

Sheep Health Report

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NIAA awarded grant to help implement National Scrapie Eradication Program

The National Institute for Animal Agriculture (NIAA) has announced that it has been awarded a grant from the U.S. Department of Agriculture (USDA) to carryout a national producer education program for the soon-to-be launched effort to eradicate scrapie from the nation's sheep flocks and goat herds.

"NIAA's role in the program will be to communicate to producers the details of the program both directly and through trade associations and the media," explained Glenn N. Slack, NIAA president and chief executive officer.

A comprehensive industry awareness and media relations campaign,

labeled *Eradicate Scrapie!*, is underway and will coincide with the publication of new government regulations governing the interstate movement of sheep and goats. The regulation will



be official upon publication in the *Federal Register*, which NIAA anticipates to be within the next 30 days.

NIAA, successor to the Livestock Conservation Institute (LCI), has played an integral role in past disease eradication efforts among cattle and swine, including tuberculosis, brucel-

losis, hog cholera and pseudorabies. The organization's Sheep Health Committee has been an advocate for scrapie eradi-

cation and has encouraged the development of a reliable diagnostic test.

"While we will be sending information directly to producers, we will also be working with the media to further disseminate information that will be important for sheep and goat producers to know and understand," said Slack. "Eradication initiatives require the support and cooperation at all levels: veterinarians, breed associations, livestock dealers and markets, meat packers and processors, show officials, transporters and producers, and media and it will be our job to explain what will be required by each segment," he points out.

The goal is to eradicate the disease in 10 years and to have the U.S. recognized internationally as "scrapie-free" in 17 years.

Animal Health Protection Act introduced in U.S. House of Representatives

Two members of the U.S. House of Representatives introduced a bill May 24th that would help prevent the introduction and spread of animal diseases and compensate owners of livestock, products and facilities should the disease ever reach the U.S.

The bill, introduced by House Livestock and Horticulture Subcommittee Chairman Richard Pombo (R-CA) and Ranking Member Collin Peterson (D-MN), is titled the Animal Health Protection Act.

The bill, H.R. 2002, would con-

solidate and revise the authority of the Secretary of Agriculture to prevent the introduction and spread of infectious animal diseases.

Should owners of livestock, products and facilities be required to destroy animals as a result of a seizure or quarantine to detect and/or eradicate such a disease, they would be compensated under this bill.

Source: American Meat Institute Newsletter

Minor Use and Minor Species Animal Health Act introduced in Congress

Members of a coalition seeking to create new ways of providing labeled drugs for use in minor species – while improving major species animal health through minor uses – are encouraged about the prospects of legislation recently introduced in the U.S. House of Representatives.

Rep. Charles “Chip” Pickering (R-MS) introduced H.R. 1956, the Minor Use and Minor Species (MUMS) Animal Health Act of 2001, on May 24. Sen. Jeff Sessions (R-AL) and Sen. Jeff Bingaman (D-NM) were expected to introduce a companion bill in the Senate before the August recess. It is intended as a mechanism to provide the US Food and Drug Administration (FDA) authorized drugs for uncommon animal disease conditions in a major species, such as cattle, horses, swine, chickens, turkeys, dogs and cats, and for conditions in minor species where therapies are unavailable. The list of minor species is large, ranging from sheep and goats to zoo animals to fish and shellfish.

According to Dr. Elizabeth Curry-Galvin, assistant director of scientific activities at the American Veterinary Medical Association, the legislation is needed because there is a critical shortage of approved animal drugs in the United States for minor uses or minor species, leaving veterinarians, animal owners, and livestock producers with limited options for treating these animals when they become ill.

She said in many cases, the choices are to leave an ill animal untreated or to treat the animal with an unapproved drug, a situation the veterinary profession wants to correct.

The MUMS legislation is a result of activity that began more than five years ago to address the shortage of drugs approved for use in treating animals. In 1996, Congress approved the Animal Drug Availability Act (ADAA) to streamline the animal drug approval process with the goal of increasing the number of products available to prevent and treat disease in companion and food animals.

