



# I-CASH

2005 Annual Report



## *Helping Farmers Stay Alive and Well*



A PARTNERSHIP OF  
THE UNIVERSITY OF IOWA  
IOWA STATE UNIVERSITY  
IOWA DEPARTMENT OF PUBLIC HEALTH  
IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP

# *IOWA'S CENTER FOR AGRICULTURAL SAFETY AND HEALTH*

## *2005 Annual Report*

**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.*

### **2005 I-CASH Annual Report**

Kay Mohling, Editor

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# Opening Thoughts From The Director

## ***Hurricane Katrina & Agricultural Injuries and Illnesses: Acute Tragedy and Chronic Tragedy***



On August 29<sup>th</sup> and the following months, the international media was filled with images of wind, floods and human misery left in the wake of Hurricane Katrina. Estimates indicate 579 people lost their lives in metropolitan New Orleans. This media coverage and response to the acute tragedy of Katrina are in stark contrast to the chronic tragedy that occurs on farms and ranches across the country. Every year our nation's agricultural communities experience the equivalent of one Katrina in terms of death loss. In Iowa alone, the annual number of agricultural related fatalities is equal to approximately one-tenth of a Katrina. However, there are no newspaper headlines, television cameras, or outpouring of public and private responses devoted to agricultural injuries or illnesses.

Chronic problems, (and familiarity), breeds acceptance. I bring up this dichotomy of response to tragedies, to remind us of the importance of the I-CASH vision "to make Iowa the world's healthiest and safest agricultural environment in which to live and work." To reach this goal we must have vigilance in our work, and we must continue collaboration and coordinated efforts with our public and private partners.

I use an analogy to Maslow's Hierarchy of Needs to suggest how most farm families prioritize health and safety, which usually follows in relative importance after basic food and shelter, economic security, children and family health, and necessities for the farm operation. Only after the basic needs have been secured, can the family and farm worker focus on their farm wellness and risk reduction. Therefore, our job is to find ways to reposition health and safety as a more fundamental concern of the farm family and agricultural enterprises. One way is to find immediate incentives for agricultural health and safety. For large farm operations, the National Pork Board has been working on a new set of educational materials to help implement safety programs. One of the driving forces for large companies is to assure they are in compliance with OSHA regulations.

However, there are 90,000 farms in Iowa that are not generally subject to OSHA. Therefore, different incentives have to be developed to raise the value of farm health and safety. Money is a good incentive, and programs like Certified Safe Farm are an example. We have shown that participation in this program saves 47% of the cost incurred by occupational injuries and illnesses. The program can pay for itself, and put money in the pocket of the farmer.

It is unlikely that the chronic problem of farm health and safety in agriculture will ever have the publicity and urgency of a Hurricane Katrina, even though the disasters are somewhat equivalent. However, we cannot accept and become complacent about the chronic tragedy of agricultural occupational injury and illness. Therefore, we must design and invest in new programs that can be integrated into agricultural enterprises, and raise the value of farm health and safety. Then perhaps we can make greater strides toward our goal of making Iowa the world's healthiest and safest agricultural environment in which to live and work.

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

# I-CASH Partner Programs

*The following are brief descriptions of major 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 (ISU) Extension 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, 2005, Iowa had 11,743 certified commercial applicators, 441 certified commercial handlers, and 26,227 certified private applicators.
- Certification testing will be held at about 1,875 sites in fiscal year 2006.

[www.agriculture.state.ia.us](http://www.agriculture.state.ia.us)

### 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 provided the Iowa Department of Public Health with a new brochure developed by EPA Region VII and the 4 Region VII States. "Iowa Pesticides - Tips & Complaints" was produced in both English and Spanish, and was distributed at migrant camps throughout Iowa.

- The Pesticide Bureau and ISU Extension provided training on pesticides and pesticide labeling to the Iowa Statewide Poison Control Center. The training stressed getting the EPA registration number from callers on pesticide related incidents, as the number is a unique identifier for specific pesticide products.
- With matching funds from EPA and IDALS, ISU Extension developed and distributed WPS training materials, held presentations for agricultural employers, developed WPS training activities for certified private applicators, updated a pesticide safety publication, and developed a new PPE glove publication.

[www.extension.iastate.edu/pme/pat/workerprotection](http://www.extension.iastate.edu/pme/pat/workerprotection)

## Iowa Department of Public Health

### Agricultural Injury Registry

The Iowa SPRAINS program has provided valuable insight into Iowa's agricultural-related morbidity and mortality since its inception in 1990.

Agricultural injury surveillance has four objectives:

- 1) provide descriptive epidemiologic associations for contemporary agricultural injury;
- 2) identify high-risk groups and high-risk circumstances for injury;
- 3) identify potential educational, regulatory, and engineering intervention strategies to prevent farm injury; and
- 4) evaluate the effectiveness of established intervention control measures.

These data continue to be used by injury prevention specialists for grant proposals, and are used to focus data-driven interventions on specific high-risk groups.

[www.idph.state.ia.us](http://www.idph.state.ia.us)

# Iowa State University

## Farm Safety Program

The activities of the Iowa State University Extension farm safety program are directed towards five major goals. These activities are:

- The Safe Farm radio program produced and distributed 52 weeks of one-minute messages to 68 radio stations.
- ISU Extension organized articles on farm safety issues by involved partners (AgriWellness Inc., Farm Safety 4 Just Kids, University of Iowa, Iowa Department of Public Health, Iowa Farm Safety Council, ISU, and Sharing Help Awareness United Network) and distributed them to Iowa's newspapers during National Farm Safety and Health Week, September 19-25, 2004.
- ISU Extension staff in four counties offered tractor safety training courses to 46 youth (14 and 15 year-olds) during 2005.
- Safety day camps conducted by extension staff were held throughout the state. A total of 16 counties participated, reaching 2,307 youth.
- Agricultural safety meetings that reached 720 participants were conducted in 16 counties by extension staff.
- A monthly electronic farm safety newsletter was produced and distributed to 101 educators.

