

Iowa's Center for Agricultural Safety and Health

*Helping Farmers Stay
Alive and Well*



2009 Annual Report



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

Opening Thoughts From The Director

Celebrating the Twentieth Year of Iowa's Center for Agricultural Safety and Health

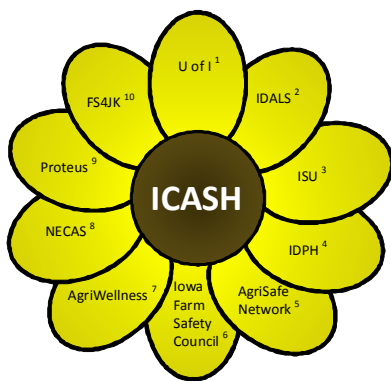


In 1990, the Iowa Legislature passed House File 2548, which created Iowa's Center for Agricultural Safety and Health (I-CASH). Representatives Josephine Gruen and Wendell Pellett led the bill through the process, with assistance from Representative David Osterberg. Osterberg and Representative Paul Johnson were responsible for several University-based centers during the period from 1985 – 1990, including the Leopold Center for Sustainable Agriculture (ISU), the Center for Health Effects of Environmental Contaminants (UI), and the Center for Waste Reduction (UNI).

The development of I-CASH was facilitated by the Agriculture at Risk process (1988 – 1990), which provided a model program of agricultural health and safety for both state and federal governments. Gruen, Pellett, and Osterberg used this model document to draft the I-CASH legislation. The legislation gave general guidelines while the details were developed by an interdisciplinary committee with members from The University of Iowa, Iowa State University, the Iowa Department of Public Health, the Iowa Department of Agriculture and Land Stewardship, and farm organizations. The legislative intent was that I-CASH be an organization consisting of those principle state public institutions. However, as new non-profit organizations came into existence, I-CASH began to serve as an umbrella organization for farm safety and health non-profits, and producer groups.

In 2002, I-CASH underwent a consensus strategic planning process to renew its organization and structure. During the discussion, Dr. Stuart Melvin presented a concept to describe and guide how I-CASH should function. The model was of a sunflower with I-CASH at the center, and overlapping petals representing the connections to Iowa's agricultural safety and health organizations.

As we enter the 20th year of I-CASH's existence, it's time to review and celebrate the sunflower that describes us. The rough diagram used in the past has been renewed into the diagram below to carry us into the third decade of I-CASH. We will use this diagram to promote our collaborative organization, mission, and vision, along with our motto "Helping Farmers Stay Alive and Well."



1. The University of Iowa
2. Iowa Department of Agriculture and Land Stewardship
3. Iowa State University
4. Iowa Department of Public Health
5. AgriSafe Network
6. Iowa Farm Safety Council
7. AgriWellness
8. National Education Center for Agricultural Safety
9. Proteus
10. Farm Safety 4 Just Kids

During 2010, I will continue to use the sunflower to promote Iowa's health and safety organizations. When we look back 20 years, it's apparent that we have come a long way with the development of Iowa as a national leader in agricultural health and safety. We can also celebrate that the numbers, and yes, even the risk rates for agricultural injuries and illness have been reduced from when we started – a tribute to everyone working in a collaborative fashion "helping farmers stay alive and well."

*Kelley J. Donham, MS, DVM
Director, Iowa's Center for Agricultural Safety and Health*

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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.

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.

2009 I-CASH Annual Report

Kay Mohling, Editor

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

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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 the 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, 2009, Iowa had 36,488 certified applicators. There were 12,192 certified commercial applicators, 476 certified commercial handlers, and 23,820 certified private applicators. Certification testing will be held at about 1,250 sites in fiscal year 2009. Approximately 180 private and 255 commercial continuing instruction certification training sessions are expected to be offered by ISU Extension in fiscal year 2010.

www.IowaAgriculture.gov

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. The Pesticide Bureau worked in cooperation with the Iowa Department of Public Health, Proteus Inc., Iowa's Center for Agricultural Safety and Health, EPA, and ISUE to promote WPS compliance.

With matching funds from EPA Region 7 and IDALS, ISUE finalized and launched an online version of the *Worker Protection Standard: Train-the-Trainer Course*. The web-based course provides agricultural employers with information needed to meet the WPS training requirements, and completion of the course is one way employers can meet the

criteria required to deliver WPS training to their employees. Additionally, each county extension office was sent the DVD *Worker Protection Standard for Nursery, Greenhouse, Fruit & Vegetable Growers*. Information was also mailed to agricultural pesticide users informing them of what the WPS is, how it may affect them, and requirements for employee training.

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) continues to work with I-CASH and its partners to promote healthy and safe workplaces for all Iowans, including those living and working in agricultural settings.

This past year the OHSSP took on some new projects, including the coordination of the 2008 Farm Progress Show Health & Safety Tent. OHSSP also worked with the Grow Your Small Market Farm Network to develop a safety and health resource packet for people running agricultural businesses other than traditional grain or livestock farms. Work continues toward an improved surveillance system for ag-related injuries. OHSSP surveillance currently includes tracking injuries and illnesses associated with pesticide and anhydrous ammonia exposures, as well as other environmental hazards. Web site updates are planned for this year, including an opportunity to sign up for periodic updates by email.

www.idph.state.ia.us



Iowa State University

Extension Farm Safety Program

Iowa State University Extension farm safety program and activities that are directed towards I-CASH goals are:

- The Safe Farm radio program produced and distributed 52 weeks of one-minute messages to 66 radio stations, completing 18 years of continuous safety programming efforts.
- ISU Extension organized articles on farm safety issues by involved partners (Farm Safety 4 Just Kids, Iowa Farm Safety Council, ISU, Easter Seals, AgriWellness, National Institute for Farm Safety, National Institute for Occupational Safety and Health, and I-CASH) and distributed them to Iowa's newspapers during National Farm Safety and Health Week.
- ISU Extension staff in two counties offered tractor safety training courses to 42 youth (14 and 15 year-olds) during 2009.
- Twenty-four safety day camps, conducted by extension staff, were held throughout the state reaching 3,581 youth.
- Safety events conducted by extension staff reached 303 participants.

www.abe.iastate.edu/safety

Iowa Concern Hotline

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 19,410 calls from July 2008 to June 2009. Approximately 20% of those calls were from farm and rural families. The number of calls is up this year because of the increase in disaster calls. Iowa Concern helped those who had flood or tornado disaster the past two years, but it has also been instrumental in answering consumer questions and concerns about the H1N1 flu for IDPH.

