

Sheep HEALTH REPORT

A National Institute for Animal Agriculture Publication

SPRING 2003

Animal Agriculture Industry Urged to Tighten Farmland Security Against Bioterrorist Attack

With the nation's "threat" level having been heightened in recent times, the National Institute for Animal Agriculture (NIAA) is joining with federal agencies in sounding an alert to producers and ranchers and urging increased biosecurity measures be implemented to protect against foreign animal diseases.

In March, and again in May, the Department of Homeland Security increased the threat level to "orange", or high status.

NIAA Chairman of the Board Kenneth E. Olson says food security is a major concern for the U.S. at this time. "Federal, state and local government agencies are working diligently to be prepared

for the next terrorist attack on our nation," said Olson. "However, because the abundance of the U.S. food supply is seen as a major strength of our nation, it is a potential target. For this reason, it

The unintentional outbreak of foot-and-mouth disease in Great Britain in 2001, the diagnosis of bovine spongiform encephalopathy, or mad cow disease, in 1996 and the resulting consequences suf-

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is imperative that employees and representatives throughout the food and agriculture chain be alert and aware of the need for extra precaution during this time."

Terrorism experts have explicitly stated that there are a number of agents and toxins that pose a severe threat to animal health and are in the hands of would-be terrorists. Some of the agents and toxins that pose a threat to animal health and animal products also pose a severe threat to public health. But the simple disruption of the nation's abundant supply of food through an intentional disease introduction into the livestock population would likely cause major economical and sociological disruption in the U.S. and abroad.

ferred by that nation, are real-time examples of the lasting effects that animal disease outbreaks can have on agriculture and the entire society. Some analysts predict the effect such an introduction would have here in the U.S. would be ten times as great because of the sheer size of U.S. animal agriculture, valued at nearly \$100 billion, the U.S. population and the nation's land mass.

"Producers are on the front line of defense for protecting America's food and agriculture. Veterinarians and others also play a very important role, as well," said Olson. "It has been said that since the events of Sept. 11, 2001, we are living in a different world. We must realize that agriculture is a pillar of our nation's strength and unfortunately the envy of those same individuals

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CEAH Releases Analysis of U.S. Sheep Health

The Centers for Epidemiology and Animal Health (CEAH), within Veterinary Services, has released two new reports detailing findings from a study of the nation's sheep producers and ranchers.

The *Sheep 2001* study was conducted by CEAH's National Animal Health Monitoring System (NAHMS) and is only the second national sheep survey in history providing an overview of sheep health, productivity and management.

Sheep operations in 22 states were surveyed in the *Sheep 2001* study, accounting for 87 percent of U.S. sheep inventory and 72 percent of U.S. sheep producers.

Part II: Reference of Sheep Health in the United States, 2001 and a third report on lambing practices in the U.S. were recently mailed to industry leaders across the country. An earlier report on management practices was released in July 2002.

Among the study's findings: Nearly one-third of U.S. sheep producers have never heard of Johnne's disease or ovine progressive pneumonia, and 84 percent of producers surveyed allowed visitor access to their operations, with only 22 percent of requiring any level of biosecurity requirements.

Copies of the *Sheep 2001* reports can be accessed on the Internet at www.aphis.usda.gov/vs/ceah/cahm.

Animal Agriculture Industry Urged to Tighten Farmland Security *(continued from page 1)*

who seek to do harm to our society and way of life."

NIAA is working with its member organizations and state and federal agencies to modernize the nation's animal health infrastructure and is establishing a relationship with the new Department of Homeland Security to ensure that agriculture protection is not overlooked. Increased funding for additional inspectors at ports and borders will be necessary, as well as infrastructure improvements to enhance animal health monitoring, surveillance and diagnostic capabilities.

The United States Department of Agriculture (USDA) has issued a list of precautions that producers and others involved in food production can use to bolster food supply protection. Olson says it is important for stakeholders to feel empowered to implement these measures in their businesses or operations. Some of the measures that USDA suggests are:

- Develop and implement a plan to manage risk.
- Train employees as to their responsibilities under the plan.

Screen potential hires.

- Have a current list of emergency phone numbers readily available.
- Educate consumers as to ways in which they can help.
- Secure hazardous materials, energy and water sources, and such production inputs as feed and nutrients.
- Prevent unauthorized entry or access to production and processing sites.
- Report any suspicious activity and be alert for sudden, unexplained death loss or unusual behavior of animals in the herd or flock.

Symptoms sheep producers and ranchers should be looking for include rising temperatures; ruptured vesicles; sticky, foamy, stringy saliva; reduced feed consumption; lameness with reluctance to move; abortions, and low conception rates.

