

Wildlife Services

Protecting People
Protecting Agriculture
Protecting Wildlife

Protects American Agriculture

FY 2008

Assisting Farmers and Ranchers by Developing New Management Methods, Preventing Predation and Wildlife-Borne Diseases



Contact Information:

In any state, call 1-866-4USDA-WS
(1-866-487-3297)
For national issues, call 301/734-7921
Wildlife Services,
Operational Support Staff
4700 River Road, Unit 87
Riverdale, MD 20737-5157
www.aphis.usda.gov/wildlife_damage

Livestock Protection Statistics

- Livestock loss to predators, predominantly coyotes, reaches about \$111 million annually; WS spent \$30.4 million in FY 2008 directed toward livestock protection
- Mountain lions, bears, wolves, foxes, bobcats, and eagles also prey on livestock.
- Sheep and lamb losses to predators in the U.S. totaled 224,200 in 2005; a NASS study valued the losses at \$18.3 million.
- Cattle and calf losses to predators in the United States totaled 190,000 head in 2005; a NASS study valued the losses at \$92.7 million.
- According to a NASS report, 155,000 goats and kids, valued at \$15.9 million, were lost to predators in 2004.
- In the absence of a professional, accountable damage management program, livestock losses to predators could be as much as two to three times higher.
- According to the National Commission on Small Farms, approximately 92% of all U.S. farms are considered small. These producers especially feel the impact of livestock predation.
- According to a 2000 NASS study, U.S. farmers and ranchers spent \$184.9 million on nonlethal measures to prevent predation of cattle and calves.
- In FY 2008, approximately 75% of WS' research funding was directed toward the development of nonlethal damage management tools and techniques.
- Every \$1 spent by producers on WS services to reduce livestock damage, protects \$3.00-6.75 in livestock.
- In FY 2008, WS wildlife disease biologists collected 6,900 samples from feral swine to monitor for diseases that could impact the pork industry and other livestock
- WS' wildlife disease biologists tested about 9,500 deer in Michigan for bovine TB in Michigan.

Wildlife Services (WS), a program within the U.S. Department of Agriculture's Animal and Plant Health Inspection Service, provides Federal leadership and expertise to resolve wildlife conflicts that threaten livestock. WS works in every State where livestock are raised to reduce predation, prevent the transmission of wildlife-borne diseases, and safeguard this important agricultural industry.

Understanding the Economic Impact of Livestock Predations

As a result of conservation efforts, wildlife populations are thriving across much of the Coyotes, mountain lions, bears and wolves kill thousands of lambs and calves each year. Livestock losses attributed to predators cost ranchers and producers more than \$111 million annually, according to the most recent surveys by the National Agricultural Statistics Service (NASS). A NASS survey found that in 2005, coyotes accounted for 51.1% of all cattle and calf losses to predators. Sheep are the most frequent victims of predation. A 2005 NASS survey recorded 224,200 sheep and lamb lost to predators, representing 37.3% of losses from all causes and costing farmers \$18.3 million.

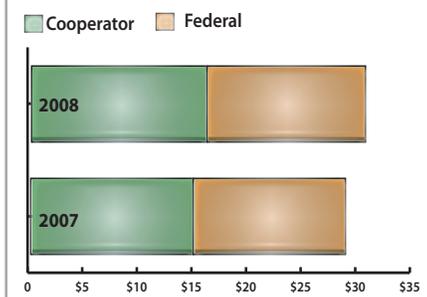
Coyotes are responsible for the majority of livestock predation. The 2005 NASS survey attributed 60.5% of sheep and lamb predation to coyotes. These losses occurred despite the use of multiple management tools and techniques to safeguard livestock. Without these protection measures, livestock losses could be as much as two to three times higher.

Some ranchers and livestock producers experience only minimal livestock losses to predators. Others must deal with serious predation. In Western states, such as Idaho, where livestock usually graze on open range lands, lambs and calves are especially vulnerable to predators. Furthermore, small farmers and ranchers often feel the impact of livestock predation more significantly than larger livestock operations.

