

Avian Flu School participants learn poultry blood sampling and shipping protocols for disease surveillance.



## ANIMAL AND HUMAN HEALTH

# Avian Flu School Goes International

H5N1 highly pathogenic avian influenza (HPAI) is currently affecting parts of Asia, Africa, Europe and the Middle East. Avian flu devastates poultry flocks of large producers and individuals in poor rural communities. The disease represents an international animal health emergency.

Adequate prevention and response to H5N1 HPAI outbreaks involves training more veterinarians, public health workers, scientists, livestock producers, wildlife and zoo managers, and government officials in biosecurity, emergency management, surveillance and reporting.

## FOOD SAFETY

### TRACKING *E. COLI*

A \$1.2 million USDA grant is supporting research to trace sources of *E. coli* O157:H7 in lettuce grown in the Salinas Valley.

Rob Atwill, Veterinary Medicine Extension specialist and co-principal investigator, says, "There has been much speculation that livestock or wildlife are possible sources of the *E. coli* O157:H7 in outbreaks in fresh produce from the Salinas Valley region. We will examine livestock and wildlife on the rangeland above the farmland, and wildlife that live near canals and on the periphery of vegetable fields on the valley floor."

In the four-year study, crews will collect thousands of samples of domestic animal and wildlife droppings; creek, ditch and irrigation water; farm soil; and lettuce. Scientists will analyze the data to identify possible sources of *E. coli* O157:H7 such as cattle, feral pigs or other animals.

They will also assess the climate, landscape attributes and irrigation management practices associated with increased risk of contamination.

Study results will help growers determine strategies to prevent field contamination of vegetables and develop effective practices to improve water quality.

Certain strains of *E. coli* bacteria normally live in the intestines of cattle, wildlife and humans causing no harm. The O157:H7 strain, however, causes severe diarrhea and can lead to kidney damage and even death. It is unusually persistent in the environment, though pasteurization or cooking destroys the bacteria.

Avian Flu School is a train-the-trainer curriculum of the Global Livestock Collaborative Research Support Program developed by the Wildlife Health Center and Cooperative Extension at the UC Davis School of Veterinary Medicine.

### *The course covers preventing, detecting and responding to avian influenza outbreaks.*

The flu school was launched internationally last summer following a series of pilot courses conducted at UC Davis, Texas A&M University and Morogoro, Tanzania.

The pilot courses were led by Carol Cardona, associate professor and Veterinary Medicine Extension poultry specialist; Christian Sandrock, assistant professor of pulmonary and critical care medicine and medical director of the California Preparedness Education Network; veterinarian Daniel Beltrán Alcrudo; and Wildlife Health Center analyst David Bunn. Participants included veterinary scientists from the United States, Mali, Libya, Nigeria, Senegal and Tanzania.

The four-day course, adaptable to different countries and

environmental conditions, covers preventing, detecting and responding to avian influenza outbreaks. Topics include emergency communications, virus surveillance in domestic and wild birds, public health and worker safety, disinfection, diagnostic sample collection and poultry vaccination.

The National Center for Foreign Animal and Zoonotic Disease Defense (FAZD) co-sponsored curriculum development. Other partners included the Wildlife Conservation Society; Sokoine University of Agriculture, Tanzania; and University of Minnesota Cooperative Extension.

Avian Flu School manager David Bunn has discussed future training sessions with officials of the African Union, USAID, UNFAO, the Centers for Disease Control and Prevention, the World Health Organization, and veterinary programs in Malawi and Uganda.

The Avian Flu School Web site ([http://www.vetmed.ucdavis.edu/whc/flu\\_school/index.html](http://www.vetmed.ucdavis.edu/whc/flu_school/index.html)) provides overviews, a planning guide, and information for obtaining course materials and locating instructors.

The Avian Flu School offers techniques for slaughtering and cleaning a bird without contaminating the meat, applicable where birds are prepared in homes or villages having minimal biosecurity options.

