



Western Center for Agricultural Health and Safety • University of California, Davis

Small changes can make a big difference in ladder safety

If you ever had an ergonomic review of your workspace, you know that small changes, such as moving your chair up an inch or tilting your monitor a few degrees, can make a big difference in reducing muscle aches and pains.

The same is true in agriculture, in which repetitive movement (e.g., going up and down ladders) can become incredibly tiring, potentially leaving a worker open to various types of injury. Staying healthy and strong is especially important for farmworkers who look forward to harvesting multiple crops through the season.

Professor Fadi Fathallah, engineer Victor Duraj, and others at the UC Agricultural Ergonomics Research Center (UC AERC) are continuing their earlier work, funded by NIOSH Community Partners for Healthy Farming Intervention, that showed some workers who harvest peaches and nectarines prefer a ladder with shorter spacing between steps.

Why might this be? It may go back to the principle of switchbacks. If you've ever hiked, you know that it is a lot easier to go up the hill via switchbacks than blazing

a trail straight up. You have to take more steps with switchbacks but the vertical height of each step is much less, and, ultimately can be less tiring. You might also find that even though you took longer to get there, by the end of the day you may have walked further or, the next day are less tired, or both. The same may be true when climbing a ladder if it has shorter steps.

In current work supported by the Western Center for Agricultural Health and **Ladder safety** continued on 2



Ladder design is important for different types of harvest. Some workers who harvest peaches and nectarines prefer a ladder with shorter spacing between the steps.

\$3 million study aims to boost health of immigrant Latino farmworkers

A new, collaborative study aimed at designing and evaluating worksite-based health programs to lower the risk of obesity and diabetes among immigrant Latino farmworkers has been launched under the leadership of the University of California, Davis.

The new five-year study, to be carried out through a partnership between UC Davis; Reiter Affiliated Companies, a large California berry grower; and the Health Initiative of the Americas at UC Berkeley; was recently funded with more than \$3 million in grant funds from the National Institute of Diabetes, Digestive and Kidney Diseases.

"Latino farmworkers harvest much of our fruit and vegetables, yet they face obesity and diabetes rates much higher than the general population," said lead investigator Marc Schenker, director of the UC Migration and Health Research Center and the Western Center for Agricultural Health and Safety, and a distinguished professor in UC Davis' Department of Public Health Sciences.

\$3 million study continued on 3

Bilingual video helps Hmong-American farmers with USDA funding

Independent Hmong farmers can learn about USDA financial assistance available to them through a bilingual video produced by the National Hmong American Farmers (NHAf). The 10-minute video, titled “Working with the USDA,” describes loans and grants available to farmers. (See

<http://www.youtube.com/watch?v=PYkyxT9wG0c>)

The video, which is available in Hmong with English subtitles, follows Mary Vu, a Hmong farmer near Fresno, Calif. Mary owns 11 acres and grows strawberries, flowers, and vegetables. Mary has lost crops due to bad weather, so she goes to her local USDA

Farm Service Agency (FSA) office in Fresno. Mary has been a farmer for many years, in her native country as well as in France, but she is not very aware of how the USDA could help her during these hard times. The video is an educational tool to help Hmong farmers learn about the financial support they can get and help other groups better understand some of the common struggles small farmers face.

Mary is directed to Tou Thao, a Farm Service Agency (FSA) loan officer, who explains that there are two types of loan programs available to help farmers like her: direct loans or guaranteed loans. Tou describes how much money Mary could borrow, for what purpose, and for how long with the different types of loans. Mary also learns that there are grants available to

help her improve her farm, for example, by installing drip irrigation or protective crop covers. Information on all the FSA loans described in the video is available in the web booklet, “Your Guide to FSA Farm Loans.”

The National Hmong American Farmers (NHAf) is a non-profit 501c3 organization whose mission is to preserve Hmong-American farm culture by promoting economic self-sufficiency for Hmong-American and other immigrant and ethnically underrepresented farmers. They provide services to independent farmers throughout the country, with special focus on California’s Central Valley farmers, who may have limited access to government programs. Contact NHAf by e-mail at info@nhaf.org, or by phone at (559) 225-1081.



Hmong farmers participate in the Clean Air Farming Workshop at Cherta Farms owned by Txexa Lee (center, in white hat) in Del Rey, California, where air quality concerns impact human health and choice of farming practices. Photo: USDA

Ladder safety *continued from page 1*

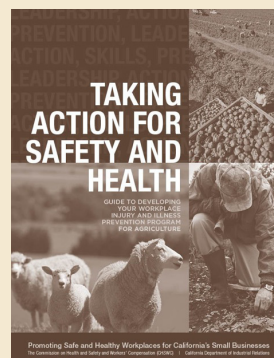
Safety, the UC AERC is using human muscle force modeling software to see why some workers with relatively small differences in size might have a strong preference for a particular spacing. To help match forces with movements, the researchers are using motion capture equipment that includes small sensors strapped to many points on a body. These electronics are similar to those used in developing animated movie and video game characters that move in “real” ways. Besides actual and modified

orchard ladders, the UC AERC will use their newly developed portable research ladder that allows for precise positioning of each ladder rung, as well as overall angle of the ladder, which will help the researchers test software-predicted optimum spacing for each person in the study.

