

June 2003

LWDR 03-06



Livestock and Wildlife Disease Report

Colorado
State
University

Extension

Department of Agricultural and Resource Economics, Fort Collins, CO 80523-1172
<http://dare.colostate.edu/pubs>

CHRONIC WASTING DISEASE: GOVERNMENT AND PRIVATE SECTOR ACTION

Andrew Seidl,* Stephen R. Koontz, Megan Bruch, and Lee Elder²

Introduction

Chronic Wasting Disease (CWD) is a transmissible spongiform encephalopathy (TSE) that affects cervidae such as deer and elk. CWD was first observed in 1967 in the United States and has been found in free-ranging and/or farmed cervidae in several states and in two Canadian provinces. The disease is always fatal to infected animals and is characterized by progressive weight loss, among a variety of other symptoms. At this time, many questions remain about the cause and transmission of CWD. No relationship between CWD and other TSEs of animals or humans has been discovered thus far (APHIS, 2003).

Both government and private organizations have become active in the fight against CWD. Federal and state government agencies are involved in activities to detect, control, and/or eradicate the disease. Private organizations have also founded an alliance to help communicate information to the public. This report provides an overview of the activities of these groups related to CWD.

Federal Government Response

The responsibility of actions made necessary by CWD is complicated by the fact that both free-ranging and

captive or farmed animals are affected. The main federal government departments involved in the disease response are the United States Department of the Interior (DOI) and the United States Department of Agriculture (USDA). Agencies involved within the DOI include the Bureau of Indian Affairs, Bureau of Land Management, National Park Service, Fish and Wildlife Service, and Geological Survey. USDA agencies assisting with the response include the Agricultural Research Service, Animal and Plant Health Inspection Service, Cooperative State Research, Education, and Extension Service, and Forest Service (Chronic Wasting Disease Task Force, 2002).

Government sponsored nation-wide surveillance of free-ranging cervidae began in 1997 in order to define the prevalence and geographic distribution of the disease in the wild. The effort uses both testing of hunter harvested deer and elk and testing of those cervidae found exhibiting signs of CWD. As of November 2002, over 15,000 free-ranging cervidae from the United States had been tested (APHIS, 2002).

A cooperative effort between the USDA Animal and Plant Health Inspection Service and state agriculture and/or wildlife agencies also began in 1997 for farmed

* Contact author. T:970-491-7071. E: Andrew.Seidl@colostate.edu. F: 970-491-2067.

¹ Associate Professors, Department of Agricultural and Resource Economics (DARE), Colorado State University (CSU-DARE) and Research Assistants, CSU-DARE.

Extension programs are available to all without discrimination.

cervid surveillance. Surveillance activities for both free-ranging and farmed cervidae continue today. Some states, including Colorado and Wyoming, have had surveillance efforts underway since 1983 (Federal Register, 2002).

National CWD Task Force

As CWD continues to be detected in new areas of the United States, a task force representing the USDA, DOI, State agricultural and wildlife agencies, and academia developed a national control program to coordinate the activities of these agencies. The task force formed in May 2002 and released a plan in June. Six working groups were created to develop and implement the plan. A short description of each group's tasks is included here, and the complete description and action plan is available at <http://www.aphis.usda.gov/lpa/issues/cwd/cwd62602.html>.

Communications Working Group: This group is tasked with creating a national outreach program to make scientific information on the disease and its management available to the public.

Scientific and Technical Information Dissemination Working Group: The goal of this group is to make information available to the agencies involved in managing the disease. This group is charged with creating national standards for CWD data collection, integrating data into a common system, and allowing for rapid data dissemination.

Diagnostics Working Group: This group is responsible for developing tests for the disease, analyzing available laboratory capacity, and creating standards for certifying laboratories for testing.

Disease Management Working Group: Preventing the introduction of the disease into a herd or the spread of the disease from an infected herd are the goals of this group. Other issues covered by this group may include preventing contact between wild and captive animals, safe carcass disposal, and effectiveness of depopulation and indemnity programs.

Research Working Group: Identifying and prioritizing CWD research topics is the main goal of this working group. The research may involve live-animal testing, environmental decontamination, epidemiology, disease management, and impact on humans.

Surveillance Working Group: This group is tasked with developing uniform standards for surveillance proce-

dures in captive and free-ranging herds for targeted, hunter harvest, and outbreak situations.