[www.abe.iastate.edu/safety](http://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 11,777 calls from July 2004 through June 2005; approximately 25% of the calls were from farm and rural families.

Although farm prices were more encouraging this year, some families were struggling with debt; the calls demonstrated that families were concerned with their



financial condition. Some of the rural and farm families had lost a second or third job that helped support their farm operation and/or paid for insurance benefits. Some had credit card and school loan debt. These families were struggling to make decisions about whether to stay on the farm or to leave. Many were dealing with family conflicts on an intergenerational farm, and issues of who would leave the farm operation and who would make farm decisions. Other situations encountered on the hotline included legal problems with divorce, child custody issues, the Iowa fence law, contracts, and landlord/ lease cases.

Again this year, Iowa Concern was fortunate to have access to the *Sowing the Seeds of Hope Grant*. This grant is part of a seven state project that is available for farm families. Vouchers are issued through the Iowa Concern Hotline for families to take to providers for up to five free counseling sessions. This grant is funded through the US Department of Health and Human Services Office of Rural Health Policy and the Bureau of Primary Health Care. Funds will be available through 2006.

Iowa Concern continues to receive 7,000-8,000 visits each month on their web site. The site has many of the frequently asked questions that people might ask on the phone, features success stories, and a Live Personlink.

[www.extension.iastate.edu/iowaconcern](http://www.extension.iastate.edu/iowaconcern)

## Private Pesticide Applicator Statewide Training Program

Federal and state laws require that people who purchase and apply restricted use pesticides be certified according to established standards. Iowa

State University Extension delivers training programs each year for private pesticide applicators (primarily farmers).

The topics for training include:

- laws, including review of the Worker Protection Standard, and recordkeeping rules;
- water quality issues and endangered species;
- Agricultural Health Study update;
- label review of seed treatment chemicals; and
- crop pest topics including Asian soybean rust.

Statewide, 330 meetings were conducted with 18,865 participants.

To determine if there was an impact on the participants after training, evaluations assessed behavioral changes toward safer pesticide-use practices. After receiving training, the participants were asked if they would update required information on their restricted-use pesticide application records. Forty-nine percent said they had adopted this practice prior to training, 40% said they would adopt because of the training and 11% said they chose not to adopt this practice or it did not apply to them.

In addition, the evaluation examined if participants had successfully implemented new pesticide safety activities as a result of the previous year's training. When asked if they kept a clean set of personal protective equipment in the cab of their tractor, 65% of the respondents indicated that they had adopted this practice, whereas 26% said they did not, and 9% said that this practice did not apply to them.

[www.extension.iastate.edu/PME](http://www.extension.iastate.edu/PME)



## The University of Iowa

*Projects led by I-CASH core faculty and staff*

### Agricultural Occupational Health Training Program

I-CASH's annual training program for health care professionals who treat and help prevent occupational illnesses and injuries on the farm was held May 18-20 and June 8-10. Forty health care professionals from Iowa, Kentucky, Nebraska, Canada, Ireland and Korea were trained in a variety of agricultural safety and health topics. The instructors delivered practical, timely information, and their expertise was highly praised by the participants. In addition to the on-campus course, Session 1 was offered through the web-based technology, Elluminate. The course is offered annually, and can be taken for three graduate credit hours from the University of Iowa College of Public Health. Continuing education credits for physicians and nurses are available.

Training and certification through the Agricultural Occupational Health Training Program is required for a health care professional or clinic to become a member of the AgriSafe Network.

[www.public-health.uiowa.edu/icash](http://www.public-health.uiowa.edu/icash)

### Certified Safe Farm



The Certified Safe Farm (CSF) program, an agricultural health and safety research study consisting of occupational health screenings, on-farm safety evaluations, and personalized education, is currently being implemented in over 25 Iowa counties, with an expected expansion to another three counties. CSF is being tested in a variety of formats:

- The Dairy Study is in its final year of implementation on 24 dairy farms in Northeast Iowa.
- In September 2005, the second year of the CSF senior farmer study began. One-hundred thirty-three

farmers age 60 and older are currently enrolled. The focus is on improving working conditions for older farmers so as to reduce their risk of farm-related illnesses and injuries.

- Another 259 Iowa farmers have enrolled in a CSF health insurance evaluation study, which will compare farm-related illness and injury claims between a control group of farmers and the 259 participants. In addition to analyzing claims information, other self-reported measures to quantify occupational health risks and to identify long-term measures of program success will be used.

[www.public-health.uiowa.edu/icash/CSF](http://www.public-health.uiowa.edu/icash/CSF)

## Comprehensive Assessment of Rural Health in Iowa

The Comprehensive Assessment of Rural Health in Iowa (CARHI) project is a collaborative relationship between the Iowa Department of Public Health, the Centers for Disease Control and Prevention in Atlanta, and the University of Iowa. The goal of CARHI is to develop and test a surveillance system that links health data and environmental contaminant source location and concentration data within a geographic information system (GIS). The system will be used to evaluate potential relationships between environmental exposures and health, and estimate public health risks.

Carroll County, Iowa was chosen as the pilot study site because the county is mainly rural, contains a variety of potential environmental exposures, and nearly 90% of residents' primary health care is received at health care facilities within the county.

## Hall of Fame Award

I-CASH named Charles Schwab, PhD, of Ames, Iowa the 2004 recipient of its Hall of Fame Award. Schwab is associate professor of agricultural and biosystems engineering and an extension safety specialist at Iowa State University (ISU).

