



Products to reduce the risk of engineered and exotic animal diseases to America's health and economy

1500 Research Parkway, Suite 100A | College Station, TX, 77843-2129 | fazd.tamu.edu | 979-845-2855

NEWS FROM THE FAZD CENTER

October 2007 | Vol. 2, No. 3

DHS approves funding for 4th year of product development

The Department of Homeland Security has approved a \$5 million grant to fund a fourth year of product research and development at the National Center for Foreign Animal and Zoonotic Disease Defense, the FAZD Center announced.

The funding is made through the DHS' University Programs Centers of Excellence grant program. Approval was granted after an extensive review process. DHS also extended approval through Year 5, pending availability of funds.

"Leadership at DHS clearly appreciates the risks posed to national stability by exotic and engineered animal diseases," said FAZD Center Director Dr. Neville P. Clarke. "We are gratified that DHS has again demonstrated its support for the FAZD Center's mission of developing the leading products that will directly address these risks."

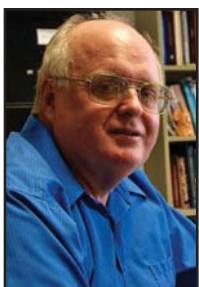
Established as a DHS National Center of Excellence in 2004, the FAZD Center is an integrated, full-spectrum center charged with generating a stream of products to protect America from

Three Categories of Products

- **Biological Systems**
 - > Vaccines and anti-virals
 - > Detection/diagnostic technologies
- **Information and Analysis Systems**
 - > Epidemiological models
 - > Economic models and risk analysis
- **Education and Outreach Systems**
 - > Training for early responders
 - > Graduate education for next generation of science power

the exotic and engineered animal diseases that threaten public health and economic stability. The Center is focused currently on three diseases: Rift Valley fever, foot and mouth disease, and avian influenza. All three are exotic to the United States, but have the potential for catastrophic outbreaks. Both Rift Valley fever and avian influenza are zoonotic diseases; they may be transmitted from animals to humans.

Nobel Prize panel honors UN team including FAZD Center investigator



Dr. Bruce McCarl

A FAZD Center principal investigator is part of a United Nations team that received the 2007 Nobel Peace Prize for its work on evaluating the risk of climate change caused by human activity.

Dr. Bruce McCarl, Regents Professor in the Department of Agricultural Economics at Texas

A&M University, belongs to the International Panel on Climate Change, which was established in 1988. Every five years, the panel publishes a report. This year's report was issued as four books.

McCarl served as lead author on a chapter in the report. He has worked on climate change for more than 20 years, studying how agriculture could be affected and how it could play a role in mitigation.

Director presents products to USAHA/AAVLD conference

Members of the United States Animal Health Association and the American Association of Veterinary Laboratory Diagnosticians received an introduction to leading FAZD Center products from Director **Dr. Neville P. Clarke** during the organizations' 111 annual meeting.

The USAHA and AAVLD held the annual conference in Reno, Nev., Oct. 18-24, 2007. During his presentation, Dr. Clarke reviewed the Center's on-going stream of products dealing with three animal diseases, each of which poses catastrophic risks to the United States. These are Rift Valley Fever, Foot and Mouth Disease and Avian Influenza. These cutting edge products include vaccines and anti-virals, companion diagnostic tools, epidemiologic and economic models, early responder training and public policy workshops.

Hartley publishes in Electronic Journal of Differential Equations



Dr. David M. Harley

Dr. David M. Hartley, a FAZD Center investigator from Georgetown University, published a new article in the August 2007 issue of the Electronic Journal of Differential Equations.

Entitled "An Epidemiological Model of Rift Valley Fever," the article presents and explores a novel mathematical model of the epidemiology of Rift Valley Fever.

"RVF is an Old World, mosquito-borne disease affecting both livestock and humans," Hartley and his co-authors say in the abstract. "The model is an ordinary differential equation model for two populations of mosquito species, those that can transmit vertically and those that cannot, and for one livestock population. We analyze the model to find the stability of the disease-free equilibrium and test which

model parameters affect this stability most significantly. This model is the basis for future research into the predication of future outbreaks in the Old World and the assessment of the threat of introduction into the New World."

White paper: U.S. must improve informing non-commercial owners

The United States must better inform owners of non-commercial livestock about exotic animal diseases if it wants to stop catastrophes like the 2003 Exotic Newcastle Disease outbreak that decimated California's poultry industry. That's the conclusion of a new white paper from the FAZD Center.

Scientists believe Exotic Newcastle Disease flourished for nearly six months in backyard flocks before diagnosis and detection occurred, according to the white paper, "Early Detection/Rapid Response: Connecting Non-commercial Livestock and Fowl Owners (NFLO) with Veterinary Information." The paper suggests a "best practices" approach to identifying NFLOs and effectively communicating the information to them.

FAZD Center principal investigator **Dr. Tom A. Vestal** and extension program specialist **Dr. Shannon H. Degenhart** (both of Texas A&M University) co-authored the paper with Dr. Jeff W. Koch of Prairie View A&M University.

Powdrill helps welcome new DHS scholars and fellows to program

Dr. Thomas E. Powdrill, the FAZD Center's assistant director for external affairs, represented the Center at the 2007 DHS Scholars and Fellows Orientation meeting held Oct. 5-7, 2007 at the Renaissance M Street Hotel in Washington, D.C. The meeting, organized by the DHS Science & Technology Directorate, provided orientation for 28 new DHS Scholars and Fellows joining 74 returning Scholars and Fellows. Along with providing information on DHS, S&T and the field of homeland security.