Managing Livestock Predations

Coyotes, mountain lions, bears and wolves kill thousands of lambs and calves each year. Livestock losses attributed to predators cost ranchers and producers more than \$111

Expenditures for Livestock Protection (Millions)



United States Department of Agriculture
Animal and Plant Health Inspection Service

million annually, according to the most recent surveys by the National Agricultural Statistics Service (NASS). A NASS survey found that in 2005, coyotes accounted for 51.1% of all cattle and calf losses to predators. Sheep are the most frequent victims of predation. A 2005 NASS survey recorded 224,200 sheep and lamb lost to predators, representing 37.3% of losses from all causes and costing farmers \$18.3 million.

Coyotes are responsible for the majority of livestock predation. The 2005 NASS survey attributed 60.5% of sheep and lamb predation to coyotes. These losses occurred despite the use of multiple management tools and techniques to safeguard livestock. Without these protection measures, livestock losses could be as much as two to three times higher.

Some ranchers and livestock producers experience only minimal livestock losses to predators. Others must deal with serious predation. In Western states, such as Idaho, where livestock usually graze on open range lands, lambs and calves are especially vulnerable to predators. Furthermore, small farmers and ranchers often feel the impact of livestock predation more significantly than larger livestock operations.

According to a General Accounting Office (GAO) report on wildlife damage, by the time livestock producers and ranchers request WS' assistance they have already employed a variety of nonlethal control measures but continue to experience livestock predation in spite of these efforts. Before beginning any type of damage management program, WS ascertains whether the producer was properly utilizing nonlethal management measures, such as scare tactics, fencing, and animal husbandry practices. In many cases, however, these measures by themselves are not sufficient to prevent livestock predation.

WS has the knowledge and skill, as well as the equipment, to track, capture, and remove predators from locations where they are causing serious damage. These efforts can significantly reduce predation in targeted areas, saving thousands of dollars in losses. WS saved producers \$3.00 to \$6.75 for every dollar they spent to reduce damage when comparing the market value of all livestock saved in 1998 with the cost of all livestock protection programs in place.

WS specialists also provide information and guidance to help producers better manage livestock predation. For example, WS regularly recommends the use of guard dogs and llamas to protect sheep flocks and new lambs. Many nonlethal methods work well, but only in certain situations or locations, and some work only temporarily. When nonlethal methods prove ineffective, impractical, or unavailable, however, the GAO report concludes that lethal management methods are a legitimate means for effectively resolving wildlife conflicts. In these cases, the GAO report notes that WS strives to select the method that will kill the predator in the quickest and most humane way possible.

Developing New Management Methods

While lethal management is necessary in certain situations, opportunity exists for developing effective nonlethal means of managing wildlife damage. The 2001 GAO report, prepared for Congress, found that WS' National Wildlife Research Center (NWRC) has contributed significantly to knowledge about coyote ecology and behavior and development of nonlethal tools. NWRC is the only Federal research facility devoted exclusively to resolving conflicts between people and wildlife. In Fiscal Year (FY) 2008, approximately 75% of NWRC's total research funding was spent on efforts relating to developing or improving nonlethal controls.

Capture technology has relied largely on tools and materials developed hundreds of years ago. Although effective, they have raised concerns about animal welfare. In response, NWRC scientists have developed and tested new and alternative capture devices and restraining methods to safely restrain captured animals. Behavioral research is also underway to study visual, mechanical, and odor-cue attractants, which will change capture technology. In addition, research is being conducted to develop more effective frightening devices employing lights and sirens to keep predators at bay. Devices that have shown potential usefulness in preventing livestock loss include: a radio-activated wolf alarm that senses radio collars on wolves and activates sound and light to frighten the predator; a motion-activated system producing the same effects; or fladry, which consists of strips of flagging prominently displayed around an area to be protected.

NWRC researchers are also studying coyote reproduction and its effects on livestock predation. Study results have shown surgically-sterilized coyotes were significantly less likely to prey on lambs than were coyotes with pups to feed. This critical research will provide new damage management options for livestock producers and enable WS to expand the list of available tools to resolve predator conflicts that are too significant for producers to handle on their own. Also, NWRC is researching the potential use of a mixture of theobromine (chemical found in chocolate) and caffeine as a predicide for use in predator damage management activities. NWRC has been determining an effective formulation and delivery system for the potential use of this chemical. This mixture could develop into a selective, effective and socially acceptable toxicant for the control of pest coyotes.