Schwab has been a driving force behind farm safety and health education throughout Iowa for many years.



Charles V. Schwab received the 2004 I-CASH Hall of Fame Award.

At ISU he teaches agricultural safety classes to future agricultural leaders, and has mentored many students through engineering projects geared at teaching farm safety. Schwab designed a "Tug of War" grain demonstration and educational package that allows children and adults to see the strength necessary to pull someone out when they're buried in grain. He also produces weekly radio spots that are sent to all radio stations in Iowa, and frequently appears on local and regional television talking about issues pertinent to farm safety in Iowa.

Schwab is a nationally recognized authority on child and youth safety issues in agriculture. His "Mystery Club" initiative is an innovative method of reaching youth with extension safety programming. This effort, along with his book, "What Would You Do: Helping Children Understand Farm Hazards," have put ISU Extension at the leading edge of providing childhood farm safety programming. For more than a decade, Schwab has provided leadership in farm safety efforts across Iowa and the nation.

[www.public-health.uiowa.edu/icash/programs/HallOfFame](http://www.public-health.uiowa.edu/icash/programs/HallOfFame)

## Injury Prevention in Agricultural Youth Grant

Each year I-CASH designates funds for community grants targeted at the prevention of farm-related injury in young people (less than 19 years of age). This year grant funds were awarded to the following projects:

- *Farm Safety Scavenger Hunt* - Adair County Wing Walkers 4-H Club. The club will present farm safety demonstrations in the classroom, followed by a farm safety scavenger hunt on a local farm.
- *Tractor and Farm Machinery Course* - Washington County Extension Service. Following the certification course, an interactive display will be created and used at local events.
- *Tractor and Farm Equipment Safety and Certification* - Sioux County Extension/Dordt College/Sioux Center Community Hospital and Health Center AgriSafe Department. Participants will receive hands-on instruction with tractors and farm equipment, as well as basic farm safety.
- *ATV Safety Awareness Program* - Orange City Health System. An ATV Safety Institute certified instructor will present information at three area middle schools, reaching over 1000 students. The project will also include display boards and protective equipment to be shown at local events.
- *Mid-Iowa Day Camp for Agricultural Youth Safety* - Wright County Agricultural Extension District. A collaborative effort between four ISU County Extension offices, this agricultural safety day camp will reach youth in a four county area.
- *ATV Safety* - AgriSafe Rural Neighbors, Butler, Franklin and Grundy Counties. A photo contest for 4-H and FFA members will provide the images to develop a 12-month ATV safety calendar.
- *Clarke County Agricultural Safety Training* - Clarke County Extension. This collaborative project between Clarke County Extension and the Osceola Vocational Agriculture program will provide safety education, and tractor and farm safety certification for youth.
- *Tractor Talk* - Keosauqua FFA. This project involves the construction of a display box to provide hands-on tractor safety education. The display will be used at area farm safety day programs and local events.

[www.public-health.uiowa.edu/Icash/programs/youthgrant](http://www.public-health.uiowa.edu/Icash/programs/youthgrant)

*Agricultural health projects at other University of Iowa research centers:*

## **Agricultural Health Study in Iowa**



The Agricultural Health Study is a prospective cohort study of agricultural exposures and chronic disease (especially cancer) in Iowa and North Carolina. This is the 13<sup>th</sup>

year of the study, which involves private pesticide applicators, their spouses, and commercial pesticide applicators. The first five years (Phase I) were devoted to enrolling eligible subjects; 89,658 subjects were enrolled in the two states, including 58,564 in Iowa.

Phase II began in 1998, and the primary activity has been recontacting each cohort member to update exposure information (completed with 40,912 Iowa cohort members), obtain dietary health questionnaire data (completed with 26,132), and obtain buccal cells (completed with 25,602). Phase III, in which pesticide exposure histories and self-reported disease information will be updated, is scheduled to launch November 2005.

The study has resulted in over 50 peer-reviewed publications evaluating farm-related work injuries, mortality and cancer incidence, eye disorders, wheeze, fertility, pesticide exposure (including high pesticide exposure events), and cancer incidence related to pesticide exposure. Abstracts and pdf versions of these publications can be found at the website.

[www.aghealth.org](http://www.aghealth.org)

## **Center for Health Effects of Environmental Contamination**

The Center for Health Effects of Environmental Contamination (CHEEC) was established at the University of Iowa in 1987 as part of the Iowa Groundwater Protection Act. The mission of the Center is to determine the levels of environmental contamination that can be specifically associated with human health effects. CHEEC is an interdisciplinary research, education and service organization whose major activities include:

- developing and maintaining environmental databases to be used in conducting environmental health research;
- conducting research on drinking water contaminants of concern to Iowans;
- managing a seed grant program to support innovative environmental research; and
- providing a variety of education and service programs to the citizens of the state and region.

In 2005, CHEEC collaborated in the Muscular Dystrophy Surveillance, Tracking and Research Network (MDSTARnet), the Agricultural Health Study, the Comprehensive Assessment of Rural Health in Iowa (CARHI) project and ongoing drinking water contaminant studies. In April, CHEEC hosted the conference “Atrazine and the Health of Humans and Wildlife: State of the Science and Future Research Needs.”

[www.cheec.uiowa.edu](http://www.cheec.uiowa.edu)

## The Center for International Rural and Environmental Health

Through education, training and research, The Center for International Rural and Environmental Health (CIREH) promotes greater understanding and awareness into the causes, consequences and prevention of communicable, chronic, environmental, and occupational diseases in all regions of the globe, focusing on nations with substantial agrarian economies.