The task force has created strategies for implementation of the plan including an oversight policy, action plans, and budget outline. Funding for the task force currently comes from the participating agencies as there is no direct funding for the group. Legislation, House of Representatives Bill 2057 and Senate Bill 1036, were introduced May 9, 2003 seeking support of research to find the cause and methods to control the disease (Patrick, 2003).

Federal Indemnity Program for Depopulation of Captive Herds

As part of the efforts to eradicate CWD in the United States, the USDA Animal and Plant Health Inspection Service (APHIS) established animal health regulations (9 CFR Part 55) approving the payment of indemnity for the voluntary depopulation of infected captive cervid herds. The interim rule went into effect on February 5, 2002. Depopulation of affected animals reduces the risk of spreading the disease to other herds, and indemnity payments are made to encourage producer participation in the disease eradication program. Producers will not be forced by APHIS to participate in the program. However, quarantines of infected premises imposed by the state where the farm is located as well as risk of death loss from the disease may serve as strong incentives to participate.

The program provides for indemnity payment for farmed cervidae infected with, suspected of having, or exposed to CWD. The owners must agree to clean and disinfect their premises and to implement a herd plan if cervidae are reintroduced to the operation. The federal indemnity payment will be made for 95 percent of the appraised value of the animals up to \$3,000 per animal when funds are available. If the owner receives a non-federal (i.e., state) indemnity exceeding 5 percent of the appraised value the payment will be reduced. The total amount of federal indemnity (and associated expenses) spent to date on CWD is \$20,348,645 (APHIS, 2003). The regulation also authorized reimbursements to states with APHIS cooperative agreements for indemnities, carcass disposal, and cleaning and disinfection costs made on or after October 1, 2001 (Federal Register, 2002).

Of the 57 herds (5,182 animals) that have been depopulated due to CWD, federal indemnity has been paid from emergency Commodity Credit Corporation (CCC) funds for 47 herds and 4,573 animals. Other herds

were depopulated before the emergency funding was available but may have been indemnified by state or other agencies (Patrick, 2003).

Federal Funding

Federal funds have been made available to cover some of the costs related to CWD management. In September 2001, the Secretary of Agriculture authorized \$2.6 million in Commodity Credit Corporation (CCC) funds to be used for CWD surveillance and indemnities. An additional \$12.2 million in CCC funds were provided to continue the efforts in February 2002.

The USDA also announced the availability of a total of \$4 million in grants for CWD activities of state wildlife agencies in April 2003. States where CWD has been detected in free-ranging cervid populations (i.e., Wyoming, Colorado, Nebraska, South Dakota, and Utah) will be eligible to receive \$93,750 for surveillance and \$125,000 for management activities. These states are designated as “Tier One” states.

States adjacent to those “Tier One” states or that have had CWD detected in game farm animals are called “Tier Two” states and will be eligible to receive \$71,429 for surveillance and \$71,249 for management activities from the grant funds. States listed as “Tier Two” are Arizona, Idaho, Iowa, Indiana, Kansas, Kentucky, Michigan, Minnesota, Missouri, Montana, Nevada, North Dakota, Oklahoma, and Texas.

All other states are defined as “Tier Three” states and will be eligible to receive \$44,642 for surveillance and \$44,642 for management activities. Each state must apply for the funding by submitting management and surveillance plans to APHIS describing how the funds would be spent (USDA, 2003).

The U.S. Department of Defense received \$42.5 million in Fiscal Year 2002 appropriations for “prion research”. Currently, many experts consider prions key to understanding CWD and TSEs more generally. The U.S. Army Medical Research and Materiel Command established the National Prion Research Program (NPRP) “to develop a rapid, sensitive, and reproducible test for the detection of prions” for diagnosis of prion diseases antemortem. Learning more about CWD and TSEs in general are also of interest.

The program called for proposals, especially with military relevance, for several types of awards and contracts (Department of Defense, 2002). One grant of \$2.4

million was awarded to researchers in the College of Agriculture at the University of Wyoming to develop environmental testing for the presence of the CWD agent. The five-year study will attempt to determine how the agent is shed into the environment and how it may be transmitted to other animals (University of Wyoming, 2003).

State Government Response

At the state level, CWD regulation of surveillance and management activities vary. The regulations may govern the importation of cervidae, testing programs, baiting, feeding, and movement of animal parts. The Michigan Department of Natural Resources has researched the CWD and cervidae regulations for each state. The results of the investigation are provided at <http://www.cwd-info.org/pdf/CWDRegstable011403.pdf>.

