



AgHealth News

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University of California, Davis

Collaborative study in Colorado and California to determine the respiratory health risks of dairy workers

California ranks first in the United States for milk production. In the San Joaquin Valley, herd size is dramatically increasing while the number of dairies is decreasing. The warm, dry California climate allows for housing cows in open-walled freestall facilities with concrete floors instead of indoors in barns as is the practice of dairy producers in the Eastern U.S. and much of Europe.

Indoor housing of cows has been associated with high levels of particles in the air that dairy workers (and cows) have to breathe. These particles include dust from organic matter, such as feed or pulverized, dried manure, and other bioaerosols as endotoxins (fragments of bacteria originating from both the cows and feed). The open facilities in California would be expected to have lower levels of these organic dusts, but higher inorganic dust from soil.

Until now, no studies have surveyed both dust concentrations the workers experience and their respiratory health. The researchers also believe that the management practice changes that have occurred with the freestall facilities (which include increasing the number of cows—both in total number and number per worker, and allowing dried manure buildup in the corrals,

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Commentary: Congress and agricultural health

By Marc Schenker, M.D., M.P.H.

Every five to seven years, Congress reauthorizes the U.S. Department of Agriculture's farm bill, a massive congressional program that provides an average of \$14.5 billion to farmers who primarily grow one of five commodities: corn, cotton, rice, soybeans and wheat.

This year, the public health community has focused on how the farm bill is contributing to one of the major epidemics of our time—obesity. The current farm bill has resulted in an abundance of cheap corn and soybeans in their concentrated, processed products (high-fructose corn syrup, hydrogenated fats). Increasing evidence suggests that the resulting low prices for these food products is a contributing factor to the obesity epidemic.

Fortunately, a strong lobbying effort by other agricultural producers and by the public health community has at least partially addressed

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this problem in the 2007 farm bill so that other commodities (fruit and vegetable producers) are also being supported by the farm bill. This is a small step, but an important one to align agricultural policy and supports with a healthier diet. However, much more can be done to reverse the nutritional trends subsidized by the farm bill, and the effort to do so should not end with the farm bill authorization.

My question is, why doesn't the farm bill address the health issues affecting the hired farm labor at the heart (or backbone) of our nation's agricultural production? Now that labor-intensive commodities are receiving support, the farm bill should incorporate critical issues affecting our nation's farm workers. These include inadequate and unhealthy housing, lack of health care, and high rates of occupational injuries and illnesses.

The health and productivity of our nation's agricultural production is directly dependent on the health of our farm workers, yet the majority of our farm workers live in inadequate, crowded housing, lack medical care insurance, and endure increased



rates of musculoskeletal disorders, respiratory disease and other maladies of agricultural work.

If the farm bill is truly to benefit American farming, let's not exclude our invaluable hired farm workers.

Finally, the immigration reform bill in this year's Congress had a potential beneficial impact on U.S. agriculture and, in this case, the bill was defeated. This failure to pass a bill that will achieve some rationalization and sanity to our immigration situation means that the majority of our hired farm workers will continue to be undocumented. In addition,

some commodities will not reach their markets because of lack of farm labor, the health of farm workers will suffer, and farm worker families will be stressed by extended separations and the tragedy of illegal border crossings. Let's hope that renewed efforts to pass immigration reform will be successful, and we can thereby improve farm worker health.

I recently visited a successful Midwestern dairy farmer. This dairyman hires 17 workers on his farm, most of whom are Mexican immigrants. He related that his farm would have to shut down if he didn't have immigrant farm labor, and he described how his workers all have "papers" but that he doesn't probe about their legitimacy and he basically knows that most of them are forged. Thus he says he is between the rock and hard place of shutting his farm or hiring illegal workers (and committing a crime at the same time).

We shouldn't be making criminals out of our farmers, and at the same time worsening the health of our farm workers. It is time to pass rational immigration legislation that will begin to correct this insane situation.