The ADAA did not mandate specific changes to improve the availability of drugs for minor animal species or minor uses, but it did require the (FDA) to propose ways this might occur. According to Curry-Galvin, the MUMS legislation is a consensus document based on the proposals put forth by the FDA in response to the congressional mandates in the ADAA.

Championing the legislation is the MUMS Coalition, a diverse group of veterinarians, animal owners and producers, and developers of animal products. Members represent terrestrial and aquatic animals, domestic and wild animals, and those kept as pets, livestock, zoological and aquaria collections, and animals in rehabilitation and restoration programs.

National Aquaculture Association President Dr. Randy MacMillan, who serves as the coalition’s chairman, compares the MUMS legislation to the Orphan Drug Act of 1983.

“Drug companies were not inclined to produce drugs for rare diseases, such

MUMS Act at a glance

- A program, similar to the human Orphan Drug Program, directed at minor species and minor drug uses, to alleviate animal suffering and improve animal care;
- A system for FDA to provide conditional approval of safe drugs, that have a reasonable expectation of efficacy, for a limited period of time prior to full approval;
- An FDA Index of legally-marketed drugs for non-food, minor species for which it is unlikely that there is any incentive for achieving full or conditional approval;
- Incentives for the development of designated new animal drugs, including limited marketing exclusively (7 to 10 years), grants for certain animal drugs, and a 50 percent tax credit for qualified testing expenses;
- An office within the FDA Center for Veterinary Medicine to support the objectives of the legislation;
- Protection of public health and animal health.

Sheep Health Report

A NIAA Publication

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as multiple sclerosis,” explains MacMillan. “With passage of the Orphan Drug Act, FDA provided funding to pharmaceutical companies for research and development of drugs to treat rare human diseases.” MacMillan estimates that in the decade prior to the

human Orphan Drug Program, there were about 10 drugs approved for minor uses, compared to approximately 100 new drug approvals during the next 10 years.

MacMillan says that the shortage of approved drugs is a serious issue, causing animal suffering, loss of ani-

mal life, and financial loss.

“Producers of minor animal species are significantly hampered in their ability to treat disease,” said MacMillan. “This legislation will positively impact the whole cornucopia of animals in the U.S.”

What constitutes a minor use?

Minor uses of animal drugs include use of drugs in major animal species for an indication that occurs infrequently or in limited geographic areas. Pharmaceutical manufacturers have developed drugs for common indications, but the small market place for uncommonly used drugs restricts drug development and leaves these species without adequate care.

What is a minor species?

Minor animal species are by regulatory definition, any species other than dogs, cats, horses, cattle, swine, chickens and turkeys. Terrestrial minor animals include sheep, goats, game birds, emu, ranched deer, elk, rabbits and cavies (e.g. guinea pigs), earthworms crickets, frogs, salamanders, snakes, lizards, tortoises, caged birds, free-ranging wildlife and those in zoos and small pet mammals (not dogs and cats). All aquatic animals, including all finfish, aquatic turtles, crustaceans, and mollusks are minor animal species. Minor animal species include a wide range of animals including those that are kept as household pets, those kept for display and educational purposes in zoos and public aquariums, and those that are raised commercially as food or for recreational fishing.

Benefits of the MUMS Act

- Allow companies the opportunity to develop and market FDA-authorized drugs that are vital to a large number of animal species.
- Alleviate unnecessary animal suffering.
- Promote the health and well being of animals while protecting and assuring human health.
- Benefit pets in the home and comfort the families that care for them.
- Benefit various endangered species, zoo animals and wildlife populations.
- Reduce economic risks and hardships to farmers and ranchers.
- Enhance the global competitiveness of U.S. animal productions.

Source: MUMS Coalition

Legislative History

1996	Congress passes Animal Drug Availability Act (ADAA) that requires FDA to propose ways to improve the availability of drugs for minor uses and minor species.
1997	FDA seeks public comment on documents including a “Discussion Draft: Proposals to Increase the Availability of Approved Animal Drugs for Minor Species and Minor Uses”.
1998	FDA concludes federal statutes should be amended in report “Proposals to Increase the Legal Availability of Animal Drugs for Minor Species and Minor Uses”.
1999 - 2000	MUMS Coalition established; uses FDA proposals and technical assistance to develop draft legislation.
2001	Minor Use and Minor Species Animal Health Act is introduced.

