farm program. *Journal of Agromedicine* 18(1):18-26.

Humann, MJ, WT Sanderson, KJ Donham, and KM Kelly. 2013. Task-based noise exposures for farmers involved in grain production. *Journal of Agricultural Safety and Health*, 19(2):101-113.

O’Shaughnessy P, T Peters, K Donham, C Taylor, R Altmaier, and K Kelly. 2012. Assessment of swine worker exposures to dust and endotoxin during hog load-out and power washing. *The Annals of Occupational Hygiene* 56(7):843-851

Onwuameze OE, S Paradiso, C Peek-Asa, KJ Donham, and RH Rautiainen. 2013. Modifiable risk factors for depressed mood among farmers. *Annals of Clinical Psychiatry*, 25(2):83-90.

Tonelli S, K Culp, and K Donham. Musculoskeletal disorders in senior farmers: Aging considerations in the safety and health of older farmers in the United States and Canada. *Journal of Agromedicine*. (Submitted)