Farm and rural issues varied this year. In general, the crop situation was good; grain prices were high at the beginning of the year and yields were good. Dairy producers started struggling last winter with lower profits, and since dairy producers also tend to have several family members as part of their operation,

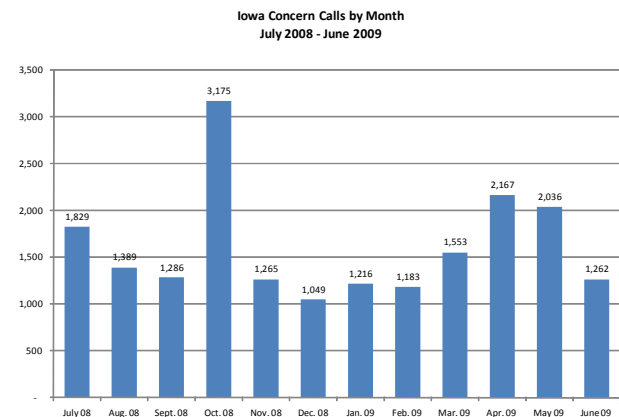
even more stress and family conflict can occur. May and June brought concerns from hog producers about reduced income with hog facilities. Grain prices started to fall late in the year, which helped producers with the cost of feed for livestock, but brought about concerns for grain producers. Wet spring conditions resulted in late planting and concerns that an early Fall frost would be harmful to the crop yield.

Farm and rural families called the Hotline regarding issues such as divorce, contracts, leases, and fence laws. Health insurance was another issue with rural families. Some indicated that a second job they had, or that a spouse held, was cut back or lost causing financial concerns and insurance coverage loss.

Iowa Concern still has funding for behavioral health counseling. The *Sowing the Seeds of Hope* grant continues to provide money for agricultural related families to receive behavioral health counseling. Iowa Concern has the list of providers, and issues vouchers for people to receive up to five free counseling sessions. This service is confidential and counseling providers are available throughout the state. Approximately 87 families have accessed this program during the past year.

Iowa Concern continues to receive questions and concerns through the web site, receiving approximately 8,000 hits per month. The site has FAQ's, 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

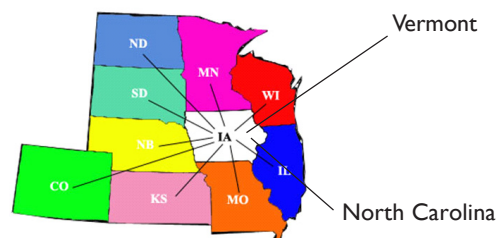
The *Agricultural Medicine: Occupational and Environmental Health for Rural Health Professionals* course was held June 8-12 in Iowa City, IA. Thirty-seven health care professionals attended the training from California, Illinois, Iowa, Kansas, Kentucky, North Carolina, Oregon, Pennsylvania, Texas, Australia, Canada, and Finland. In addition to the didactic training, the participants toured Amana Farms and enjoyed 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 2010 Iowa Agricultural Medicine training will be held June 7-11 in Iowa City.

www.public-health.uiowa.edu/icash/programs/AOHTtraining.htm

Building Capacity of Health and Safety Professionals

Iowa's Center for Agricultural Safety and Health initiated an agricultural medicine training in 1988. The growth of this program was advanced with NIOSH funding from the Great Plains Center for Agricultural Health Building Capacity Project, which aims to establish capacity in other regions to train health providers in agricultural medicine. The primary goal of this education/translation project is to address the critical shortage of agricultural occupational health and safety researchers and program leaders, by educating the next generation of agricultural safety and health specialists through graduate and continuing education programs. In addition to Iowa, Agricultural Medicine training courses have been held in Illinois, North Carolina, Vermont, and Wisconsin. Future training opportunities are planned for health providers in Colorado, Kansas, Minnesota, Missouri, Nebraska, North Dakota and South Dakota.

www.public-health.uiowa.edu/icash/programs/AOHTtraining.htm



Building Capacity States

Certified Safe Farm



The Certified Safe Farm (CSF) program has been an agricultural health and safety intervention research project since 1996. The methods are multifactorial, consisting of occupational health screenings, wellness screenings, on-farm safety evaluations, incentives, and personalized education. The program has been implemented in over 25 Iowa counties. Some of the essential findings include:

- a 47% savings in insurance costs for occupational illnesses and injuries
- an increased use of personal protective equipment
- a 22% reduction in Organic Dust Toxic Syndrome (ODTS) in intervention farmers
- a reduction in bronchitis

The current phase is research to practice within different segments of production agriculture. The applications are in a variety of formats and include studies with senior farmers and large farms, and analysis of insurance claims and workman's compensation. Meetings are being held with representatives from Vermont, North Carolina, and Canada to investigate the possibility of establishing the programs in those locations. The CSF program is one of the few interventions that has shown effectiveness in reducing occupational injuries and illnesses and providing a cost savings in medical care. Our goal is to make CSF sustainable by integrating it into the agricultural infrastructure.

www.public-health.uiowa.edu/icash/CSF

Certified Safe Farm for Large Farms

After a decade of refining the CSF program for family farms, I-CASH has been working with Amana Farms, Inc. of Amana, Iowa to develop a health and safety program for their company utilizing Certified Safe Farm program principles. LaMar Grafft, I-CASH Safety Specialist, is working with Amana Farms to modify CSF for large farms. This experience will aid in the development of a CSF for Large Farms Program that can be implemented in any large-scale agricultural operation which includes both crops and livestock.