How to help . . .

Dr. Randy MacMillan suggests that individuals wanting to aid in the legislation’s passage should contact members of their state’s congressional delegation and urge support of the MUMS legislation. He also encourages a follow-up call to determine what position their congressman or senator has taken on the legislation.

MacMillan also says that financial contributions can be made in support of the Coalition’s efforts by contacting him at randy@clearsprings.com.

Additional information can be found on the Internet at the American Veterinary Medical Association’s website, www.avma.org, under the Governmental Relations Division section.

Bush requests additional \$35 million to guard against foreign animal diseases



The President's FY2001 supplemental appropriations request to Congress included an additional \$35 million for the United States Department of Agriculture (USDA) to enhance activities to protect U.S. agriculture from serious animal disease threats such as foot and mouth disease (FMD) and bovine spongiform encephalopathy (BSE).

"Given the various foreign animal disease outbreaks in other parts of the world this year, USDA has been conducting a top-to-bottom review of its core programs to ensure we have the necessary resources to protect American agriculture from devastating animal diseases," said USDA Secretary Ann M. Veneman. "These additional funds will help strengthen

these important programs."

Components of the FY 2001 supplemental request include:

- \$4.5 million for inspections at U.S. border and ports of entry for passengers and cargo arriving from other countries, with a special emphasis on those countries affected by FMD and BSE;
- \$24.6 million for additional veterinarians and animal health assessments to ensure that foreign animal diseases would be detected quickly should they ever penetrate U.S. borders. This includes \$13.5 million to strengthen state surveillance and infrastructure programs.
- \$1.9 million for contingency planning for immediate control and eradication in the event of a foreign animal disease outbreak;
- \$1.7 million for technical assistance worldwide to monitor diseases

and help those trying to control and eradicate them; and

- \$2.3 million for continuous improvement of tools and technologies through research.

"While we have been vigilant for years and have successfully prevented many foreign animal diseases from entering our country, recent outbreaks of foot and mouth disease across the world and ongoing concerns about BSE underscore the need to strengthen our safeguarding system," Veneman said.

FMD update

Nearly six months after the outbreak began, British officials are sifting through the aftermath in order to size up the effects of foot and mouth disease (FMD).

In all, FMD will have cost taxpayers \$3 billion before it is eradicated, officials say, in order to pay for the cost of killing and disposing of animals, disinfecting diseased premises and compensating farmers for slaughtered livestock. It does not include the economic impact on agriculture.

About three news cases are being identified each day, down from the 40 or so confirmed daily in March. U.S. reports as of July 20 indicate 1,868 cases of the highly contagious disease. Nearly 4 million sheep, cows and pigs have been slaughtered in Great Britain.

Argentina and Uruguay also are battling the disease, with 1,429 and 1,596 confirmed cases respectively, according to USDA reports. The FMD strain affecting Europe, Type O, differs from the Type A strain currently in South America.

Senate passes bill to form animal disease task force

The Senate in early April approved a bill that would commission a team of high-ranking government officials to coordinate prevention efforts for bovine spongiform encephalopathy and foot-and-mouth disease.

The proposal would create an interagency task force including the heads of the agriculture, commerce, health and human services, treasury, state, and customs departments, as well as the Food and Drug Administration, National Institutes of Health, and Centers for Disease Control and Prevention, among others. No more than 60 days after the

act is enacted, the group would submit a report to Congress on the steps already being taken to prevent the diseases, as well as any recommendations for further actions.

The bill – sponsored by Sens Ben Nighthorse Campbell, R-Colo, Orrin Hatch, R-Utah, and Herb Kohl, D-Wis – is called the Animal Disease Risk Assessment, Prevention, and Control Act of 2001. It would also assign the Secretary of Agriculture to report on prevention methods and economic and public health implications of these diseases.

Source: JAVMA News

Veneman says vigilance keeping FMD out of U.S. Congress assured that compensation would be available in case of emergency

In recent testimony before the House Agriculture Appropriations Subcommittee, U. S. Agriculture Secretary Ann Veneman said that USDA would be prepared to compensate farmers fair market value for livestock losses should there ever be a foot-and-mouth disease outbreak.