- Graduate students from South Africa, Egypt, Peru, Hungary, Romania, Russia and The Gambia were awarded CIREH funding to take part in international summer internships or research projects.
- CIREH was awarded a five-year NIH Fogarty International Center training grant that will focus on trauma and injury prevention research.
- CIREH received a second Fogarty International Center grant (Minority Health International Research and Training) that will benefit minority students in the undergraduate, graduate and professional health

professions by offering them international research experiences.

[www.public-health.uiowa.edu/cireh](http://www.public-health.uiowa.edu/cireh)

## Environmental Health Sciences Research Center



The Environmental Health Sciences Research Center (EHSRC) is one of 22 NIEHS-funded Core Centers of

Excellence. Established in 1990, the EHSRC is the only center in the rural Midwest and the only center to focus on rural environmental exposures and related pulmonary diseases. The EHSRC, comprised of 48 faculty and 25 staff, is at the forefront of research in environmental lung disease, inflammation and innate immunity, and oxidative stress. Health concerns such as community and occupational exposures to airborne hazards from concentrated livestock feeding operations, asthma among rural children, and adverse health effects arising from exposures to agricultural chemicals and bioaerosols are among the issues being studied by the Center’s Investigators.

The EHSRC also operates a pilot grant program, an enrichment program, and an outreach program. In 2005, the Center’s Community Outreach and Education Program hosted the 8<sup>th</sup> Annual Environmental Health Sciences Institute for Rural Youth (EHSI) and co-hosted with the Institute of Medicine, a national conference entitled, “Rebuilding the Unity of Health and the Environment in Rural America.”

[www.ehsrc.org](http://www.ehsrc.org)

## Great Plains Center for Agricultural Health



The Great Plains Center for Agricultural Health (GPCAH) continued as an agricultural safety and health resource nationally and regionally. The unique Keokuk County Rural

Health Study finished Survey Round 2 and began Round 3 in the Fall of 2005. Other activities included:

- Research evaluating organic dust aerosols, which allows researchers to compare sampling devices and facilities.
- Feasibility projects covering musculoskeletal disorders among dairy farmers and neurological effects from exposure to agrichemicals.
- Continuing efforts to address tractor overturn deaths in Iowa. A Keokuk County pilot study reported on tractors involved in over 100 overturns, and Center staff participated in the NIOSH Tractor Safety Initiative.
- Twenty-seven *Illuminate* webinars were hosted in the new virtual agricultural safety and health classroom; agricultural health and safety courses and a certificate program continued.
- A new initiative of Certified Safe Farm (CSF) for Iowa's older farmers; agricultural safety and health in dairy farming via a modified CSF program continued to progress.

[www.public-health.uiowa.edu/gpcah](http://www.public-health.uiowa.edu/gpcah)

## Injury Prevention Research Center



Since 1990, the University of Iowa Injury Prevention Research Center (UI 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 UI 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.

Large research studies currently underway at the UI IPRC include:

- 1) evaluating emergency medical services within Iowa;
- 2) comparing the effectiveness of various types of smoke detectors in rural homes;
- 3) examining risk-taking behavior of children using a bicycle simulator;
- 4) studying the driving abilities of persons with sleep apnea syndrome;
- 5) studying the effects of phenytoin, a drug commonly prescribed for epilepsy, on cognitive ability and driving; and
- 6) measuring domestic violence longitudinally and identifying the role of physical violence in relationship dissolution.

[www.public-health.uiowa.edu/iprc](http://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 2004, eighty-nine Iowans were killed while at work. Workers in agriculture jobs continue to experience a high number of fatal injuries in Iowa. Since 2000, nearly 40% of the victims were employed in the agricultural sector.

[www.public-health.uiowa.edu/face](http://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, Inc.



The eighteen member clinics of the AgriSafe Network strive to develop safe and healthy agricultural communities through the variety of programs and services they deliver.

In 2005, clinics provided comprehensive agricultural occupational health screenings, and personalized education for the Certified Safe Farm program. AgriSafe staff assisted a coalition of health care providers, known as Agricultural Health Partners, in the implementation of a needs assessment to farmers in northwest Iowa. Barriers to accessing health care were addressed in surveys and the results indicated the majority of farmers have insurance but are considered underinsured. The compiled results were published in a chart book now available at our website.

The Network's Board of Directors and staff are dedicated to increasing clinic membership in Iowa and additional states to ensure farmers have access to the specialized occupational health services available at an AgriSafe clinic.

[www.agrisafe.org](http://www.agrisafe.org)



## AgriWellness, Inc.



AgriWellness, Inc., a nonprofit organization, builds behavioral health supports for the agricultural population in seven states: Iowa, Wisconsin, Minnesota, North Dakota, South

Dakota, Nebraska and Kansas. Partnering organizations in the seven states reached 2,030 participants in community education, responded to 4,278 requests for various kinds of information, responded to 6,621 calls on farm crisis hotlines and dispensed 3,061 vouchers for professional behavioral health services to farmers, ranchers, farm workers and their families. AgriWellness, Inc. activities for this year include:

- Coordinated "Iowa Recovers," a Crisis Counseling Program funded by the Federal Emergency Management Agency through the Iowa Department of Human Services to assist Iowans in recovery from 110 flash floods and 69 tornadoes that hit Iowa in May and June, 2004.
- With assistance from the Iowa Department of Human Services, the State Public Policy Group in Des Moines, and Iowa State University, AgriWellness, Inc. helped to provide training to approximately 400 persons who assist in disasters and emergencies. Fifty-five individuals were also trained to serve as ready reserve outreach workers to provide Crisis Counseling Program assistance following disasters.

[www.agriwellness.org](http://www.agriwellness.org)

## Easter Seals Rural Solutions



*Creating solutions, changing lives.*

The Easter Seals Rural Solutions Program was developed in 1986 to address the technological and psychological needs of farm families affected by a disability.