The program includes the four main components of the CSF program: 1) occupational health and wellness

screenings, 2) on-farm safety reviews, 3) personalized education, and 4) incentives. In addition, the large farms program concentrates on OSHA compliance issues as well as preparing the operation for applying for OSHA's Voluntary Protection Program.

Since the Amana Farms, Inc. program began in April 2007, I-CASH has completed two rounds of on-farm safety reviews with recommendations for removing the hazards that were found. Several new practices have been implemented such as strategic placement of first aid kits and personal protective equipment. In addition, 11 educational meetings have been presented to the employees.

www.public-health.uiowa.edu/icash/CSF

Comprehensive Assessment of Rural Health in Iowa

The Comprehensive Assessment of Rural Health in Iowa (CARHI) is a project of I-CASH, with funding from the Iowa Department of Public Health (IDPH). The goal of this research is to develop a surveillance system that links health data and environmental contaminants data, using a geographic information system (GIS). The system is designed to test the potential to evaluate relationships between environmental exposures from agricultural and other rural sources, and health outcomes.

A GIS environmental database was created to map potential sources of toxic substance sources. The CARHI team developed a privacy protection tool within the GIS system that will allow the IDPH to collaborate on investigations into the relationship between environmental exposures and health outcomes, while protecting privacy. The main relationship examined is the location of permitted animal confinement facilities and medical diagnoses of persons living in the vicinity of these facilities.

At present, we have found no relationship to the risk for development of a variety of respiratory, gastrointestinal, and other conditions relative to the closeness one lives to the livestock facility. However, a new exposure model using actual measures taken by the Department of Natural Resources has been developed to predict more accurately levels of hydrogen sulfide exposures at various distances from the facility. We are in the process of repeating the analysis with the new model.

Hall of Fame Award

I-CASH named Teresa Mowrer from Guthrie Center, and Pioneer Hi-Bred International Inc., as recipients of its 2008 Hall of Fame Awards. Mowrer organizes the Guthrie County Progressive Agriculture Safety Day™ program, which provides farm safety education for nearly 250 children each year.

Pioneer Hi-Bred has supported programs such as the "Agriculture at Risk" conference, Farm Safety 4 Just Kids, the Progressive Agriculture Safety Day, Certified Safe Farms, the AgriSafe Network, and the Center for International Rural and Environmental Health.

Mowrer and Pioneer Hi-Bred International Inc. were honored in August of 2008 during the WOI-AM midday radio show, which aired live from the Iowa State Fair in Des Moines.

www.public-health.uiowa.edu/Icash/programs/HallOfFame/index.htm



I-CASH Hall of Fame recipient Teresa Mowrer is pictured with Senator Chuck Grassley to her right, Secretary of Agriculture Bill Northey, and I-CASH Director Kelley Donham to her left.



Pioneer Hi-Bred International Director of Risk Management, Jim O'Hare, (center) with Senator Bob Dvorsky, and I-CASH Director Kelley Donham.

Injury Prevention in Agricultural Youth Grant

I-CASH designates funds each year for communities to develop farm injury prevention and education programs for Iowa's youth. The grant program aims at decreasing the risk of illness and injury to young people living on Iowa farms or involved in production agriculture. This year's theme was rural roadway safety. Grant funds were awarded to seven organizations for rural roadway safety projects in their communities.

- Charles City FFA, Charles City, Iowa
- Midland FFA, Wyoming, Iowa
- Humbolt FFA, Humbolt, Iowa
- Grant 4-Her's, Ida Grove, Iowa
- Moscow Friendly 4-H, Moscow, Iowa
- Bluff Creek Wranglers 4-H, Pilot Mound, Iowa
- Town and Country Farm Safety 4 Just Kids, Ackley, Iowa

www.public-health.uiowa.edu/icash/programs/youthgrant/index.htm



Grant 4-Her's from Ida Grove present rural roadway safety information after receiving Ag Youth Grant funds from I-CASH.

Pork Industry Health and Safety Training

I-CASH, with funding from the National Pork Board, has developed an education program for producers on prevention of occupational injuries and illnesses. The Pork Industry Health and Safety Training project is a series of eleven online seminars which can be viewed at www.porktraining.com. This website also provides a location where producers can ask questions and share information on the health and safety of employees. The seminar topics were developed in conjunction with an advisory group of industry representatives, and were presented by I-CASH staff, as well as health and safety professionals from across the country. Pork industry safety employees participated in the education sessions to provide practical commentary to the

presentations. The seminars were focused towards pork production company personnel and safety managers who could then disseminate the information to their employees. Certification was given to those who attended and completed the quizzes for each of the eleven sessions.

www.porktraining.com

Rural Roadway Safety

With over 200 crashes between cars and farm vehicles occurring on Iowa roads each year, rural roadway safety remained a top concern of the I-CASH Producer's Committee. Some drivers, such as new rural residents, are not used to sharing the road with slow-moving farm machinery. Inexperienced drivers may become impatient and attempt to pass farm vehicles in no-passing zones, or pass just as a farm implement is making a left turn into a farmstead. Other rural drivers simply may be traveling too fast and unable to stop in time to avoid a collision. Rural drivers can reduce risks by obeying speed limits and using extra caution during the harvest season. Farmers can reduce risks by making sure they have adequate lighting and marking on farm equipment driven on public roads.

I-CASH continues to coordinate state resources to address the problem. Several Iowa stakeholders attended a regional conference on farm equipment - motor vehicle crash prevention organized by the Great Plains Center Agricultural Health. At the meeting each state developed a draft strategic plan for their state; Iowa stakeholders held a follow-up meeting in July 2009 to revise and prioritize the plan.