For additional details in implementing these measures, log onto NIAA's website at www.animalagriculture.org, click on Farmland Security and look for a copy of the USDA brochure, Keep America's Food and Agriculture Safe.



Sheep Health Report

Spring 2003

Publisher

National Institute for Animal Agriculture
Glenn N. Slack, President & CEO

Sheep Health Report provides the latest information on issues pertinent to sheep health initiatives, strategies, research and regulatory action. It is a communications initiative of the NIAA Sheep Health Committee and is produced in cooperation with USDA-APHIS. Reprinting is encouraged.

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APHIS Dedicates New Emergency Operations Center



Deputy Secretary of Agriculture Jim Moseley dedicated the APHIS Emergency Operations Center on April 3rd. The center is able to coordinate with USDA and the Department of Homeland Security. Behind Moseley in this photo, screens show the center's multi-site video teleconferencing capabilities. His remarks were broadcast to three remote locations which could be seen by attendees throughout the center.

A state-of-the-art facility that will significantly improve the Animal and Plant Health Inspection Service' (APHIS) capability to coordinate responses to animal and plant health emergencies was officially dedicated on April 3.

Located at USDA's Veterinary Services headquarters in Riverdale, Md., the emergency operations center (AEOC) will serve as the national command and coordination center for APHIS emergency programs' disaster management.

According to Dr. Joseph Anelli, director of emergency programs for USDA, APHIS, Veterinary Services, the center can be used in both routine and emergency situations. "During an emergency, the AEOC can support 40 or more personnel and operate 24 hours a day, seven days a week," said Anelli. "When an emergency operation is not underway, the AEOC facilities will be used to monitor and report on international and domestic surveillance of

pest pathogens and disease conditions of concern and to conduct advanced training."

The AEOC will be used through all phases of an emergency, from initial situation assessment through response coordination and support and then to wrap-up phases.

The AEOC features advanced technology that allows AEOC team members to communicate with field personnel and USDA leadership. Communications capabilities include video teleconferencing, advanced computer interfaces, geographical information system mapping, and a strong multimedia component.

"Teams working in the AEOC now have a greatly enhanced ability to collect, analyze, and disseminate information, enabling them to meet any animal or plant health emergency with a well-orchestrated and technologically advanced emergency response."

"Teams working in the AEOC now have a greatly enhanced ability to collect, analyze, and disseminate information, enabling them to meet any animal or plant health emergency with a well-orchestrated and technologically advanced emergency response," said Anelli. He said national response management team can direct necessary resources and communicate with appropriate stakeholders by coordinating with other federal, state, and international organizations, including the Department of Homeland Security.

The spatial layout of the AEOC provides both large gathering areas and private workspaces. The Center for Intelligence Collection is a large, open space that includes the

projection area and 21 emergency operation stations. The Leadership Incident Coordination Center is used for assembling and briefing key leadership. Another room is dedicated to receiving and storing classified information. A briefing room, with seating for 25 to 30 people, can be used to assemble stakeholder groups. It can also serve as a training classroom. There are also conference rooms and a number of individual offices.

"AEOC team members are trained in incident command system procedures of emergency management and now have an enhanced ability to keep leadership informed of the status of emergencies," said APHIS Administrator Bobby Acord. "Having this world-class facility to coordinate and support emergency response helps APHIS to provide leadership during national emergencies and greatly enhances our ability to work with partners."

AEOC At-a-Glance

- Development started in September 1999.
- The size of the center is 8,800 square feet.
- It is supported by a 400-kilowatt generator as an emergency power source.
- It features four, 65-inch rear projection screens, 40 high-resolution computers, and global positioning system time-zone clock displays.
- The AEOC was designed at a cost of \$87,321. Construction cost was \$587,626. The advanced electronics systems cost \$2.6 million.

It's Fair and Show Time!

Sheep and goat producers preparing to exhibit their animals this show season will want to become familiar with movement restrictions and identification requirements associated with the national program to eradicate scrapie. The following Q&A provides basic information exhibitors need to know.

Q What categories of sheep and goats **REQUIRE** official ID at shows/exhibitions?

A • All breeding females, i.e. ewes, ewe lambs, does and doelings;
• All breeding rams and bucks.

Q What categories of sheep and goats **DO NOT REQUIRE** official scrapie ID for shows/exhibitions?

A Wethers, unless otherwise required by state regulations in the state where the show is taking place or by a specific show's rules.

Q Does this mean that official scrapie ID must be in place for all sheep and goats, as outlined in the first question, for all shows?

A No, shows and exhibitions that are not open to out-of-state exhibitors ARE NOT required to have official scrapie ID. However, the show or state may have such a requirement, so be sure to check the show rules or with the organizers of the event.