The Rural Solutions Program provides on-site rehabilitation services that promote the return to farming and the community, and increased independence. Services offered include providing adaptive equipment, modifications to the farm and home, secondary injury prevention education, equipment loan, and peer support.

Easter Seals collaborates with Iowa State University Extension through the AgrAbility Project, and the Division of Vocational Rehabilitation Services to assist farm family members to remain in farming after a disability.

[www.eastersealsia.org](http://www.eastersealsia.org)

## Farm Safety 4 Just Kids

### Farm Safety



Farm Safety 4 Just Kids (FS4JK) is a non-profit organization working to promote farm safety for kids. The organization produces and distributes farm safety educational materials, and

includes a chapter network of volunteers throughout the United States and Canada. Collectively, they reach approximately a million children, youth, and farm families each year. Along with regional workshops in Nebraska, California, Pennsylvania, and Arkansas the following activities were provided by FS4JK:

- “Buckle Up or Eat Glass” continues through funding from the Iowa Governor’s Traffic Safety Bureau. Awareness prompted local students to create a new section on rural roadway safety for the Iowa driver’s education manual.
- The Rural Health Kit was completed in 2005 and distributed. It includes activities, fact sheets, demonstrations, and props. The kit is being

evaluated for ease of use through the chapter network.

- FS4JK and the National Children’s Center for Agricultural Safety and Health evaluated avenues of distribution for the Safe Play Area document. Focus groups were held in two different locations.
- Funding from the Great Plains Center for Agricultural Health was used to follow up with attendees of the National FFA Convention session, “Quado-logy on ATV safety.”
- A manual titled, “Let’s Do A Farm Safety Day Camp,” was created as a result of the Day Camp Evaluation project with the University of Kentucky and FS4JK.

[www.fs4jk.org](http://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 grassroots effort supported by a network of professionals in agricultural production, education, insurance, industry, and government.

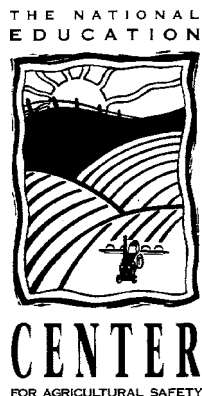
Thousands of children across Iowa participated in the Council’s Fire Prevention Education Program. This educational program is provided for the children of Iowa with support from the State Fire Marshall, Iowa Firemen’s Associations, and many industry and insurance leaders.

This year, the Council’s ongoing efforts to promote good safety and health practices resulted in a visible presence at both the Iowa State Fair and the Iowa Power Farming and Machinery Show.

[www.abe.iastate.edu/safety/ifsc.htm](http://www.abe.iastate.edu/safety/ifsc.htm)



## National Education Center for Agricultural Safety



The National Education Center for Agricultural Safety (NECAS) is located in Peosta, Iowa on the Northeast Iowa Community College campus. NECAS delivers hands-on safety training at its facility as well as outreach programs throughout the United States.

- NECAS received a NIOSH grant to perform a usability study for AutoROPS-equipped zero-turn riding mowers. AutoROPS are a “deployable” type of ROPS designed to prevent crushing injuries to the operator in the event of an equipment overturn. NECAS will conduct field studies at the facility on the new technology being developed by NIOSH engineering staff.

- NECAS will be participating in a new round of the Certified Safe Farm program funded by NIOSH, the University of Iowa, and the Iowa Farm Bureau. NECAS also just entered year 4 of a five year grant, funded through the University of Iowa, to study safety and health on 25 Midwestern dairy farms.

- NECAS hosted the annual Ag Families weekend program funded by Pioneer Hi-Bred International, Inc. Ag Families invites farm families to NECAS for a weekend of safety and health training so they can return to their home communities as safety and health advocates.

- The prototype of the 1/8th scale model John Deere tractor has been completed at Scale Models, Inc. Seventy-six agricultural science teachers are now using the tractors and curriculum in the classroom and providing feedback to NECAS staff.

- NECAS staff provided agricultural rescue education to Midwest fire departments and EMS providers.

[www.nsc.org/necas](http://www.nsc.org/necas)



Proteus, Inc. is a not-for-profit organization that since 1990 has operated the BPHC-funded Migrant Health Project in the state of Iowa. From offices located in Des Moines, Fort Dodge, and Muscatine, Proteus provides outreach, home visits, and clinics around the state where migrant and seasonal farmworkers are found.

Between 1,000 to 2,000 migrant farmworkers come to Iowa each year to perform work which includes seed corn rouging, pollinating, detasseling, sorting and bagging. Other jobs include walking beans, and working with crops such as flowers, grapes, apples, cucumbers, potatoes, and melons. 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 for other farmers, work in hog confinement operations, egg production, or are employed as general farmhands.

This past calendar year, the Proteus Migrant Health Project served 1,451 farmworkers throughout the state of Iowa, and this year the Project is well on its way to serving over 1,500 farmworkers. In addition, the National Farmworker Jobs Program was able to provide support for Workplace and Pesticide Safety training for 95 migrant farmworkers, utilizing the EPA curriculum and issuing certification cards.