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

Safe Play Areas

Nothing can be worse than losing a child. And yet, that is exactly what happens to over 100 farm families each year. About 43% of those fatalities are to children in the 0-9 year age group. Creating safe play areas is a relatively new and promising strategy to reduce these injuries. A new randomized controlled trial among 3 groups will evaluate the effectiveness of two specific interventions to motivate parents to build safe play areas. 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 and the University of Iowa.

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 17th year of the study. During the first five years eligible subjects were enrolled. In 1998 each cohort member was contacted to update exposure information, obtain dietary health questionnaire data, and obtain buccal cells. Phase III, which updates pesticide exposure histories and self-reported diseases, is ongoing and has been completed by over 29,000 Iowans.

The study has resulted in over 100 peer-reviewed publications evaluating methods, exposure assessment, high pesticide exposure events, environmental pesticide measures, farm work-related injuries, and health outcomes. Health outcomes evaluated include mortality, cancer, eye disorders, neurologic symptoms/diseases, respiratory diseases, reproductive abnormalities, diabetes, and immunologic diseases. Abstracts of these publications can be found on the Agricultural Health Study website.

www.aghealth.org

The 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 Program and International Collaborative Trauma and Injury Research and Training Program are funded by the NIH Fogarty International Center. In thirteen years more than 80 young professionals have come to Iowa as Fogarty trainees. Trainees have conducted 45 in-country workshops after returning home, and have received funding from various sources for more than 30 collaborative research projects. The programs have welcomed trainees from Poland, Slovakia, Croatia, Serbia, Macedonia and Romania. Examples of 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 organizes a summer research internship program for minority students in the health sciences. The Minority Health and Health Disparities International Research and Training Program provides minority students from Iowa an opportunity to spend 10-12 weeks at a foreign research institution. The students are able to work with mentors in a laboratory setting, and also have the chance to participate in field trips. Students have traveled to Slovakia, Poland, The Gambia, Romania, Australia, Thailand, Ghana, China, and Cameroon.

www.public-health.uiowa.edu/Cireh

Environmental Health Sciences Research Center



The Environmental Health Sciences Research Center (EHSRC), established in 1990, is one of 26 NIEHS-funded Core

Centers of Excellence, and the only one located in the Midwest. Comprised of 56 faculty and 25 staff, the EHSRC is at the forefront of research in environmental lung disease, inflammation and innate immunity, and oxidative stress. The Center recently added research initiatives in the fields of environmental genomics and nanotoxicology. Health concerns such as community and occupational exposures to airborne hazards from concentrated livestock feeding operations, asthma among rural children, and exposures to agricultural chemicals, radon, and bioaerosols are among the many issues currently under study by Center investigators. The EHSRC also operates a pilot grant program and an enrichment program. In January 2009, the Center co-hosted an educational workshop for state legislators, "Environment, Health and the Future in the Central USA: 2009 Policy Summit" in Chicago, IL.

www.ehsr.org

Great Plains Center for Agricultural Health

The Great Plains Center for Agricultural Health (GPCAH) serves America's most agriculturally intensive region, Iowa, Missouri, Kansas, Nebraska, Illinois, Wisconsin, Minnesota, South Dakota, and North Dakota. The GPCAH advances knowledge about agricultural injuries and illnesses through its research activities, education, outreach, and intervention efforts.



The Keokuk County Rural Health Study (KCRHS) is a prospective cohort study of approximately 1,000 rural Iowa families for over 15 years. The study has focused on the association between rural life exposures and risk factors for respiratory disease, injuries, mental illness, and hearing loss.

Building Capacity of Health and Safety Professionals is a GPCAH Education and Translation project that has played a major role in training health and safety professionals on agricultural hazards and ways to prevent disease and injury. The Agricultural Medicine course has been presented in Iowa, Illinois, North Carolina, Vermont, and Wisconsin with additional courses projected for health providers in Colorado, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota. With support from this project, a PhD, MS and certificate training program in agricultural safety may now be earned through the University of Iowa College of Public Health.

The Determinants of Gas and Dust Exposures Among Swine Workers Study provided results from swine facilities confirming that tasks such as moving pigs during winter conditions, (when air flow rates are low), produce the greatest exposure levels. These conditions produced dust concentration and endotoxin levels above the recommended levels. This research will lead to recommendations for respirator use among swine workers for tasks and time periods that pose the greatest risk.

The Pilot/Feasibility Projects program has funded the development of new and creative research projects which show promise of leading to more comprehensive studies. Projects funded in the last funding cycle include research on the Rural Health Initiative, rural roadway safety, evaluating noise exposures of rural youth, and an evaluation of farm crisis services.

Outreach opportunities included a first-of-its-kind Farm Equipment – Motor Vehicle Crash Prevention Conference in March 2009. Participants from upper Midwest states with interest and expertise in farm equipment vs. motor vehicle crash prevention were invited to attend this conference, which produced state-based action plans. The *Farm Families Alive & Well* newsletter and distribution of press clippings (Farm and Agricultural Injury Monitoring System-FAIMS) accounts of farm and agricultural injuries provide additional outreach in the 9-state GPCAH region.

www.public-health.uiowa.edu/gpcab

Injury Prevention Research Center



Since 1990, the University of Iowa Injury Prevention Research Center (IPRC) has been a national leader in identifying ways to reduce the high number of preventable injuries that occur in rural communities. Faculty and staff from sixteen departments within the Colleges of Public Health, Medicine, Engineering, and Liberal Arts participate on research in the Center. In addition to supporting research, the IPRC also serves as a national resource for rural injury prevention.

The Center provides information, educational programs, and multi-disciplinary training to injury control advocates and programs across the Midwest.

The Center currently has several research and policy initiatives focused on preventing crashes among young drivers. The IPRC is also part of a statewide coalition encouraging the strengthening of Iowa's Graduated Drivers License (GDL) law.