Regulatory jurisdiction over farmed cervid operations belongs with different agencies in each state. Jurisdiction may lie with the Department of Agriculture or equivalent, as it does in nine states, the Wildlife Department or equivalent, as it does in seven states, or by both, as in 26 states. Jurisdictional information is not currently available for all states.

Cervid import regulations may require certain tests, veterinary inspections, and/or permits to be conducted or obtained. Cervidae from areas where CWD has been detected may be restricted for imports into other areas. Some states have prohibited all cervid imports. The importation of hunter-harvested animal parts is restricted in ten states.

Free-ranging cervidae are tested in 37 states, and 23 states test captive herds. Some states require farmed cervid operations to be enrolled in a CWD monitoring program and undergo inspections. Other states are in the process of developing surveillance and management programs. Free-ranging cervidae are tested for CWD in 47 states.

Baiting (using food to draw in game) of cervidae is banned in 18 states, and three other states restrict it. Feeding of free-ranging cervidae is banned in nine states, and three place restrictions on it. (Michigan Department of Natural Resources, 2003).

Specific information for each state can be found from several sources. The Michigan Department of Natural Resources provides a review of CWD and cervidae regulations by state and a national summary (Michigan Department of Natural Resources, 2003). This and other sources of policy and legislation on this topic are

available on the Chronic Wasting Disease Alliance's website at www.cwd-info.org. A summary of CWD regulations and activities for each state is also included in the report by the National CWD Task force and is available at <http://www.aphis.usda.gov/lpa/issues/cwd/cwd62602.html>. Links to state agencies and program information can be found at <http://www.aphis.usda.gov/vs/nahps/cwd/cwd-stateinfo.html>. It should be noted that the CWD policy environment is extremely dynamic. For the most up-to-date information, it is strongly recommended to contact the appropriate state agency.

State Indemnity Programs for Depopulation of Captive Herds

Several states, including Colorado, Wisconsin, and Idaho, also have indemnity programs in place for Chronic Wasting Disease. These programs may work in conjunction with the federal program or alone when federal funds are not available. The indemnity amount paid and restrictions vary for each state. The department of agriculture or wildlife in each state can provide more information on the existence and details of a state indemnity program for CWD.

In Wisconsin, one white-tail deer herd and one elk herd have been or were currently in the process of being depopulated as of May 2003. The state indemnifies for two-thirds of the value of the animal up to \$1,500 less any federal indemnity. In December 2002, 122 white-tail deer were destroyed. Five of the animals tested positive for CWD. The owner received a net payment of \$131,601 in state indemnity after carcass storage and disposal costs were deducted from the gross payment amount of \$135,426. Federal funds were not available at that time. One elk herd of 200 animals was in the process of being depopulated as of May 2003. At that time, only one animal had tested positive for the disease. The owner was to receive \$243,390 in federal indemnity for 95 percent of the value of the herd and \$8,455 in state indemnity for two-thirds of the remaining 5 percent of the value (Gilson, 2003).

Chronic Wasting Disease Alliance

The Chronic Wasting Disease Alliance was formed in January 2002 by three organizations, the Boone and Crockett Club, Rocky Mountain Elk Foundation and Mule Deer Foundation. Since then, the Pope and Young Club, Quality Deer Management Association, National Shooting Sports Foundation, Inc., Wildlife Management Institute, and Cabela's have also become sponsors of the Alliance. Information about the Alliance and

sponsoring organizations can be found at the contacts in Table 1.

The mission of the Alliance is "to promote responsible and accurate communications regarding CWD, and to support strategies that effectively control CWD to minimize its impact on wild, free-ranging deer and elk populations." The organizations created the Alliance to enable them to combine their resources to more effectively undertake their mission. The Alliance supports disease control strategies that do not require the depopulation of free-ranging cervidae.

The Chronic Wasting Disease Alliance has taken several actions to accomplish its mission. The Alliance website, at www.cwd-info.org, has resources for media and the general public. Information is available on the disease, news, scientific research, policy and legislation, recommendations for hunters, links to other resources, and the alliance activities. The Alliance co-sponsored the National CWD Symposium held in August 2002 in Denver, Colorado that brought over 450 veterinarians, wildlife biologists, academic scientists, government administrators, and media together to discuss the disease. A project leader for the Alliance is also serving on several national research and task force committees. Among other activities, the group is lobbying for the development of live animal diagnostic tests as well as field tests for hunters (Chronic Wasting Disease Alliance, 2003).