Veneman said that increased vigilance by federal and state agencies, particularly since recent outbreaks of FMD were discovered in Europe, has been successful in reducing the risk of entry and keeping it out of the country for more than seventy years.

"We are making every effort to reduce the risks so that FMD will not enter our country," said Veneman. "However, we must always be on guard. It is responsible to plan and prepare in case there ever were an emergency. That is why our agency has been increasing our vigilance in the areas of prevention and preparedness."

While Veneman said details of a compensation program are still being prepared, she stressed that this was part of ongoing efforts to review programs and ensure the U.S. has the adequate resources to respond if there ever were an emergency situation.

Stringent measures taken to reduce the risk of FMD entering the U.S. includes prohibiting shipments of products from high risk countries; increasing personnel at ports of entry; tightening regulatory enforcement; increasing surveillance of incoming passengers and cargo; enhancing monitoring and surveillance of domestic

livestock; strengthening federal, state and industry coordination; implementing public education campaigns; and dispatching experts to other countries to assist in containment efforts.

Earlier this year, in the wake of the FMD outbreaks in Europe and other countries, Secretary Veneman authorized \$32 million in spending for the hiring of 350 new inspection personnel and the doubling of USDA's canine inspection teams. This was in addition to nearly 400 inspectors already being hired during 2001 and another 200 being reassigned from other program areas.

USDA officials have authorized a top to bottom safeguarding review of the core animal and plant health programs to ensure that the agency has the necessary resources to prevent foreign animal diseases from entering the U.S. and the ability to eradicate such diseases should they ever enter the country. The National Association of State Departments of Agriculture is conducting the review.

USDA removes import restrictions for certain EU countries

The U.S. Department of Agriculture (USDA) has removed the March 13, 2001, import restrictions placed on certain European Union countries, following the completion of a scientific risk assessment performed by the USDA's Animal and Plant Health Inspection Service (APHIS).

The restrictions were lifted for the following EU countries where no cases of foot-and-mouth disease (FMD) have been reported: Austria, Belgium, Denmark, Finland, Germany, Italy, Luxembourg, Portugal, Spain, and Sweden.

Import restrictions remain in effect for the following countries: United Kingdom, France, Ireland, and the Netherlands, where there have been confirmed cases of FMD in recent months. The agency continues to evaluate the status of these countries through site visits and analysis and evaluation of risks.

Although USDA has lifted import restrictions for certain EU Member States that are unaffected by the current FMD situation, stringent measures continue to be taken to reduce the risk of FMD entering the United States.

Foreign animal disease advisory committee renewed

Saying it is necessary and in the public interest, the Secretary of Agriculture has reestablished the Secretary's Advisory Committee on Foreign Animal and Poultry Diseases.

The purpose of the advisory committee is to advise the Secretary of Agriculture regarding program operations and measures to suppress, con-

trol, or eradicate an outbreak of foot-and-mouth disease, or other destructive foreign animal or poultry diseases, in the event these diseases should enter the United States. The Committee also advises the Secretary of Agriculture of means to prevent these diseases.

Members of the committee have yet to be announced.

Effort underway to preserve genetic resources

By Dean Houghton

Scientists at the National Animal Germplasm Repository in Fort Collins, Colo., are working on a comprehensive plan to conserve sheep and goat genetic resources. But what these scientists really are doing is building a genetic time machine.

The USDA's National Animal Germplasm Program (NAGP) "is a way to backstop the genetics of the livestock industries in the United States," says Operations Coordinator Dr. Harvey Blackburn, an Agricultural Research Service scientist based in Fort Collins. "We know that selection sometimes proceeds too heavily toward one trait, and that may lead to problems. Breeders may need to go back and regenerate a line or breed that existed in the past as a way to reintroduce genetic variation, or to pick up a specific gene from a rare breed."

He points out how valuable such a genetic warehouse has been for U.S. wheat breeders. A national seed repository has been around since the 1950s, and that storehouse of genes was put to the test in the 1980s. That's when Russian wheat aphids attacked, and breeders had to sort through various wheat varieties in the genetic bank until they found a resistant variety that could be incorporated into the modern seed supply.