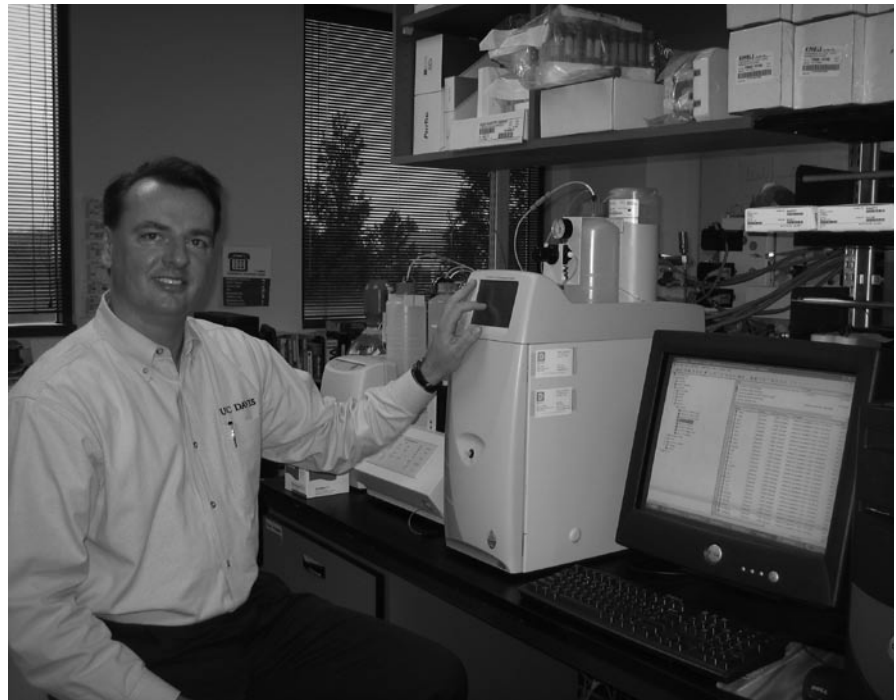
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among other factors), may result in higher than expected dust and organic particle levels and consequently potentially negative health consequences.

WCAHS investigators Frank Mitloehner, Deborah Bennett and Marc Schenker are conducting the pilot phase of the study, titled "Respiratory Health Exposures on Large California Dairies." They will be collecting preliminary data from local dairies in the Modesto area, using air samplers attached to the torso of workers while they labor on the dairy, which will monitor the air close to their breathing zone.

The same workers will also have breathing tests before and after their work shifts to see if there has been any change in their pulmonary function that correlates with the amount or type of dust collected by their personal air sampler. In addition, they will be surveyed to find out about more long-term health consequences.

The full study will be carried out in the San Joaquin Valley in 2008, and will involve about 200 workers on dairies that house more than 1,000 milking cows, and 50 "control" workers without exposure to cows as a comparison.



Air Quality Extension Specialist Frank Mitloehner

Professor Stephen Reynolds, director of the High Plains Intermountain Center for Agricultural Health and Safety at Colorado State University, is conducting a similar project in Colorado. He is serving as a collaborator to the WCAHS dairy project and will assess samples for endotoxin so that the results from each location can be compared. Colorado has a different climate, management style and smaller dairy facilities, which will complement the California study.

Shared data between the studies will enhance the quality of information elucidated from both projects. The researchers expect the project will produce data and information on the respiratory health impacts of work on Western dairies that is currently lacking. If any major health impact is found, investigators hope the data will help determine which dairy activities should be modified or changed to improve health outcomes.



"Agricultural Sustainability in Action: Farmers as Part of the Team" was the theme of the UC Davis Sustainable Ag Farming Systems (SAFS) Annual Field Day held on June 22nd at Muller and Sons Farm, in Woodland, CA. The keynote speaker was Tom Tomich, director of the UCD Ag Sustainability Institute. Topics covered in the field included the economics of alternative management practices, runoff and soil carbon, and weed management. WCAHS External Advisory Board member Tony Turkovich participated on the grower panel, one of the event's traditional highlights, which focused this year on water quality and reducing farm energy costs. Nearly 100 attended, including 20 UC Davis faculty, Extension researchers, graduate students and growers. The annual field day focus continually evolves, relying on the input from growers and farm advisors.

Diane Schroeder, WCAHS business office manager, retires

Honored on April 12th, in the “filled to capacity” Board Room at the Center for Health and the Environment (CHE), Diane’s former and current co-workers, expressed two common themes; 1) If you learned from Diane Schroeder, you learned from the best and your accounting skills have universal campus respect; and 2) If you worked with Diane, no kinder or more professional colleague exists.