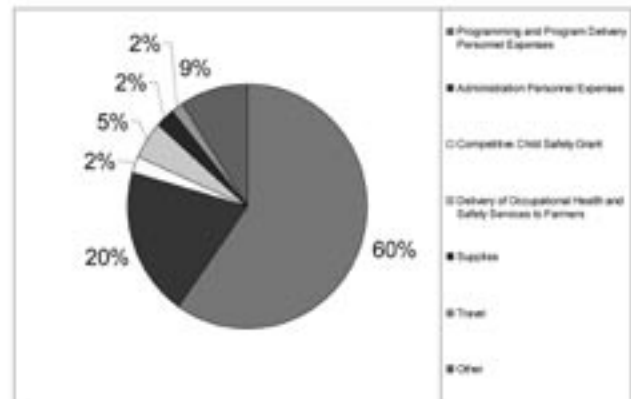
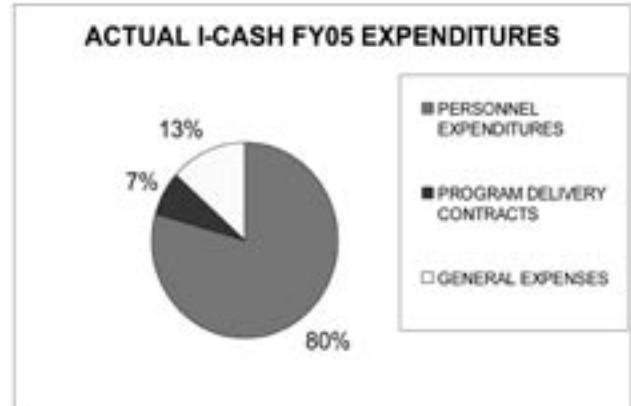
[www.proteusinc.net](http://www.proteusinc.net)



# Financial Report

The I-CASH budget consists of FY 2005 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 expenditures.

PERSONNEL EXPENDITURES			
	Total I-CASH Effort	Budget Dollars	Actual Dollars
Programming and Program Delivery	75%	134,585	130,918
Administration	25%	44,862	43,639
<b>Total</b>		<b>179,447</b>	<b>174,557</b>
PROGRAM DELIVERY CONTRACTS			
Competitive Child Safety Grant		5,000	5,100
Delivery of Occupational Health and Safety Services to Farmers		11,000	11,000
<b>Total</b>		<b>16,000</b>	<b>16,100</b>
GENERAL EXPENSES			
Supplies		1,500	5,121
Travel		3,500	3,682
Other: Includes computer system support, required semi-annual meetings, outreach materials, annual report, telephone and newsletters		19,202	20,189
<b>Total</b>		<b>24,202</b>	<b>28,992</b>
<b>TOTAL BUDGET</b>		<b>219,649</b>	<b>219,649</b>



***Grants and contracts that I-CASH faculty and staff have successfully competed for to conduct intervention and research activities in Iowa:***

	<u>Annual Total Amounts</u>	<u>Project Term</u>
<b>Certified Safe Farm: Evaluating Health Insurance Claims</b> (US Dept. of Health and Human Services, CDC, Pioneer, Monsanto, Iowa Farm Bureau Federation)	<b>\$ 250,680</b>	9/01/2003 to 8/31/2007
<b>Comprehensive Assessment of Rural Health in Iowa</b> (CDC, IDPH)	<b>\$ 202,039</b>	10/1/2002 to 8/31/2006
<b>ERC Ag (Heartland Center for Occupational Health and Safety)</b>	<b>\$ 65,176</b>	7/01/2002 to 6/30/2008
<b>GPCAH CSF Dairy</b>	<b>\$ 45,581</b>	9/30/2001 to 9/29/2006
<b>GPCAH CSF Elder Farmer Supplement</b>	<b>\$ 187,740</b>	9/30/2001 to 9/29/2006
<b>GPCAH Education &amp; Outreach</b>	<b>\$ 100,108</b>	9/30/2001 to 9/29/2006
<b>GPCAH Evaluation of Organic Dust Aerosols</b>	<b>\$ 118,859</b>	9/30/2001 to 9/29/2006
<b>Total</b>	<b>\$970,183</b>	

# Appendix A

## I-CASH Presentations/ Educational Activities/ Newspaper Publications

### July 2004

“U.S. must reduce rate of death in tractor rollovers.” LaMar Grafft. The Cedar Rapids Gazette. July 11.

“Tractor certification training.” LaMar Grafft. Presentation at the National Education Center for Agricultural Safety. July 14-15; Peosta, IA.

### August 2004

“Alive & Well Newsletter.” I-CASH and GPCAH staff. Vol 10 (4). August 2004.

“Farms must put focus on machine guarding.” LaMar Grafft. The Cedar Rapids Gazette. August 8. Iowa Farm Safety Council display. LaMar Grafft. Exhibit at the Iowa State Fair. August 12-22; Des Moines, IA.

“Agricultural trauma.” LaMar Grafft. Presentation at the University of Iowa Carver College of Medicine. August 23; Iowa City, IA.

I-CASH display. Meggan Fisher and LaMar Grafft. Exhibit at the Farm & Field Fest. August 26-28; Boone, IA.

I-CASH display. LaMar Grafft. Exhibit at the Farm Progress Show. August 30-September 2; Alleman, IA.

“Psychosocial behavior of children: Implications for childhood agricultural injury prevention.” Risto Rautiainen. Presentation and paper presented at the International Social Security Association, Colloquium of the Agricultural Section. August 31-September 2; Helsinki, Finland.

### September 2004

“Grain suffocation: A tragic scenario.” CV Schwab. AgrAbility Newsletter, September 2004.

“Rescue training.” LaMar Grafft. Presentation to the Olin Fire Department. September 9; Olin, IA.

“Harvest time requires caution on highways.” LaMar Grafft. The Cedar Rapids Gazette. September 12.

“Agricultural trauma.” LaMar Grafft. North Benton Ambulance Training. September 13; Vinton, IA.

I-CASH display. Kelley Donham and Meggan Fisher. Exhibit at the Iowa Bankers Association Convention. September 19-21; Des Moines, IA.

“Farm equipment crashes.” Murray Madsen. Presentation at the Southern Region Symposium on Agricultural Safety and Health 2004. September 19-21; Nashville, TN.

“Tractor safety perspectives, farm and agricultural injury press clips.” Murray Madsen. Presentation at the Southern Region Symposium on Agricultural Safety and Health 2004. September 19-21; Nashville, TN.