In the summer of 2009, the IPRC in collaboration with the Iowa Department of Public Health published the first Burden of Injury in Iowa that provides state and county level data on the leading causes of injuries to Iowans. This report and other information can be found on the IPRC website.

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. 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 2008, 88 fatal incidents resulted in a total of 90 traumatic deaths to persons while at work (29 were ag related). All but four of the occupational deaths in Iowa during 2008 were males. The victims tend to be older with 30% being 60+ years of age. Four of the victims were less than 21 years old.

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 grassroots national organization representing rural health professionals who serve the unique health care needs of farmers. Member benefits include:

- continuing education via workshops and webinars
- educational and clinical resources
- technical assistance
- marketing benefits
- network opportunities with other clinicians
- updates on cutting-edge developments in agricultural health and safety

AgriSafe's core strength is based upon the professional standards required to deliver AgriSafe services. Only health professionals who have received extensive training in the field of agricultural health can become AgriSafe Providers. AgriSafe's aim is that farmers across the country will have access to AgriSafe Providers, and that local clinician will provide superior disease management and prevention services to match the farmer's specific exposures. AgriSafe has 57 members located in 16 states and internationally in Canada and Australia. To learn more about developing AgriSafe services in your community visit the AgriSafe website.

www.agrisafe.org

AgriWellness, Inc.



AgriWellness, Inc. is a nonprofit organization with the mission to "promote accessible behavioral health services for underserved and at-risk populations affected by rural crisis in agricultural communities."

In 2008, AgriWellness continued the Sowing the Seeds of Hope (SSoH) behavioral health support program along with its state partners in each of seven states: Iowa, Kansas, Minnesota, Nebraska, North Dakota, South Dakota and Wisconsin. During 2008 the SSoH program provided services to 16,590 helpline callers,

vouchers for professional behavioral health services to 4,314 people, and trained 697 professional providers.

AgriWellness also began a three-year comprehensive promotional campaign for SSoH services in North Dakota and Minnesota, with funding from the Otto Bremer Foundation. This project includes conducting a needs assessment to determine the extent of behavioral health issues among Minnesota's agricultural population, development and implementation of online stress management modules in Minnesota, and the development of a pilot agricultural behavioral health curriculum.

www.agriwellness.org

Farm Safety 4 Just Kids



Farm Safety 4 Just Kids (FS4JK) is a non-profit organization that produces and distributes farm safety and health resources. A chapter network of volunteers in 139 locations throughout the United States and Canada deliver programs to children, youth, and their families. The following activities were provided by FS4JK in 2009:

- Ten regional farm safety and health workshops sponsored by USDA Risk Management Agency took place in CA, DC, FL, GA, OK, MD, NC, and NM
- FS4JK chapter assessments and focus groups sponsored by USDA Cooperative State Research, Education, and Extension Service took place in CO, FL, IL, KY, MN, MO, NE, NY, OH, and TX
- FS4JK Outreach Coordinators in IA, IL, IN, KS, MN, MO, OH, and TN conducted safety and health educational programs
- *Successful Farming*® magazine sponsored ten Farm Family Grants through FS4JK
- FS4JK published the article "Youths Operating All-Terrain Vehicles: Implications for Safety Education" in the April/June 2009 issue of *Journal of Agromedicine*

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 and the Iowa State Fair. 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) provides educational and interactive training programs for agriculture production workers, farm and ranch families, ag businesses and related industries. NECAS developed the theme for the 2008 National Farm Safety and Health Week (NFS&HW) "Farm Safely... Protect YOUR Investment" that focused on farmers taking care of themselves with personnel protective equipment. It is estimated that the NFS&HW information reached 39 million.



Photos courtesy of NECAS

A partnership brought a grain engulftment simulator to NECAS to train others on prevention and rescue strategies.



A safety specialist in the grain bin engulftment simulator during training.

The center placed a new ATV into service and will be developing hands-on safety training for ATV farm operators. A new 50-foot grain leg was built and attached to our existing grain bin structure and a new mobile grain engulftment

simulator will be on the road in spring 2010 to teach grain safety and grain bin rescue.

NECAS continues to serve the needs of farmers, ranchers, and agribusiness personnel with safety and health programs, as well as ag rescue techniques to rural volunteer firefighters and EMS personnel.

www.necasag.org

Proteus, Inc.



Proteus, Inc. is a not-for-profit organization that since 1990 has operated the Bureau of Primary

Health Care-funded Migrant Health Project in the state of Iowa. From offices located in Des Moines, Fort Dodge, and Iowa City, Proteus provides outreach, home visits, and clinics around the state for migrant and seasonal farm workers. After farm worker families are certified as eligible, Migrant Health Aides conduct health histories and the families are seen by the Project's Physician Assistants (PA), student PAs, volunteer providers, or contracted providers. Proteus conducts clinics and educational activities at sites such as migrant camps and employer sites. Each year, 1,000 to 2,000 migrant farmworkers come to Iowa to work. Iowa is also home to as many as 10,000 low income seasonal farm workers. These individuals reside in Iowa throughout the year and perform seasonal agricultural work, work in hog confinement operations, egg production, or are employed as general farmhands.

In 2008 the Proteus Migrant Health Project served over 1,700 farmworkers in Iowa and Proteus anticipates serving the same number in 2009. Over the past 3 years, the National Farmworker Jobs Program was able to provide support for Workplace and Pesticide Safety training for over 300 migrant farmworkers utilizing the EPA curriculum and issuing certification cards.