Having worked closely with Diane for 17 years, WCAHS Director Marc Schenker knew Diane’s retirement would come one day and it would be difficult. “She’s been the perfect accountant—a fountain of knowledge and experience from which the center has benefited in countless ways,” he said.

Associate Director Kent Pinkerton praised the friend and colleague he said he will greatly miss. “Diane provided us with sound financial management of Ag Center accounts since its inception in 1990. We never lost or misspent a penny with her management skills and oversight.”

Diane Schroeder was an ideal fit at the WCAHS, since agriculture has been a part of her life since she moved to her grandfather’s ranch in Dixon when she was 4 years old. She and her husband Sydney Schroeder have



From left, Kent Pinkerton, Diane Schroeder, and Diane’s daughter Kim

been married since 1963. His family started farming west of Dixon in 1875. They raised sheep and grew wheat, barley, sugar beets, corn, alfalfa, beans, seed crops, millet, sunflowers, and almonds. There isn’t a part of farming that Diane doesn’t know. She has driven the tractor, helped harvest crops and hauled them to their receiving stations, helped move equipment, and of course, kept the books.

We wish her all the best!



NORA AgFF Council promotes partnerships, research and practice

On August 1st and 2nd, WCAHS Director Marc Schenker (back row, 4th from left) attended the NORA AgFF Council meeting in Marshfield, Wis. The 30-member AgFF Council, of

which Dr. Schenker is a member, includes stakeholders from universities across the nation—large and small businesses, professional societies, government agencies, worker organizations, safety professionals

and NIOSH scientists. The diversity of NORA is one key to its success.

The charge for this diverse collaborative council is to identify the most critical issues in workplace safety and health, as well as establishing partnerships to develop goals and objectives to address them—moving research to practice. Information of particular interest to the group when discussing and prioritizing issues are:

- The numbers of workers at risk for a particular injury or illness,
- The seriousness of the hazard or issue,
- The probability that new information and approaches will make a difference.



Two new NIOSH agricultural health and safety publications available

NIOSH Publication No. 2007-106

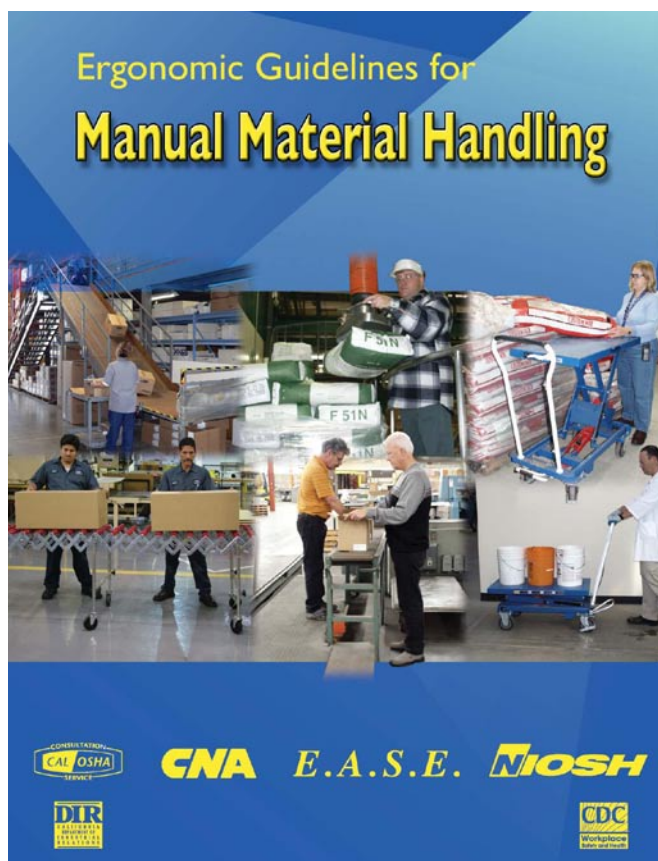
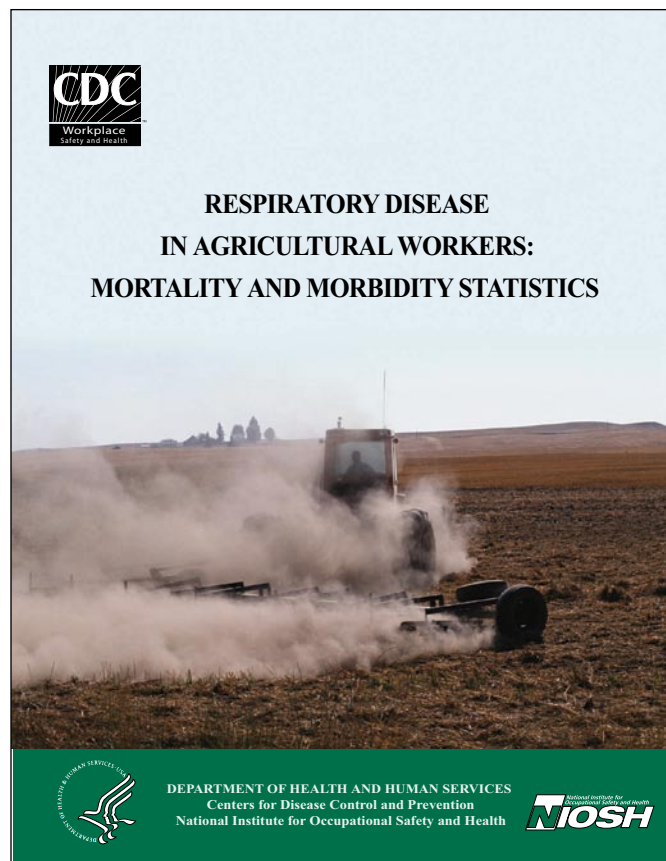
Respiratory Disease in Agricultural Workers: Mortality and Morbidity Statistics, Feb. 2007