Protecting Livestock from Wildlife-Borne Diseases

Although a serious problem for producers and ranchers, predation is not the only issue impacting livestock health. Wildlife-borne diseases also pose a serious threat to livestock. In FY04, WS began assigning wildlife disease biologists to conduct wildlife disease surveillance and provide assistance to Federal, State, Tribal, and other entities. Currently, the program has increased to include 44 wildlife disease biologists and this expansion has been invaluable in helping a number of entities in the United States to address significant wildlife disease concerns, which have the potential to affect the Nation's livestock.

Highly pathogenic avian influenza H5N1, a virus very deadly to birds, became a global issue in 2006. Confirmed in Asian poultry during 2003, the next year it was reported in humans who had close, direct contact with birds. Transmission of the disease by wild birds potentially threatens the United States and could seriously affect commercial poultry populations. WS assisted a diversity of partners in collecting samples from wild birds in an effort to detect entry of the disease into the United States before it has an opportunity to spread. In FY 2008, WS worked cooperatively with State wildlife agencies and others to collect about 81,000 samples in all States across the country. The samples were examined for the presence of AI in an ongoing early detection/rapid response National initiative.

Another concern is bovine tuberculosis (TB), a respiratory disease that can infect most mammals. Significant progress had been made in the 20th century to eradicate the contagious, bacterial disease; Where it is found, restrictions can be placed on interstate transportation of cattle, a significant impact on producers. The presence of bovine TB in white-tailed deer puts people, livestock, and wildlife at risk. Captive cervids (members of the deer family) and free-ranging wildlife may both be a reservoir for the disease. The WS' wildlife disease biologist in Michigan, aided as needed by an additional eight wildlife disease biologists, con-

ducted surveillance for the disease, helping test approximately 9,500 deer in Michigan for bovine TB. WS is also developing research, disease management, and educational tools to complement the efforts of other Federal and State agencies. WS is concluding a research project to study the interaction of deer and cattle, and another investigating whether coyotes may be reservoirs of bovine TB.

Chronic wasting disease (CWD) is a fatal neurological disease carried by deer and elk, which can be transferred from wild populations to captive cervid herds. Due to greater testing of free-ranging cervid populations, the number of states reporting confirmed CWD cases increased to 14 by the end of FY 2008. WS' wildlife disease biologists assisted with CWD surveillance in 19 states in FY 2008. WS also has the expertise to assist with depopulation efforts and to help landowners obtain permits to remove deer from their property in order to protect their herds from potentially diseased wildlife.

Feral swine are a subject of increasing concern as potential carriers of or catalysts for a variety of diseases that could impact livestock, domestic pork producers, ranchers, farmers, and the general population. Diseases such as pseudorabies, swine brucellosis, classic swine fever, e-coli contamination and others have been linked to feral swine. During FY 2008, a total of 6,900 disease samples were collected by WS disease biologists working with APHIS-VS to protect the American pork industry, as well as all agriculture. Disease surveillance continues to grow as control efforts intensify. Range expansion and massive population growth are occurring throughout the US, with current feral swine estimates at 4-5 million animals. An internal WS survey conducted in FY 2008 indicated that 35 states (70%) currently have feral swine and an additional 8 states expect to have feral swine invade their borders within the next 5 years. If realized, 86% of states will have feral swine present by 2013. During FY 2008, over \$3.7 million dollars were spent to control feral swine in the United States, with 76.4% coming from other entities cooperating with APHIS, WS. Control activities primarily include trapping and aerial hunting. Over 27,800 hogs were taken in control activities during FY 2008. As the swine population continues to rise and expand geographically, disease surveillance and control activities will need to expand proportionally to even attempt to keep disease threat and economic losses at current levels.

Livestock also are threatened by diseases such as histoplasmosis and salmonella, diseases that are carried in or furthered by bird feces where large numbers of birds are present. In feedlots and dairies, livestock that become infected frequently lose weight and dairy cattle can experience a significant drop in milk production. WS works with producers to test collected birds for diseases, to reduce the attractiveness of feedlots to birds by making feed more difficult to obtain, and to reduce bird populations when appropriate. These efforts benefit not only livestock, but also agricultural workers who can contract the diseases. Ultimately American consumers benefit through economic efficiencies and safer foods.