If you are curious to know more or are a grower interested in participating in field trials, please contact Victor Duraj at 530-752-1898, vduraj@ucdavis.edu or via www.ag-ergo.ucdavis.edu.

In our last edition, we published that the new *Taking Action for Safety Guide* to assist in the development of workplace Injury and Illness Prevention Programs for agriculture is now available as part of the Worker Occupational Safety and Health Training and Education Program (WOSHTEP). We neglected to acknowledge that WOSHTEP is administered by the Commission on

Health and Safety and Workers’ Compensation in the Department of Industrial Relations. For more information about the IIPP training guide, you may contact WCAHS (530) 752-4050 <http://agcenter.ucdavis.edu>, or the Commission on Health and Safety and Workers Compensation (CHSWC) www.dir.ca.gov/chswc/WOSHTEP.



\$3 million study *continued from page 1*

He noted that the prevalence of obesity and diabetes has rapidly increased during the past decade in the United States. Among Latinos, the prevalence of overweight and obesity is now an alarming 78 percent, markedly higher than in the general population. Furthermore, the prevalence of diabetes among Latinos in the United States is almost twice that of non-Latino whites.

“To address that problem, we have created and are evaluating an obesity and diabetes prevention program that can be delivered to workers in the field,” Schenker said.

The study will include food and nutrition educational programs at the participants’ on-farm worksites, as well as exercise activities such as Zumba classes. All programs are led by community health workers or “promotoras.”

The study focuses on ranches in Salinas and Watsonville, but the ultimate goal is to disseminate the intervention program to farms throughout the state and country.

The program is designed to improve health outcomes among the farmworkers participating in the study, and to evaluate those outcomes, as well as the economic impact for the employer.

“We hope that the economic benefits – which we anticipate will be demonstrated and quantified through this study – will help convince other companies in the agricultural industry to adopt similar programs,” Schenker said.



Zumba classes (pictured above), included in this current study, were pilot tested earlier as an ideal way to help farmworkers combat obesity, one of their most serious health hazards.

He added that Reiter Affiliated Companies is a model industry partner for this study, because it is already invested in the health of its workers.

Co-investigators on the study include Daniel Sumner, a professor of agricultural and resource economics at UC Davis and director of the UC Agricultural Issues Center; Nancy Keim, an adjunct professor in the UC Davis Department of Nutrition; Heejung Bang, a professor of biostatistics at UC Davis; and Xóchitl Castañeda, director of the Health Initiative of the Americas at UC Berkeley.

WCAHS/HIA co-sponsor XV Binational Promotores Conference

On September 9, more than 200 promotores from across California and Mexico got together during the XV Binational Promotores Conference, organized by the Health Initiative of the Americas (HIA). The objective of the conference is to link promotores in the United States with those in Mexico to improve the health and well-being of underserved populations to which they serve. Among the topics covered were: Occupational Health and Prevention of Accidents in Agriculture, How to Impact Public Policies, Your Culture – Your Wealth, and other relevant topics to support the work of this communities’ leaders. The Western Center for Agricultural Health and Safety co-sponsored the event.





Last June, Sandy Freeland (back row, fourth from left), WCAHS manager since 2006, decided that it was time to enjoy life as a retiree. On June 25, a group of Sandy's co-workers got together to thank her for her years of great service. Sandy stated that working for the Ag Center was "a rewarding experience, within a great work environment, and with the most incredibly kind and talented co-workers anyone could hope for. Each day I looked forward to work... You made it fun and easy... most of the time!" Sandy retired with the respect and appreciation of all of her co-workers, but she is having a blast in her retirement. Congratulations, Sandy!

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Calendar

Wednesday, Sept. 24, Noon – 1p.m., CHT Building, Room 1341, 4610 X Street, Sacramento "An estimate of the U.S. government's undercount of occupational injuries on farms." **Paul Leigh, Ph.D., WCAHS PI**

Wednesday, Oct. 1, Noon – 1p.m., CSAC Conference Center, 1020 11th Street, 2nd Floor, Sacramento "Improving maternity care in California." **Paul Leigh, Ph.D., WCAHS PI**

Monday, Oct. 6, 2014, 4:00 – 5:00 p.m., CHE, Old Davis Road, Davis "Addressing California's unique agricultural health and safety issues through regulation and 'Best Practices,' 2014 and beyond." **William Krycia, MPH, CIH, Cal OSHA**

Monday, Nov. 3, 2014, 4:00 – 5:00 p.m., CHE, Old Davis Road, Davis "Innovative outreach strategies." **Xóchitil Castañeda, UC Berkeley, and Teresa Andrews, Western Center for Agricultural Health and Safety, UC Davis**

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The Western Center for Agricultural Health and Safety's AgHealth e-mail discussion group is open to anyone interested in agricultural health and safety. We welcome and encourage participation by posting comments or questions about agricultural health and safety. Subscribe at the WCAHS homepage: <http://agcenter.ucdavis.edu>, click on "AgHealth email List."