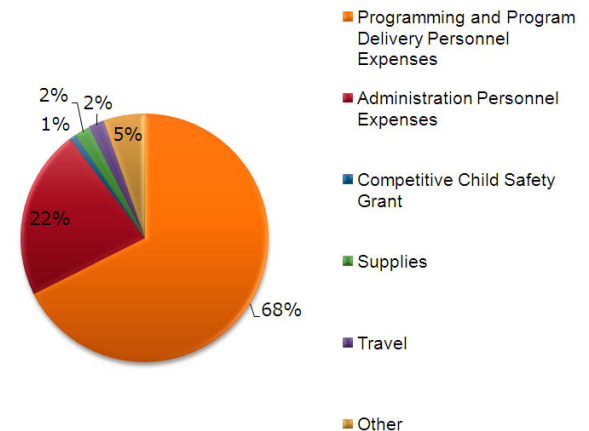
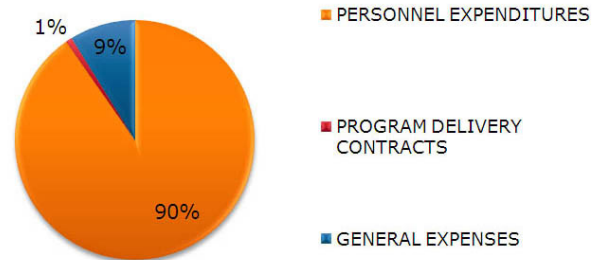
www.proteusinc.net

Financial Report

The I-CASH budget consists of FY 2009 state funds, plus competitive grant and contract funds listed below. The following table and graphs 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
Programming and Program Delivery	168,342	169,689
Administration	54,559	55,604
Total Personnel Expenditures	222,901	225,293
PROGRAM DELIVERY CONTRACTS		
Competitive Child Safety Grant	2,000	2,100
Total Program Delivery Contracts	2,000	2,100
GENERAL EXPENSES		
Supplies	3,000	5,093
Travel	3,000	5,174
Other: Includes computer system support, required semi-annual meetings, outreach materials, annual report, telephone and newsletters	18,515	13,363
Carry-over deficit to FY10		(1,607)
Total General Expenses	24,515	22,023
TOTAL BUDGET	249,416	249,416

Actual FY 2009 Expenditures



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

	Annual Total	Project Term
Certified Safe Farm: Evaluating Health Insurance Claims (US Dept. of Health and Human Services, CDC, Pioneer, Monsanto, Iowa Farm Bureau Federation)	\$ 250,087	09/01/2003 to 08/31/2008
ERC Ag (Heartland Center for Occupational Health and Safety)	\$ 118,000	07/01/2002 to 06/30/2013
GPCAH Building Capacity	\$ 152,498	09/30/2006 to 09/29/2011
GPCAH Swine Worker Exposure	\$ 165,763	09/30/2006 to 09/29/2011
Motivating Farm Owners to Create Safe Play Areas (National Children's Center for Agricultural Health and Safety/NIOSH)	\$ 82,452	10/01/2008 to 09/30/2013
Pork Industry Training (National Pork Board)	\$ 25,000	12/01/2007 to 12/01/2008
Total	\$ 793,800	

I-CASH Presentations/ Educational Activities/ Newspaper Publications

July 2008

“Tractorcades require caution for both riders and spectators.” L Grafft. *The Gazette*, July 13, 2008.

“Tractorcade raises safety issues.” L Grafft. *Iowa Farmer Today*, July 26, 2008.

August 2008

“Rural intersections turned blind by tall corn.” L Grafft. *The Gazette*, August 10, 2008.

“Agricultural medicine: Occupational and environmental health for rural health professionals Building Capacity Project.” I-CASH staff. Poster display at the NIOSH conference. August 11; Cincinnati, OH.

Farm safety display. L Grafft. Exhibit at the Iowa State Fair. August 14; Des Moines, IA.

“Intersections and tall corn a dangerous mix.” L Grafft. *Iowa Farmer Today*, August 16, 2008.

“Hazard communication.” L Grafft. Online presentation to the Pork Industry Training Program. August 21; Iowa City, IA.

“Agricultural medicine: Occupational and environmental health for rural health professionals Building Capacity Project.” I-CASH staff. Poster display at the Iowa Farmer’s Union Annual Meeting. August 28-29; Marshalltown, IA.

September 2008

“Prepare for a safe harvest.” L Grafft. *The Gazette*, September 14, 2008.

“Check equipment before hitting field.” L Grafft. *Iowa Farmer Today*, September 20, 2008.

“Agricultural medicine training: Session I.” K Donham, L Grafft. September 25-26; Stowe, VT.

October 2008

“Agricultural health certificate program”, “Certified Safe Farms”, “Dust control in swine buildings.” K Donham. Presentations to the Worker Safety Round Table of the National Pork Board. October 4; Memphis, TN.

“Respiratory hazards and prevention in production agriculture.” K Donham. Presentation at Amana Society Farms. October 9; Amana, IA.

“Iowa takes caregiver education to Vermont.” L Grafft. *The Gazette*, October 12, 2008.

“Avian influenza: The next pandemic.” K Donham. Presentation at the North American Agromedicine Consortium. October 15-17; Tuscaloosa, AL.

“Farm trauma.” L Grafft. Presentation at the University of Iowa Carver College of Medicine. October 16; Iowa City, IA.

“A look at foreign safety practices.” L Grafft. *Iowa Farmer Today*, October 18, 2008.

“Airborne antibiotic concentrations in a swine feeding operation.” M Murphy, W Sanderson, J Vargo. Presentation at the 6th International Symposium - Public Health and the Agricultural Rural Ecosystem (PHARE) Conference. October 19-22; Saskatoon, Saskatchewan, Canada.

“Atrazine levels inside rural Iowa farm homes.” V Golla, W Sanderson, B Curwin. Presentation at the PHARE Conference. October 19-22; Saskatoon, Saskatchewan, Canada.

“Challenges of conducting a large rural prospective population-based study: The Keokuk County Rural Health Study.” A Stromquist, K Kelly, L Burmeister, C Zwerling, J Merchant. Presentation at the PHARE Conference. October 19-22; Saskatoon, Saskatchewan, Canada.

“Children’s play areas on farms in the Keokuk County Rural Health Study.” E Fisher. Presentation at the PHARE Conference. October 19-22; Saskatoon, Saskatchewan, Canada.

