

Farm Families ALIVE & WELL



News from The Great Plains Center for Agricultural Health

Vol. 13, Issue 2 - March 2007

Youth Grants Awarded

Iowa's Center for Agricultural Safety and Health (I-CASH) has awarded funds to seven projects for 2007 through its grant program aimed at decreasing the risk of illness and injury to young people living on Iowa farms or involved in agriculture. Since its inception in 1990, I-CASH has designated funds each year for communities to develop farm injury prevention and education programs for Iowa's youth.

Following are this year's grant recipients, with a brief description of each project:

Adams County Youth & 4-H, "Kid Safety Day Camp" - This youth-run and organized day camp is geared toward educating fellow county youth about safety practices when visiting farms.

Iowa State University Extension, Louisa County, "Growing Safe Youth: A Valuable Crop" - Public Health and Extension employees, along with county

4-H youth, will present a different safety topic for each day of the five-day Louisa County Fair.

Town and Country Farm Safety, "Safe Tractor and Machinery Operation Program" - Local FFA members will educate youth on ATV and tractor safety, as well as agricultural health. An educational DVD and printed materials for distribution will be developed.

O'Brien County Extension, "Farm Safety Scene" - This interactive farm safety scene, built in part by youth, will be a scale model of a rural landscape in which potential hazards are represented.

Iowa State University Extension, Jefferson County, "Farm Safety Day Camp" - A continuation of the 2006 Farm Safety Day Camp, this event will be held during the Jefferson County Fair and will feature topics including ATVs, sun safety, tractors and more.

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Pesticide Concentrations Inside Iowa Homes

by Wayne Sanderson, PhD, CIH

The Great Plains Center for Agricultural Health (GPCAH) has been collaborating with the National Institute for Occupational Safety and Health (NIOSH) to assess pesticide concentrations inside Iowa homes and determine what factors influence the concentration levels. Dr. Brian Curwin of the NIOSH Division of Surveillance, Hazard Evaluations, and Field Studies led the original study in 2001 and he has recently published his findings in five peer-reviewed manuscripts. Dr. Curwin's study was among the first to look at the concentrations of pesticides inside farm homes. It showed that farm homes had higher levels than are typically found in the general population, but those levels are lower than among the homes of people who apply pesticides for a living.



Researcher collecting vacuum dust sample.

During the planting season he measured the concentrations of six herbicides (atrazine, acetochlor, alachlor, glyphosate, metolachlor, and 2,4-D) and one insecticide (chlorpyrifos) in dust samples vacuumed from home floors and the metabolites of these pesticides in urine samples from family members. He studied 25 farm homes and 25 non-farms, finding that

the farm homes tended to have greater pesticide concentrations in the dust samples than non-farm homes, particularly for the strictly agricultural pesticides atrazine, acetochlor, and metolachlor. Farmers who applied a particular pesticide had metabolite concentrations in their urine that were higher than farmers who did not apply that pesticide, farmers who did not apply their own pesticides, and non-farmers. He also found that the metabolite levels of these pesticides in the farm family member's urine tended to increase as the pesticide concentrations in

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The 2007 Agricultural Occupational Health Training will be held June 11-15 at the Holiday Inn and Conference Center in Coralville, Iowa. Nurses, nurse practitioners, physicians, veterinarians, physician assistants, physical therapists, and other health care providers are invited to participate. The training may be taken for three graduate credit hours from the University of Iowa College of Public Health, and 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 an AgriSafe provider affiliated with the [AgriSafe Network](#). The training brochure/registration form is available on the I-CASH website at www.public-health.uiowa.edu/icash. Contact Kay Mohling at 319/335-4219 or kay-mohling@uiowa.edu for more information.



Proteus, Inc. is looking for bilingual college students interested in paid and unpaid summer jobs or internships with its Migrant Health Project. In addition, there is always a need for volunteers at clinics during the peak summer months. There are multiple positions at each office and assorted types of work available: Migrant Health Aides provide health services at clinics and home visits; a special internship would analyze and prioritize needs for agricultural safety and health for future funding and draft a report; other interns may work specifically with diabetic patients, offering education and other services. Proteus is willing to also assist students conduct research or internships aligned with their own educational needs. If interested contact Terry Meek or Bob Witt at 800/372-6031.

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Kossuth & Palo Alto County Agricultural Extension Districts, “Farm Safety Awareness Program” - An enhancement to the existing youth and adult farm safety training days, the new curriculum will include tractor safety, rural health, and livestock safety.

Orient Bulldogs 4-H Club, “Rounding up the Cows” Livestock & ATV Safety Program - A four-county-wide safety day will heighten awareness of ATV and livestock hazards.

More details on these projects, and those from past years, are available online at www.public-health.uiowa.edu/icash.



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Eye Protection

90% of all eye injuries can be prevented

by Jill Gonder, Iowa Optometric Association



A few of the most common eye injuries in agricultural settings are:

Chemical - Wear safety glasses or goggles to protect against splashes or fumes. Contact lens users should be especially cautious because the lens may trap chemicals and their vapors.

Impact - Flying particles from chain saws, grinders, chippers, sanders and many other farm, industrial, home and garden tools can pose serious eye hazards. Always wear safety glasses. Side shields are recommended for added protection against flying objects. Ensure that machinery is suitably shielded.

Dust - Wear safety glasses or goggles to protect the eyes when working in dusty conditions.

Optical radiation (welding) - Ensure that the correct filters, welding goggles or full-face shields are worn when welding. Safety glasses with side shields worn underneath a helmet provide increased protection from flying particles.

Protective eyewear should meet American National Standards Institute (ANSI) approval and offer both front and side protection and enough ventilation to prevent fogging.