“I-CASH.” LaMar Grafft. Presentation to AgriWellness, Inc. September 26; Toledo, IA.

### October 2004

“Rescue training.” LaMar Grafft. Presentation to the West Bertram Fire Department. October 7; West Bertram, IA.

“Teach children top safety lessons.” LaMar Grafft. The Cedar Rapids Gazette. October 10.

“Agricultural trauma.” LaMar Grafft. Presentation at the Emergency and Trauma Symposium. October 15; Council Bluffs, IA.

“Farmers alerted to take precautions when vacuuming corn from bins.” Risto Rautiainen and Murray Madsen. University of Iowa Press Release. October 29; Iowa City, IA.

### November 2004

“Alive & Well Newsletter.” I-CASH and GPCAH staff. Vol 11 (1). November 2004.

“Rhythm of the Seasons Video Companion.” CV Schwab, S Burgus, and Colleen Jolly. Iowa State University Extension publication Pm-1986. ISU University Extension, Ames, IA.

“Agricultural trauma.” LaMar Grafft. Presentation at the Nebraska Emergency Room Physician Conference. November 4; Omaha, NE.

“Agricultural fatalities in the Iowa FACE Program.” Rebecca Heick, et. al. Poster presentation at the American Public Health Association Annual Meeting. November 6-10; Washington D.C.

“Tractor safety concerns and overturns in Iowa.” Wayne Sanderson. Presentation at the Governor’s Safety Conference. November 8; Des Moines, IA.

“Sharing the road with farm equipment.” Murray Madsen. Presentation at the Iowa Behind-the-Wheel Instructors’ Training, Grandview College. November 13; Des Moines, IA.

“Rounding out list of tips to teach kids.” LaMar Grafft. The Cedar Rapids Gazette. November 14.

“Agricultural trauma.” LaMar Grafft. Presentation at the University of Iowa Carver College of Medicine. November 15; Iowa City, IA.

“Industrial hygiene prevention scheme: Respirator selection criteria and fit testing.” Wayne Sanderson. Presentation at the Midwest Rural Agricultural Safety and Health Forum. November 18; Iowa City, IA.

“Press clippings: Midwest farm and agricultural injuries, 2003.” Risto Rautiainen. Presentation at the Midwest Rural Agricultural Safety and Health Forum. November 18; Iowa City, IA.

“Tractor safety concerns in a rural Iowa county.” Wayne Sanderson. Presentation at the Midwest Rural Agricultural Safety and Health Forum. November 18; Iowa City, IA.

“Using a geographic information system (GIS) to identify agricultural injury and illness: A description of the CAHRI project.” Kelley Donham. Presentation at the Midwest Rural Agricultural Safety and Health Forum. November 18; Iowa City, IA.

“Farm machinery crashes with motor vehicles on public roads.” Murray Madsen. Presentation at the Midwest Rural Agricultural Safety and Health Forum. November 19; Iowa City, IA.

## **December 2004**

RASCAL EMS training. LaMar Grafft. December 1; Cedar Rapids, IA.

“Are standards the answer?” Kelley Donham. Presentation at the Canadian Agricultural Safety Association Annual Conference: Engineering Safer and Healthier Agriculture. December 2; Quebec City, Quebec, Canada.

“Researchers explore ways to reduce risks.” LaMar Grafft. The Cedar Rapids Gazette. December 12.

## **January 2005**

“Listen up: Protect your hearing on the job.” LaMar Grafft. The Cedar Rapids Gazette, January 9.

“Technology and economy in large-scale farming.” Risto Rautiainen. Presentation and paper presented at Technology Days. January 11; Vihti, MTT, Vakola, Finland.

## **February 2005**

“Alive & Well Newsletter.” I-CASH and GPCAH staff. Vol 11 (2). February 2005.

“Learn critical facts before using tractor.” LaMar Grafft. The Cedar Rapids Gazette, February 13.

“Respiratory conditions among farmers.” Kelley Donham. Presentation to the University of Iowa Ambulatory Medicine Program. February 28; Iowa City, IA.

## **March 2005**

“What is a webinar? New Great Plains project ‘e-illuminating.’” Murray Madsen. Western Center for Agricultural Health and Safety News, Spring 2005 Vol 14 (2).

“Community health concerns in agriculture, respiratory illness, and toxicity conditions.” Kelley Donham. Presentation to Allen Hospital Family Medicine Program. March 9; Waterloo, IA.

“ATVs are useful, fun and dangerous.” LaMar Grafft. The Cedar Rapids Gazette. March 13.

I-CASH display. Eileen Fisher. Exhibit at the Iowa Public Health Association Conference. March 29-30; Ames, IA.

“Comprehensive assessment of rural environmental health.” Kelley Donham. Presentation to the University of Iowa Department of Occupational and Environmental Health. March 29; Iowa City, IA.

“Learning from fatal occupational injury investigations – The Iowa FACE Program.” John Lundell. Presentation at the Heartland Center for Occupational Health and Safety Annual Iowa Occupational Health Symposium. March 30-April 1; Iowa City, IA.

“Zoonotic infections of importance to emergency room physicians.” Kelley Donham. Presentation to the University of Iowa Emergency Medicine Program. March 31; Iowa City, IA.

I-CASH display. Meggan Fisher. Exhibit at the Heartland Center for Occupational Health and Safety Annual Iowa Occupational Health Symposium. March 31; Iowa City, IA.

### April 2005

“Startled horses can often pose danger to rider.” LaMar Grafft. The Cedar Rapids Gazette. April 10.

“Skin diseases among agricultural workers.” Kelley Donham. Presentation at Iowa Lutheran Hospital. April 14; Des Moines, IA.