“Economic and social factors affecting agricultural safety and health: Large farms - health and safety regulations.” K Donham, R Rautiainen, A Kline, L Grafft, P O’Shaughnessy, P Gundersen. Presentation at the PHARE Conference. October 19-22; Saskatoon, Saskatchewan, Canada.

“Effectiveness of the agricultural occupational health service program in reducing injury claims in Finnish agriculture.” R Rautiainen, J Ledolter, R Ohsfeld, K Donham, C Zwerling. Presentation at the PHARE Conference. October 19-22; Saskatoon, Saskatchewan, Canada.

“Effectiveness of the Certified Safe Farm on-farm safety review process in identifying and removing injury and illness hazards on the farm.” R Rautiainen, L Grafft, A Kline, M Madsen, J Lange, K Donham. Presentation at the PHARE Conference. October 19-22; Saskatoon, Saskatchewan, Canada.

“Exposure assessment surveys of rural Iowa farm homes: The Keokuk Rural Health Study.” W Sanderson, K Kelly, A Stromquist, J Merchant. Presentation at the PHARE Conference. October 19-22; Saskatoon, Saskatchewan, Canada.

“Pesticide use and exposure risks for vector control activities in The Gambia.” M Murphy, W Sanderson. Presentation at the PHARE Conference. October 19-22; Saskatoon, Saskatchewan, Canada.

“The relationship between rural adolescents’ risk behaviors and mental health and the risk behaviors and mental health of their parents.” A Stromquist, K Kelly, L Burmeister, C Zwerling, J Merchant. Presentation at the PHARE Conference. October 19-22; Saskatoon, Saskatchewan, Canada.

“Storage safety training.” L Grafft. Presentation at Amana Farms. October 30; High Amana, IA.

November 2008

“Cold weather coming – a new season with different health problems: Carbon monoxide – case in point.” K Donham. *Iowa Pork Producer*, a publication of the Iowa Pork Producers Association. November 2008.

“Understanding agricultural injuries.” L Grafft. Presentation at the University of Iowa Carver College of Medicine. November 5; Iowa City, IA.

“Mechanism of injury-farm trauma.” L Grafft. Presentation at the University of Iowa. November 7; Iowa City, IA.

“Practice fall roadway safety.” L Grafft. *The Gazette*, November 9, 2008.

“Agricultural medicine training: Session II.” K Donham, L Grafft. November 13-15; Hartford, VT.

“Tips to curb fall roadway dangers.” L Grafft. Iowa Farmer Today, November 15, 2008.

“Agricultural safety & health.” L Grafft. Presentation at the University of Iowa Carver College of Medicine. November 17; Iowa City, IA.

“What a rural doctor should know about the occupational and environmental health and safety issues of their farm patients.” K Donham. Presentation at the University of Iowa Carver College of Medicine. November 17; Iowa City, IA.

“Certified Safe Farms for sustainable agriculture.” K Donham. Presentation at the Midwest Rural Agricultural Safety and Health (MRASH) Forum. November 20-21; Davenport, IA.

“Characterizing lighting and marking of the current farm equipment fleet.” M Madsen. Presentation at the MRASH Forum. November 20-21; Davenport, IA.

“Children’s play areas on farms in the Keokuk County Rural Health Study.” E Fisher. Presentation at the MRASH Forum. November 20-21; Davenport, IA.

“Effective intervention to increase PPE use: Certified Safe Farm research to practice.” K Donham. Presentation at the MRASH Forum. November 20-21; Davenport, IA.

“Farm and agricultural injury accounts in press clippings for GPCAH region.” M Madsen. Presentation at the MRASH Forum. November 20-21; Davenport, IA.

“Injuries from farm animals.” W Sanderson. Presentation at the MRASH Forum. November 20-21; Davenport, IA.

“Machinery dealers’ perspectives on installation of ROPS on tractors.” K Donham. Presentation at the MRASH Forum. November 20-21; Davenport, IA.

“Motor vehicle crashes with farm equipment on GPCAH region’s roadways.” M Madsen. Presentation at the MRASH Forum. November 20-21; Davenport, IA.

“NIOSH tractor initiative: Where’s the beef?” W Sanderson. Presentation at the MRASH Forum. November 20-21; Davenport, IA.

December 2008

“What clinicians need to know about rural/farm patients.” K Donham. Presentation at Iowa Lutheran Hospital. December 10; Des Moines, IA.

“Teaching youth to be safe.” L Grafft. The Gazette, December 14, 2008.

“Teaching safety can produce results in families.” L Grafft. Iowa Farmer Today, December 20, 2008.

January 2009

“Ice is with us again.” L Grafft. The Gazette, January 11, 2009.

“Resolve to keep kids safe in ‘09.” L Grafft. Iowa Farmer Today, January 17, 2009.

“Developing capacity for training agricultural medicine in rural America.” K Donham. Presentation at the National Institute for Farm Safety. January 23; Charlottesville, NC.

“Producing pork with employee and public health in mind”, “Respiratory and auditory challenges of production workers.” K Donham. Presentations at the Iowa Pork Congress Annual Meeting. January 29; Des Moines, IA.

February 2009

“Common sense to safety.” L Grafft. The Gazette. February 15, 2009.

“Safety is every farmer’s first responsibility.” L Grafft. Iowa Farmer Today, February 21, 2009.

March 2009

“AgriSafe Network: Preventive healthcare for agricultural producers.” K Donham. Iowa Pork Producer, a publication of the Iowa Pork Producers Association. March 2009.

“Agricultural occupational health: What the health care providers need to know about the risks of their farm patients.” K Donham. Presentation at the University of Iowa Carver College of Medicine. March 2; Iowa City, IA.

“Rural public health and agricultural medicine.” K Donham. Presentation at the University of Iowa Carver College of Medicine. March 3; Iowa City, IA.