What to do if an eye injury occurs?

Prompt evaluation by an optometrist is necessary to determine the extent of the injury and subsequent treatment. For chemical injuries, the chemical should be identified if possible.

Those in the agricultural field are also at risk of eye damage from too much sunlight while working long hours outdoors. Sunglasses are an important item to help prevent damage from the sun's rays.

For more information contact Jill Gonder, Iowa Optometric Association 800/444-1772 or www.iowaoptometry.org

“Clock is Ticking” Conference Held

The *Clock is Ticking for Rural America: A Behavioral Health and Safety Conference* was held February 12-14, in Sioux Falls, South Dakota. AgriWellness, Inc. convened the conference, which focused on the behavioral health concerns of rural and agricultural populations, including mental health, suicide risk and addictions. Sponsors included American Coalition for Ethanol, Avera Health, Catholic Family Services of Sioux Falls, Great Plains Center for Agricultural Health, National Association for Rural Mental Health, Prairie Risings CSI and Sanford Research.

Speakers analyzed access to affordable health insurance, domestic violence education for rural non-English speaking agricultural workers, sleep management, farm marriages, intergenerational transfer of farms and methamphetamine use among rural Midwesterners. The conference drew a varied audience of 50 persons from eleven states.

AgriWellness Executive Director, Mike Rosmann, presented awards to two nominated persons “Bringing Hope and Health to the Agricultural Population.” AgriWellness recognized Kathy Schmitt from the Wisconsin Farm Center for her professional work which has focused on advocating for and providing behavioral health supports to farmers. AgriWellness also recognized South Dakota rancher and author Dan O’Brien for his writings which inspire farmers and ranchers around the world. Dan wrote an essay specifically for conference attendees which he delivered as the closing keynote address.

Conference proceedings are available at www.agriwellness.org

Pesticide, continued from page 1

household dust increased, but the association was not statistically significant, possibly because the study was so small.

Dr. Curwin’s study was not able to determine the primary factors that cause the migration of pesticides into homes. Dr. Curwin continues to collaborate with the GPCAH and in 2005, he worked with Vijay Golla, a doctoral student at the University of Iowa, to study 31 farm homes which had atrazine applied to their cropland. Again vacuum dust samples from the homes and urine samples from family members were collected, but this time they collected these samples during both the planting season and six months later to determine how quickly pesticide concentrations decrease over time. The results of this study are not yet available.

During the planting season in 2007, Donna Vosburgh, who is also a doctoral student at the University of Iowa, is initiating a study in homes of about 40 commercial pesticide applicators who apply atrazine. Like Vijay Golla, she will also collect vacuum dust samples from their homes and urine samples from the family members during both the planting season and six months later. The results of these efforts sponsored by the GPCAH will help us determine how pesticides may migrate into homes, what steps best prevent this migration, how long pesticides persist indoors, and whether the pesticide exposures of farm family members represent a serious health risk.

For information on the manuscripts mentioned in this article contact [Dr. Wayne Sanderson](#).

Dr. Wayne Sanderson directs the Great Plains Center for Agricultural Health, housed in the Department of Occupational and Environmental Health of the College of Public Health. He can be reached at 319/335-4207 (wayne-sanderson@uiowa.edu).

calendar

April 27

Iowa's Center for Agricultural Safety and Health (I-CASH) Spring Meeting
Ames, IA.
www.public-health.uiowa.edu/icash

May 6-12

North American Occupational Safety and Health Week (NAOSH)
www.asse.org/naosh

June 11-15

I-CASH Agricultural Occupational Health Training
Coralville, IA.
www.public-health.uiowa.edu/icash

June 24-28

National Institute for Farm Safety, Inc. (NIFS) 2007 Annual Conference
Penticton, British Columbia
www.ag.ohio-state.edu/~agsafety/NIFS/meetings2005.htm

July 11-13

National Association of County and City Health Officials (NACCHO) Annual Conference
Columbus, Ohio
www.naccho.org/conferences/NACCHOannual07/

August 2-3

The Governor's Conference on Public Health - Barn Raising VI: Celebrating Healthy Communities
Des Moines, IA.

www.idph.state.ia.us/bhpl/barn_raising.asp

August 9-19

Iowa State Fair
Des Moines, IA
www.iowastatefair.com

August 28-30

Farm Progress Show
Decatur, IL.
www.farmprogressshow.com

September 16-22

National Farm Safety & Health Week

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+++++It All Adds Up

Farm and Agricultural Injury Incidents Reported in Press Clippings (Iowa, Kansas, Missouri, and Nebraska)

Tractors, ATV's, Self-propelled Machines					Other Machinery		Grain Storage		Livestock			Other & Unknown	Number of Clippings
	Overtur n	Runover	Collision	Other	Entangle ment	Runover	Engulf	Fell from	Maul/Crush	Fell from	On Road		
2006													
Fatal	16	8	9	11	2	1	2	1	4	0	1	17	72
Nonfatal	9	6	22	15	7	1	3	2	10	0	12	25	112
2005													
Fatal	29	13	5	20	3	0	7	0	4	1	0	37	119
Nonfatal	20	8	19	15	4	1	2	2	5	2	1	28	107
2004													
Fatal	26	10	8	16	7	5	5	1	1	0	2	16	97
Nonfatal	20	6	12	14	7	0	3	0	7	1	5	15	90
2003													
Fatal	32	7	7	9	0	1	5	2	3	2	1	33	102
Nonfatal	18	7	22	15	9	3	2	3	4	1	5	17	106

For more information contact Murray Madsen, murray-madsen@uiowa.edu or 319/335-4481.

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