“Overview of illnesses and injuries in farm families.” Kelley Donham. Presentation to the University of Iowa Physicians Assistant Program. April 19; Iowa City, IA.

### May 2005

“Alive & Well Newsletter.” I-CASH and GPCAH staff. Vol 11 (3). May 2005.

“Protect small children from livestock at fairs, shows.” LaMar Grafft. The Cedar Rapids Gazette. May 8.

“Agricultural trauma.” LaMar Grafft. Training to Iowa County EMS. May 16; Marengo, IA.

“Agricultural respiratory issues,” “Agricultural skin diseases /Cancer in the farm environment,” “Rural environmental health problems,” “Veterinary pharmaceuticals, biologicals and antibiotics,” “Zoonotic diseases.” Kelley Donham. Presentations at the Agricultural Occupational Health Training Program – Session 1. May 18-20; Iowa City, IA.

“Agricultural trauma.” LaMar Grafft. Presentation at the Agricultural Occupational Health Training Program – Session 1. May 18-20; Iowa City, IA.

“Airborne antibiotic exposures in animal feeding operations.” M Murphy, W Sanderson, and J Vargo. Presentation at the American Industrial Hygiene Conference and Exposition. May 21-26; Anaheim, CA.

“Respiratory diseases among farmers.” Kelley Donham. Presentation to the University of Iowa Carver College of Medicine Ambulatory Medicine Module. May 23; Iowa City, IA.

### June 2005

“Interventions to reduce safety and health hazards in agriculture.” Wayne Sanderson. NIOSH Agricultural Research Centers Update for Spring, 2005 AgConnections Agricultural Safety and Health Newsletter. Vol 3 (1). 2005.

“Agricultural case scenarios.” Kelley Donham and LaMar Grafft. Presentation at the Agricultural Occupational Health Training Program – Session 2. June 8-10; Iowa City, IA.

“Farm tour: Identifying selected hazards.” LaMar Grafft and Risto Rautiainen. Presentation at the Agricultural Occupational Health Training Program – Session 2. June 8-10; Iowa City, IA.

“Food safety.” LaMar Grafft. The Cedar Rapids Gazette. June 12.

I-CASH display. LaMar Grafft and Eileen Fisher. Exhibit at the Farm Progress Hay Expo 2005. June 22-23; Fredricksburg, IA.

“Economic evaluation of the Certified Safe Farm program.” Kelley Donham. Presentation at the 2005 National Institute for Farm Safety Annual Conference. June 26-30; Wintergreen, VA.

“Farm and Agricultural Injury Monitoring System (FAIMS) – Press clips.” Murray Madsen. Abstract and poster presentation at the 2005 National Institute for Farm Safety Annual Conference. June 26-30; Wintergreen, VA.

“Perspectives from farm and agricultural injury press clippings, 2003-4.” Murray Madsen. Abstract presented at the 2005 National Institute for Farm Safety Annual Conference. June 26-30; Wintergreen, VA.

# Appendix B

## I-CASH Publications

- Carreon T, MA Butler, AM Ruder, MA Waters, KE Davis-King, GM Calvert, PA Schulte, B Connally, EM Ward, WT Sanderson, EF Heineman, JS Mandel, RF Morton, DJ Reding, KD Rosenman, G Talaska. 2005. Gliomas and farm pesticide exposure in women: The Upper Midwest Health Study. *Environ Health Perspectives* 113(5):546-51.
- Donham KJ, JR Wheat, W Simpson, P James. 2005. What's in a name? Revisited: Terms used to describe activities related to the health and safety of agricultural-associated populations and consumers. *J Agromedicine* 10(1):5-11.
- Freeman SA, CV Schwab, JLP Judge. 2005. An Investigation of three physical parameters of PTO entanglements. National Institute for Farm Safety International Summer Meeting Wintergreen, Virginia. NIFS Paper No. 2005-05. NIFS Madison, WI.
- Humann MJ, KJ Donham, ML Jones, C Achutan, BJ Smith. 2005. Occupational noise exposure assessment in intensive swine farrowing systems: Dosimetry, octave band, and specific task analysis. *J Agromedicine* 10(1):23-37.
- Merchant JA, AL Naleway, ER Svendsen, KM Kelly, LF Burmeister, AM Stromquist, CD Taylor, PS Thorne, SJ Reynolds, WT Sanderson, EA Chrischilles. 2005. Asthma and farm exposures in a cohort of rural Iowa children. *Environ Health Perspectives* 113(3):350-356.
- Myers KP, CW Olsen, SF Setterquist, AW Capuano, KJ Donham, EL Thacker, JA Merchant, GC Gray. 2005. Are U.S. swine workers at increased risk of infection with zoonotic influenza virus? *J Infectious Diseases*. (In press)
- Rautiainen R, R Ohsfeldt, N Sprince, K Donham, L Burmeister, S Reynolds, P Saarimaki, C Zwerling, T Siitonen. 2005. Cost of compensated injuries and occupational diseases in agriculture in Finland. *J Agromedicine*. (In press)
- Reynolds SJ, DK Milton, D Heederik, PS Thorne, KJ Donham, EA Croteau, KM Kelly, J Douwes, D Lewis, M Whitmer, I Connaughton, S Koch, P Malmberg, BM Larsson, J Deddens, A Saraf, L Larsson. 2005. Interlaboratory evaluation of endotoxin analyses in agricultural dusts – comparison of LAL assay and mass spectrometry. *J Env Monitoring*. (In press)
- Sanderson WT, MD Madsen, RH Rautiainen, KM Kelly, C Zwerling, CD Taylor, SJ Reynolds, AM Stromquist, LF Burmeister, JA Merchant. Tractor overturn concerns in Iowa: Perspectives from the Keokuk County Rural Health Study. *J Agric Saf Hlth*. (Accepted)



# Notes