“Avoid tractor runovers.” L Grafft. The Gazette, March 8, 2009.

“Amana Farms: Right to know.” L Grafft. Presentation at Amana Farms. March 19; High Amana, IA.

“Respiratory and hearing risks in pork production workers.” K Donham. Presentation to the National Pork Board. March 19; Clive, IA.

“Spring safety training.” L Grafft. Presentation at Amana Farms. March 19; High Amana, IA.

“Avoid runovers and crushing.” L Grafft. Iowa Farmer Today, March 21, 2009.

“Agricultural medicine: Occupational and environmental health for rural health professionals. A Kline. Poster exhibit at the Occupational Health Symposium, March 26; Iowa City, IA.

April 2009

“Human resources, workplace safety, employee training.” K Donham. Presentation to the National Pork Board. April 4; Clive, IA. Farm safety display. L Grafft. Exhibit at the Iowa Public Health Conference. April 7-8; Ames, IA.

“Agricultural medicine: Occupational and environmental health for the health professions.” K Donham. Presentation at the Iowa Physician Assistant Society Continuing Medicine Education Conference. April 21-22; Des Moines, IA.

“Chemical safety important for producers, environment.” L Grafft. Iowa Farmer Today, April 25, 2009.

“Agricultural safety & health.” L Grafft. Presentation at the University of Iowa Carver College of Medicine. April 27; Iowa City, IA.

May 2009

“Employee health and safety: A critical component to the triple bottom line.” K Donham. Iowa Pork Producer, a publication of the Iowa Pork Producers Association. May 2009.

“Safety around antique tractors.” L Grafft. Presentation to the Two Cylinder Club. May 11; Troy Mills, IA.

“Spring crunch time.” L Grafft. *The Gazette*, May 16, 2009.

“Spring key time to play it safe as planting continues.” L Grafft. *Iowa Farmer Today*, May 16, 2009.

“A task-specific assessment of swine worker exposure to airborne dust.” P O’Shaughnessy, T Peters, K Donham, R Altmaier, C Taylor, K Kelley. Presentation at the American Industrial Hygiene Conference and Exposition. May 30-June 4; Toronto, Ontario, Canada.

June 2009

Agricultural medicine training. I-CASH staff. June 8-12; Iowa City, IA.

“Children’s play areas on farms in The Keokuk County Rural Health Study.” E Fisher. Poster exhibit at the National Institute for Farm Safety, (NIFS) Inc. Annual Conference. June 14-18; New Orleans, LA.

“A complete safety program for a large Iowa farm.” L Grafft, A Kline, R Rautiainen, K Donham. Presentation at the NIFS, Inc. Annual Conference. June 14-18; New Orleans, LA.

“Effectiveness of the Finnish farmers’ occupational health service in reducing injuries and injury costs.” R Rautiainen, K Donham, R Ohsfeldt, J Ledolter, C Zwerling. Presentation at the NIFS, Inc. Annual Conference. June 14-18; New Orleans, LA.

“Formal ag safety and health education.” L Grafft. Presentation at the NIFS, Inc. Annual Conference. June 14-18; New Orleans, LA.

“Improving the health and safety of women vegetable farmers in The Gambia, (West Africa).” L Vanderwal, R Rautiainen, R Kuye, K Donham, C Peek-Asa, T Cook, M Ramirez, K Culp. Presentation at the NIFS, Inc. Annual Conference. June 14-18; New Orleans, LA.

“Incorporating the Certified Safe Farm intervention in the Shawano County Rural Health Initiative.” L Schiller, K Donham, T Anderson, R Strebel, D Dingeldein. Presentation at the NIFS, Inc. Annual Conference. June 14-18; New Orleans, LA.

“Noise exposure among rural youth.” M Humann, W Sanderson, G Moore, G Flamme. Poster exhibit at the NIFS, Inc. Annual Conference. June 14-18; New Orleans, LA.

“Online, interactive health and safety training series for the pork industry.” A Kline, R Rautiainen, L Grafft, K Donham. Presentation at the NIFS, Inc. Annual Conference. June 14-18; New Orleans, LA.

“Task variability in dust exposure to workers in swine buildings.” K Donham, P O’Shaughnessy, T Peters, K Kelley, R Altmaier, C Taylor. Presentation at the NIFS, Inc. Annual Conference. June 14-18; New Orleans, LA.

“Toward the future of agricultural health and safety: Emerging educational programs.” K Donham, L Grafft, K Mohling, E Fisher, R Rautiainen, A Kline. Presentation at the NIFS, Inc. Annual Conference. June 14-18; New Orleans, LA.

“Zoonotic influenza: Swine, avian, human, horses, and dogs.” K Donham. Presentation at the NIFS, Inc. Annual Conference. June 14-18; New Orleans, LA.

“Summer is here; Be wary of heat, sun exposure.” L Grafft. *Iowa Farmer Today*, June 24, 2009.

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Donham KJ. Introduction to the conference “The Changing Face of Agricultural Health and Safety: Biofuels, Food Safety, and Alternative Agriculture.” *J Agromedicine* 13(4):205-206, 2008.

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Gillette JC, Stevermer CA, Meardon SA, Derrick TR, Schwab CV. Upper extremity and lower back torques during carrying tasks in farm children. *J Applied Biomechanics* 25:149-155, 2009.

Karttunen JP, Rautiainen RH. Work ability index among Finnish dairy farmers. *J Agricultural Safety and Health* 15(4):353-364, 2009.

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Schwab CV, Stabler D, Abbott B. The Mystery Club: METH – Steer clear, stay safe. Iowa State University Extension publication Pm-2069A, 2009.

Stromquist AM, Merchant JA, Zwerling C, Burmeister LF, Sanderson WT, Kelly KM. Challenges of conducting a large rural prospective population-based cohort study: The Keokuk County Rural Health Study. *J Agromedicine*. 14(2):142-149, 2009.

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