The NAGP's mission is "to coordinate the availability, conservation and utilization of animal and aquatic genetic resources in order to provide optimum access to desirable genes and gene complexes that will contribute to the future food and fiber supply." The primary species in this program are beef and dairy cattle, swine, poultry, sheep, goats, and aquatic forms.

NAGP traces its roots back to 1990, when Congress authorized the National Genetic Resources Program, designed to acquire, characterize, preserve, document and distribute to scientists the germplasm of all lifeforms important for food and agricultural production.

"Today, with increasing availability of molecular technologies to identify and manipulate individual genes, the potential value of conserving a wide variety of stocks has become much greater."

**Dr. Eric Bradford
Professor Emeritus
University of California - Davis**

The year 2000 saw NAGP initiate germplasm collections for chickens, beef cattle and sheep. Storage of genetic material — semen, embryos, tissues, or DNA — will be in a section of USDA's National Seed Storage Laboratory in Fort Collins. Long-term cryopreservation of these materials will ensure that today's genetics will be available if needed in the future.

The Small Ruminant Subcommittee, a group of about a dozen people with industry or academic ties to sheep and goat production, have initiated a number of projects to conserve germplasm. Dr. Eric Bradford, professor emeritus at the University of California-Davis, is a subcommittee member. He points out that new technology allows scientists to capture potentially valuable genetics, and to do it more efficiently than before.

"Preservation of genetic materials from rare breeds has long been considered desirable to provide genetic variation for unanticipated needs, but utilization has been difficult because of the time and cost of extracting useful genes from such stocks by conventional breeding procedures," he says.

"Today, with increasing availability of molecular technologies to identify and manipulate individual genes, the potential value of conserving a wide variety of stocks has become much greater."

The Small Ruminant group has initiated the collection of germplasm from the Warhill breed of sheep in conjunction with Colorado State University. This collection is part of a larger strategy to acquire representative germplasm from Western fine-wooled sheep.

The Warhill is a white-faced composite breed founded in the 1950's and maintained as a closed population since that time. The breed was developed on a ranch near Cheyenne, Wyo., and is now endangered by sale of the ranch where the animals were developed. The breed is prolific and adapted to a range environment.

In cooperation with Colorado State University, NAGP is collecting and freezing semen from 14 rams of this breed.

The University of California - Davis has placed four lines of Targhee sheep into the repository. This collection consists of about 500 units of semen and 300 embryos.

The frozen embryos and semen are from the long-term Targhee selection lines at the University of California.

The sheep and goat subcommittee

also is working to help gather information about the Navajo Churro sheep breed. It is one of the oldest breeds of domesticated livestock in North America, brought over with Spanish explorers in the 1500s. However, a formal breed association and registry was not formed until 1989. A Colorado State graduate student has been working with the Navajo Churro pedigree records. The goal is to determine levels of inbreeding for the breed and individual flocks. If there are potential inbreeding problems remedial strategies will be developed with the Navajo Churro Breed Association.

Inbreeding can be a problem even in large populations of animals, points out NAGP's Blackburn. "Despite having millions of cows, the level of inbreeding in Holstein cattle is at about 5 percent and is increasing exponentially."

The NAGP, in conjunction with the American Livestock Breeds Conservancy, also is conducting national surveys to determine the population status of U.S. breeds. The initial surveys are for goats, swine and research-chicken lines. The project is

targeted for completion in late 2002. A student intern from the University of Wisconsin has been working with the NAGP and the ALBC to develop a survey of goat genetic resources.

"We're off to a good start. But it is clear that we are only initiating this process and there is still a tremendous amount of work to do."

**Dr. Harvey Blackburn
Agricultural Research Service
United States Dept. of Agriculture**

The Small Ruminant Committee has also taken the first steps to collect germplasm from Angora, Myotonic and Spanish goats in Texas. This effort involves three Texas universities, the Texas Department of Agriculture and the Mohair Council of America.

The group is concerned about the status of Angora and Spanish goats, primarily because of extensive crossing with the Boer goat. Numbers of purebred animals have declined dramatically in recent years, but remain substantial. Texas Agricultural

Statistics indicate that numbers of Angora does decreased from 360,000 in 1999 to 260,000 in 2000.