Conclusions

Chronic Wasting Disease is posing several challenges to interested parties in government and the private sector. The nature of the disease and the many questions surrounding it require the allocation of many resources. The existence of affected free-ranging and captive herds makes it difficult to determine which agencies have jurisdiction as well as surveillance and control activities.

State and federal agencies, universities, and private organizations are working to effectively control and/or eradicate the disease. Providing information to the public and scientific community, finding new and more efficient ways to test for the disease, preventing its spread, and defining the areas where CWD exists are all important tasks of these groups.

Acknowledgments

Without implication, the authors would like to thank Cleon Kimberling and John Balliette for their reviews of an earlier version of this document.

Table 1. Contacts within the Chronic Wasting Disease Alliance

Chronic Wasting Disease Alliance	www.cwd-info.org
Boone and Crockett Club	www.boone-crockett.org
Rocky Mountain Elk Foundation	www.rmef.org
Mule Deer Foundation	www.muledeer.org
Pope and Young Club	www.pope-young.org
Quality Deer Management Association	www.qdma.com
National Shooting Sports Foundation, Inc.	www.nssf.org
Wildlife Management Institute	www.wildlifemanagementinstitute.org
Cabela's	www.cabelas.com

References and resources

Animal and Plant Health Inspection Service, United States Department of Agriculture. www.aphis.usda.gov.

Chronic Wasting Disease Alliance. <http://www.cwd-info.org>. May 7, 2003.

Chronic Wasting Disease Task Force. *Plan for Assisting States, Federal Agencies, and Tribes in Managing Chronic Wasting Disease in Wild and Captive Cervidae*. June 26, 2002. Available online <<http://www.aphis.usda.gov/lpa/issues/cwd/cwd62602.html>> April 2, 2003.

Federal Register. *Chronic Wasting Disease in Cervidae; Payment of Indemnity*, 9 C.F.R. § 55. 67(27): 5925-5934. February 8, 2002.

Gilson, D. Wisconsin Department of Agriculture, Trade, and Consumer Protection. Personal Correspondence. May 15, 2003.

Michigan Department of Natural Resources. *Chronic Wasting Disease Regulations by State, in the United States*. January 21, 2003. Available online <http://www.cwd-info.org/pdf/CWDRestable011403.pdf> May 14, 2003.

Patrick, J. Animal and Plant Health Inspection Service. Personal Correspondence. May 16, 2003.

Seidl, A., Koontz, S.R., Bruch, M., and L. Elder. 2003. *Economic Implications of Chronic Wasting Disease*. Agricultural and Resource Policy Report, Department of Agricultural and Resource Economics, Colorado State University, June 2003, APR03-07. <http://dare.agsci.colostate.edu/extension/pubs.html>.

_____. 2003. *Chronic Wasting Disease and Theories of Transmissible Spongiform Encephalopathy Transmission*. Agricultural and Resource Policy Report, Department of Agricultural and Resource Economics, Colorado State University, June 2003, APR03-05. <http://dare.agsci.colostate.edu/extension/pubs.html>

_____. 2003. *Chronic Wasting Disease Overview: Hunter Information*. Agricultural and Resource Policy Report, Department of Agricultural and Resource Economics, Colorado State University, June 2003, APR03-04. <http://dare.agsci.colostate.edu/extension/pubs.html>

United States Department of Agriculture. *USDA makes \$4 million available to state wildlife agencies for strengthening Chronic Wasting Disease management*. News Release No. 0122.03. April 15, 2003.

United States Department of Defense. *Department of Defense National Prion Research Program*. July 8, 2002. Available online <<http://cdmrp.army.mil/pubs/press/prionpreannnc.htm>> May 8, 2003.

University of Wyoming. *UW researchers awarded \$2.4 million for unique chronic wasting study*. April 23, 2003. Available online <<http://www.uwyo.edu/agadmin/news/wasting.html>> May 8, 2003.

Veterinary Services, Animal and Plant Health Inspection Service, United States Department of Agriculture. *Chronic Wasting Disease*. November 2002. Available online <http://www.aphis.usda.gov/lpa/pubs/fsheet_faqs_notice/fs_ahcwgwd.html> April 2, 2003.