Q When can breed registration tattoos be used in place of official scrapie ID tags?

A A registration tattoo can be used when the animal is accompanied by its registration paper or a photocopy or a completed application for registration.

Q Are electronic microchips allowed in goats for exhibition?

A If your goat breed registry recognizes electronic microchips as an authorized form of ID and the microchip number is recorded on the registration certificate, then electronic ID is acceptable. You must also have your registration certificate (or a copy of it) or a health certificate which includes the microchip number that matches the one on the registration certificate. Further, you must take your own reader unless one is provided by the show.

Q When should sheep or goats be tagged?

A Any time prior to leaving the farm or ranch.

Q What about health certificates?

A Any time sheep or goats cross state lines, they must be accompanied by a health certificate (Certificate of Veterinary Inspection).

Note: Check the show rules; some events require health certificates for all entries.

Q How do I know if a given show will have entries from other states?

A Check the show's official rules or ask the show organizers.

Q Who do I call to find out what my state requires for official scrapie ID at shows/exhibitions?

A Contact your local veterinarian. Also, your State Veterinarian's Office can inform you of ID requirements and movement restrictions. Phone numbers for the 50 State Veterinarian Offices

can be obtained at www.animalagriculture.org/scrapie.

Q If I am taking my animals to an out-of-state show, can I assume that I must have official scrapie ID and a health certificate?

A Yes.

Q Where can I get official identification tags and/or more information?

A Simply call 1-866-873-2824. That number will put you in touch with animal health officials in your state who are responsible for the scrapie eradication program.

Q What if my sheep or goat loses its official ID?

A Replace it with a new one, and record the new number and flock of birth in your records.

Q If I sell my sheep or goat at the show, what records am I required to keep?

A Record the ID of the individual animal(s) sold and the buyer's name, address and telephone number and retain the records for five years.

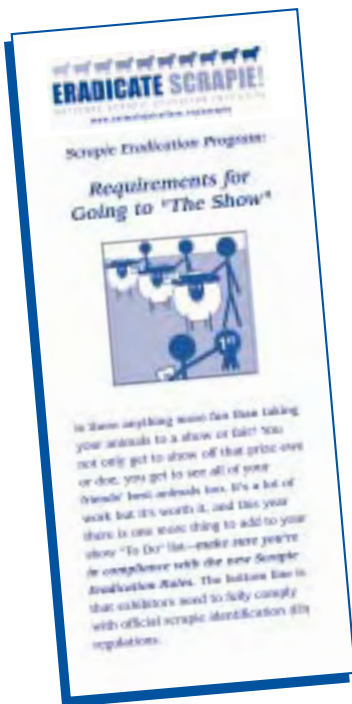
Q Where can I find out more about scrapie and the scrapie eradication program?

A Contact your local veterinarian or call your State Veterinarian's Office.

Or, check out:

USDA, APHIS, Veterinary Services
www.aphis.usda.gov/vs/scrapie

National Institute for Animal Agriculture
www.animalagriculture.org/scrapie



To obtain a copy of the brochure, "Requirements for Going to 'The Show'", log onto www.animalagriculture.org/scrapie, or call the National Institute for Animal Agriculture at 270-782-9798.

APHIS Working to Establish Prevalence, Eradicate Scrapie

With the Accelerated Scrapie Eradication Program well underway, USDA's Animal and Plant Health Inspection Service (APHIS) is seeking to understand prevalence levels throughout the U.S. and prevent further spread by locating infected flocks.

According to Dr. Gary Ross, a veterinarian with USDA, APHIS, Veterinary Services, 193 scrapie cases have been confirmed and reported by the National Veterinary Services Laboratories (NVSL) in FY 2003, with 49 scrapie infected and source flocks under quarantine as of March 31.

Participation in a program that recognizes flocks seeking scrapie-free recognition continues to grow. Ross reported 1,653 flocks participating in the Scrapie Flock

Certification Program (SFCP) on March 31, of which 87 were certified, 1,557 were classified as "complete monitored", and nine classified as "selective monitored" flocks.

A slaughter surveillance study designed to estimate the national and regional prevalence of scrapie in mature cull sheep entering slaughter channels has reached the end of the second phase. Samples from a total of 11,143 sheep have been submitted since Phase II was initiated in April 2002. The next phase, now underway, will use slaughter surveillance to detect infected cull slaughter sheep and trace them to their flock of origin.

The study is being conducted by the Centers for Epidemiology and Animal Health in Ft. Collins, Colo.