Future work faced by NAGP includes the development of guidelines for how genetic material will be released from the repository for research or industry use. It also is working on development of a format for developing breed conservation plans and how to sample current industry genetic resources.

The Small Ruminant Subcommittee is reviewing a conservation plan for the Gulf Coast Native Sheep, including plans for coordination among industry and research flocks as well as cryopreservation of semen and embryos. The group also is discussing a conservation plan for the Myotonic goat, although implementation of such a plan may not be feasible until 2001-2002.

The bottom line: NAGP is just getting started. "We're off to a good start," says NAGP's Blackburn. "But it is clear that we are only initiating this process and there is still a tremendous amount of work to do."

NIAA re-issues position on MUMS

During its annual meeting in April in Colorado Springs, Colo., the National Institute for Animal Agriculture (NIAA) re-issued its concern for the limited availability of animal drugs approved for use in sheep and other minor species.

A position statement promulgated by the Sheep Health Committee and adopted by the NIAA Board of Directors reads: "The National Institute for Animal Agriculture supports legislative and regulatory reform in the FDA's regulatory policy that will expedite the drug approval process for minor species and minor uses while maintaining product safety, efficacy, and human food safety."

Sixth World Sheep & Wool Congress announced



"Performance, Production and Profit" is the chosen theme for the 6th World Sheep & Wool Congress, to be held Nov. 11-15, 2001, in Christchurch, New Zealand. Congress organizers say it is the "largest possible forum of delegates interested in the sheep and wool industry."

The Congress will provide exposure to the latest industry technology, innovations and research. International speakers combined with

leading edge industry specialists and local expertise will be outlining strategies for improving performance, production and profit.

The World Sheep & Wool Congress is a triennial meeting, which began in 1985. The last meeting, in 1998, was held in California.

Registration information is available on the Internet at www.exevents.co.nz/WSWCexint.htm or you can request information by mail by writing to Eddy van Til, Congress Organiser, P. O. Box 647, Rangoria, 8254, New Zealand.

NIAA announces tour to Europe to study animal health and trade issues

The National Institute for Animal Agriculture announced today that it will coordinate a study tour to Europe in December. Foot and Mouth Disease (FMD), bovine spongiform encephalopathy (BSE) and other animal health and trade issues will be at the center of discussions during the weeklong trip that will begin in Paris and also take participants to the French countryside.

NIAA Chief Executive Officer Glenn Slack said that NIAA is working to fill a void in continuing education and professional development opportunities for animal agriculture professionals. The international study tour will seek to provide a global perspective to the educational and training process.

Participants will get a first-hand look at some of the animal health-related challenges confronting the European Community, including BSE, FMD and other non-disease issues like genetically-modified organisms (GMOs). In addition, they will receive

an introduction to the European Union (E.U.), explore the role of animal health in international trade, and receive an inside view of agriculture in a European country through farm visits.

Finally, the study tour, scheduled for the first week in December, will offer an incredible practical exposure to the French agricultural system, including animal identification, labeling and traceability.

Working with NIAA in the role of technical coordinator for the study tour is Dr. William Hueston, an international authority on transmissible spongiform encephalopathies. Hueston, currently the associate dean of the Virginia-Maryland Regional College of Veterinary Medicine, was recently named director of the new Center for Animal Health and Food Safety at the University of Minnesota.

Hueston said participants will meet in the conference center at the International Office of Epizootics (OIE), based in Paris. OIE is recog-

nized by the World Trade Organization as the international standard setting body for animal health. The Director General of the OIE and others from their staff will be active participants in the meetings.

Slack said the tour is limited to only 20 participants in order to provide optimum interaction with the speakers and instructors. Activities will also be planned for spouses who attend. Reservations will be accepted on a first-come-first-serve basis; however, members of the National Institute for Animal Agriculture will be given first consideration.

Slack recommends that individuals interested in reserving a spot on the study tour, or to be put on the mailing list to receive a detailed brochure (including associated costs, a tentative itinerary, list of speakers (faculty), deadlines and a reservation form), contact Peggy Logsdon at NIAA headquarters (Phone: 270-782-9798; Email: plogsdon@animalagriculture.org).

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