WCAHS Director Marc Schenker provided consultation on *Respiratory Disease in Agricultural Workers: Mortality and Morbidity Statistics*. The publication presents summary tables and figures of occupational respiratory disease surveillance data focusing on various occupationally relevant respiratory diseases for the Agriculture, Forestry, and Fishing industries.

Interpreted with appropriate caution, the information contained in this report can help to establish priorities for research and respiratory disease prevention in agriculture. To increase the utility of future surveillance of occupational respiratory disease in agriculture, comments on the report, descriptions of how the information could be used, and suggestions of other data for inclusion in future reports are invited.

Data contained in this report originate from various publications, reports, data files, and tabulations provided by the National Center for Health Statistics (NCHS) and the Bureau of Labor Statistics (BLS).

Download a PDF at <http://www.cdc.gov/niosh/docs/2007-106/>



NIOSH Publication No. 2007-131:

Ergonomic Guidelines for Manual Material Handling, April 2007

WCAHS Investigator Fadi Fathallah contributed editorial content and served as technical reviewer for this publication. Manual material handling (MMH) work contributes to a large percentage of the over half a million cases of musculoskeletal disorders reported annually in the United States.

Musculoskeletal disorders often involve strains and sprains to the lower back, shoulders, and upper limbs. They can result in protracted pain, disability, medical treatment, and financial stress for those afflicted with them, and employers often find themselves paying the bill, either directly or through workers' compensation insurance. At the same time they must cope with the loss of the full capacity of their workers.

This booklet is written for managers and supervisors in industries that involve the manual handling of containers. It offers suggestions to improve the handling of rectangular, square, and cylindrical containers, sacks, and bags.

Download PDF at <http://www.cdc.gov/niosh/docs/2007-131/>



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for Agricultural
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Join our list server!

Have puzzling questions about occupational hazards in agriculture? Wondering about resources for teaching pesticide safety? Interested in Spanish-language resources for agricultural health and safety training? Then subscribe to our list server by visiting our Web site at <http://agcenter.ucdavis.edu>, and click on "AgHealth E-mail List."

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WCAHS Seminar Series

4-5 p.m., 3201 Hart Hall, UC Davis Campus
Refreshments Provided

Monday, October 1

Guadalupe Sandoval, consultant, Sandoval Bilingual Safety Solutions, "Bridging the gap: Understanding and addressing the culture/language divide between agricultural workers and the American workplace"

Monday, November 5

Dave Runsten, executive director, Community Alliance with Family Farmers, "CAFF programs and their impact on the health of farmers and farm workers"

Monday, December 3

Robin Dewey, M.P.H., UC Berkeley School of Public Health Labor Occupational Health Program, "Extending the worker occupational safety health training and education program into agriculture"

The seminar series is available via video webcast at <http://agcenter.ucdavis.edu/seminar/webcast.php>