Federal Budget Includes Significant Increase for Scrapie Eradication

When President Bush signed the 2003 fiscal year spending bill, it included a significant increase in funding for the national scrapie eradication program. According to the American Sheep Industry Association (ASI), the \$15.47 million sum is the largest single-year increase the industry has secured for a long-term, sheep-specific program.

"These funds are crucial to the implementation of the scrapie eradication program and will allow the U.S. Department of Agriculture's Animal and Plant Health Inspection Service the ability to hire the personnel necessary to achieve the aggressive goals set

for the elimination of this disease," said ASI Executive Director Peter Orwick.

ASI worked with key lawmakers for the inclusion of several programs in the bill that would benefit the sheep industry.

"We considered the key responsibility of ASI was to secure the several-fold increase of annual appropriations -- second only to launching the nationwide regulation on scrapie two years ago," stated Orwick. "These funds provide federal and state officials with the means to successfully operate the eradication program as necessary in working with the sheep industry."

Studies Examine Strategies to Control Potential Foot-and-Mouth Disease Outbreak in the United States

Threats of foot-and-mouth disease (FMD) entering the United States call for an emergency plan that would be implemented immediately upon confirmation of FMD. In the February issue of the *American Journal of Veterinary Research*, scientists report the development of an epidemic simulation model that assesses how well control strategies involving vaccination and preemptive slaughter would manage an FMD outbreak. Also assessed was the impact of delays in FMD diagnosis and the effect of different herd sizes and species composition on the epidemic size and duration.

"Typically, for each week the initial diagnosis of FMD was delayed, an FMD epidemic increased by about 3-fold," explained Mark Thurmond, DVM, MPVM, PhD, a veterinary epidemiologist at the University of California School of Veterinary Medicine in Davis and co-author of the study. "Therefore, developing surveillance aimed at early and rapid detection is key to the early control of an FMD epidemic."

Devastating images of the FMD

epidemic in the United Kingdom in 2001 illustrated the need for a strategic plan for control and eradication in the event of an FMD outbreak in the United States.

Because FMD has not occurred in the United States since 1929, specific data on FMD virus transmission are not available. The authors created a model they then used to simulate hypothetical epidemics of FMD for specified control scenarios that included a baseline eradication strategy mandated by the USDA and supplemental control strategies of slaughter or vaccination of all animals within a specified distance of infected herds, slaughter of only high-risk animals identified by use of the model, and expansion of infected and surveillance zones.

Factors evaluated in the studies included:

- Immediate large scale vaccination;
- Preemptive depopulation of herds;
- Number and type of herds potentially infected.

Results indicated that up to 17% of herds in the study area

could become infected, depending on the type of herds (e.g. swine, dairy) initially involved. The model indicated that one of the vaccination strategies explored could potentially decrease epidemic size by 41%. This would require immediate implementation of a large-scale vaccination program with an appropriate vaccine.

The preemptive depopulation of herds was effective in reducing the scale of an FMD epidemic, but for this scenario, up to 27% of uninfected herds were eliminated in addition to the herds with FMD.

These studies provide valuable tools for disaster planning and the basis for formulating effective control scenarios, which may be useful in developing cost-effective eradication programs.

The studies were funded in part by the USDA-National Research Initiative Competitive Grants Program and collaborative agreements with the California Department of Food and Agriculture and the United States Department of Agriculture, Animal Plant Health Inspection Service, Veterinary Services.

USDA Designates \$4 Million to States for CWD Management

The U.S. Department of Agriculture recently announced that it is making \$4 million of new funding available to assist state wildlife agencies in addressing chronic wasting disease concerns.

"USDA is committed to assisting states, federal agencies and tribes in controlling the growing threat to elk and deer from chronic wasting disease," said Secretary

of Agriculture Ann M. Veneman. "States and local communities, along with academia and the private sector, are critical partners in this effort."

The funding will be distributed through grants determined by a formula developed in conjunction with the International Association of Fish and Wildlife Agencies. The formula establishes three tiers of

states and distributes money according to need.

To apply for funding, each state must submit management and surveillance plans detailing how the funds will be spent. More information is available on the Internet at www.aphis.usda.gov/lpa/issues/cwd/cwd.html.

BSE Diagnosed in Canadian Cattle Herd

The Canadian Food Inspection Agency (CFIA) has quarantined a growing number of Alberta farms in an investigation of a single case of bovine spongiform encephalopathy (BSE). The case of one cow was detected as part of Canada's ongoing BSE surveillance program.

Preliminary tests performed at a provincial laboratory and at the CFIA's National Centre for Foreign Animal Disease were unable to rule out BSE. The CFIA sent specimens to the World Reference Laboratory in the United Kingdom, which verified the presence of BSE.

"Immediate action has been taken to safeguard Canadian consumers and the Canadian livestock population," said Agriculture and Agri-Food Minister Lyle Vanclief. "Federal officials, in cooperation with provincial and industry partners are conducting a comprehensive investigation and taking all necessary steps to control the situation."

The CFIA and the Province of

Alberta are investigating the animal's origin and how its remains were processed.

Alberta agriculture officials tested the cow when it was condemned at slaughter. The eight-year old cow was slaughtered on Jan. 31. Canada reported on May 20 that it had found the single case of BSE. No meat from the cow entered the food chain.

The United States Department of Agriculture placed a ban on the importation of all live ruminants (such as cattle, sheep, goats, cervids and camelids), ruminant meat, ruminant meat products and other ruminant products from Canada pending further investigation and dispatched a technical team to Canada to assist with the investigation.

Agriculture Secretary Ann M. Veneman said she spoke to Vanclief soon after the diagnosis was made public and expressed confidence that appropriate measures were being taken. "Informa-

tion suggests that risk to human health and the possibility of transmission to animals in the United States is very low."

USDA's Animal and Plant Health Inspection Service activated its emergency operations center (AEOC) to monitor the ongoing investigation in Canada and implement the restrictions placed on Canadian imports.

"The impact for the sheep industry should be minimal, since only a small number of sheep and sheep products cross the border from Canada," said Paul Rodgers, deputy director of policy for the American Sheep Industry Association. "Imports of sheep and sheep products from Canada are suspended under the temporary ruminant ban."

For more information, contact APHIS Emergency Programs at 800-601-9327. Additional information and updates are available on USDA's BSE Website: www.aphis.usda.gov/lpa/issues/bse/bse.html.

VS "Safeguarding Animal Health in 2002" Report Now on the Web

USDA's Animal and Plant Health Inspection Service's Veterinary Services (VS) has made available its annual report for fiscal year 2002. The report highlights VS activities in domestic detection and surveillance, exclusion, international information, response, regional highlights, and communications and outreach.



VS is charged with protecting the \$100 billion-a-year livestock industry from foreign and domestic animal diseases and supports USDA's efforts in opening new markets for U.S. animal products.

The report, Safeguarding Animal Health in 2002, is available on the Internet at www.aphis.usda.gov/vs.

USAHA Announces 2003 Annual Meeting

The 107th annual meeting of the U.S. Animal Health Association will be held Oct. 9-16 in San Diego, Calif. As in past years, the meeting will be held in conjunction with the 46th annual meeting of the American Association of Veterinary Laboratory Diagnosticians.

Topics that will be discussed include the continuing threat of bioterrorism, animal disease surveillance, the ability to trace the movement of animals, implementation of a national animal health laboratory network and a special session on international agricultural trade.

For registration and hotel information, call (804) 285-3210 or log on to www.usaha.org.

MUMS Legislation Reintroduced in Congress

The American Veterinary Medical Association (AVMA) is leading a coalition urging members of Congress to support the Minor Use and Minor Species (MUMS) Animal Health Act of 2003, legislation designed to increase the number of drugs available to treat ill animals.

The bill, developed in collaboration with the Food and Drug Administration (FDA), is similar to the Orphan Drug Act of 1983. Introduced by Alabama Senator Jeff Sessions and Mississippi Congressman Charles Pickering, the legislation is intended as a mechanism to provide FDA-authorized drugs for conditions in minor species, such as sheep and goats, where therapies are unavail-

able and uncommon animal disease conditions in major species.

AVMA says the critical shortage of approved animal drugs for minor uses and minor species is -- among other things -- an animal welfare concern, leaving sick animals untreated or forcing veterinarians to treat animals with unproven therapies.

Congress nearly took action in the last session before running out of time. Sessions and Pickering were quick to reintroduce the legislation this year.

Among the organizations endorsing the MUMS legislation is the American Association of Small Ruminant Practitioners. For more information, log onto www.avma.org/scienact/mums.

Colorado to Host Int'l TSE Conference

TSE in Animal Populations – Fact and Fiction, is the theme of an international conference that will be held in Fort Collins, Colo., Sept. 10-11, 2003. The conference will feature discussions by leading experts on approaches to understand and reduce the spread of Transmissible Spongiform Encephalopathy (TSE) diseases in animals.

The purpose of the conference is to establish a line of communication between scientists, policy makers, regulators, and the public on topics related to TSEs in animal populations in order to improve future preventive measures.

Scrapie in sheep will be used as a base line disease for contrast and comparison. To receive notification as information becomes available, contact Pam Timms at aphi@colostate.edu.

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