September 2, 2005

Chronic wasting disease found in a wild deer in Alberta

Edmonton... Alberta's ongoing chronic wasting disease (CWD) surveillance effort has identified the disease in a wild mule deer about 30 kilometres southeast of Oyen, Alberta. The case was confirmed today by the Canadian Food Inspection Agency (CFIA).

A member of the public observed a very thin deer, which was subsequently collected by a Fish and Wildlife officer from Alberta Sustainable Resource Development. Before this case, there have been three cases of CWD found in game-farmed animals in Alberta, and in Saskatchewan 68 cases in wild deer and a significant number of elk found on game farms.

"This is an unfortunate finding in our wild deer population, but we are ready with a comprehensive approach to limit the spread," stated Minister David Coutts. "As we have been doing all the way along in managing for CWD, we will be working closely with other departments and agencies, as well as the public and our stakeholders, in a response to this occurrence."

Although this is a serious disease for Alberta's wild deer, and needs to be dealt with promptly, there is no known health risk for humans. Fish and Wildlife staff will meet with local residents to ensure they are fully informed while a step-by-step approach is taken to dealing with this new information. A limited collection of up to 50 deer in the immediate vicinity of the infected deer is planned for late September or early October.

Surveillance for chronic wasting disease in wild deer and elk in Alberta has been ongoing for almost 10 years, with hunter samples being submitted over the past seven hunting seasons and special collections in areas of particular concern. About 6,000 wild deer and elk from Alberta have been tested for the disease with no trace being found before this case. Alberta continues to be proactive in trying to manage CWD and is working with other provinces and the federal government to develop a national chronic wasting disease strategy and action plan.

Chronic Wasting Disease

Update - September 2, 2005

The Canadian Food Inspection Agency has confirmed a postive case of chronic wasting disease in a mule deer found about 30 kilometres southeast of Oyen, Alberta.

Prior to this case, no trace of CWD have been found in more than 6,000 wild deer and elk tested since 1996.

For more information, please see News Release and question and answers.

Name of Condition

Chronic Wasting Disease (CWD), prion disease of cervids, cervid spongiform encephalopathy.

Name of Agent

An unnamed prion protein.

Significance
CWD has the potential to infect and cause mortality in a variety of cervids. Infections are known in wild mule deer, elk, and white-tailed deer in a small area of the western US and in Wisconsin/Illinois, In addition, infections have been found in game farm cervids in USA (various states), Canada (Saskatchewan, Alberta), and Korea. Recently, isolated reports in wild deer in some of these regions have occurred.

Background
Although identified in the 1970s and 1980s, CWD probably occurred in a localized area of Colorado/ Wyoming/ Nebraska for quite some time. It may be the result of local mutation of a similar agent that causes scrapie in domestic sheep. However, CWD is known to occur only in cervids, and is **not** a disease of traditional livestock (cows, sheep or pigs). The disease can occur as a "silent" infection for many years but eventually, infected deer and elk cannot maintain weight and slowly waste away. Excessive salivation as well as lethargy,

incoordination, and drooping head and ears also are common in individual animals that show clinical signs. Infection appears to be fatal in all cases.

The nervous system is the preferred habitat for the agent of CWD. Infections are associated with clear open spaces within the animal's brain tissue that make it look somewhat like a sponge. Needless to say, these spaces result in changes to behaviour, attitude, and metabolism that lead to the clinical signs described above.

Life Cycle

To date, we do not know the specific mechanisms of transmission of CWD. The disease can pass from one individual animal to another and occasionally passes from females to their offspring. Infectious material also can survive in the environment for an unknown period of time.

Distribution in Alberta

In response to a report of CWD in wild mule deer in Saskatchewan, the Fish and Wildlife Division collected wild deer along the Alberta/Saskatchewan border in April 2001. ***All deer collected were negative for CWD.***

In late March 2002, CWD was identified in a farmed elk in Alberta. The infection was detected during the provincial surveillance program that has been on-going since 1996. Federal CWD eradication programs were implemented immediately. All farmed cervids that moved on or off the premises in the previous three years as well as the current animals on the farm were killed and tested. ***No further CWD was found.***

In early November 2002, CWD was identified in two farmed white-tailed deer on one farm in Alberta. As with the farmed elk, federal control and eradication programs were implemented immediately. No further cases of CWD were found. In response to finding CWD on two game farms in central Alberta, the Fish and Wildlife Division sampled wild deer in the vicinity of the farms in late February/early March 2003. ***All deer and elk collected were negative for CWD.***

In late March/April 2005, Alberta culled a total of 486 deer from a small high risk area east of Chauvin near the Alberta-Saskatchewan border. Fish and Wildlife officers presented information and an outline of their plan at public information meetings before the cull and recieved good cooperation from the public and landowners. **All of those animals were negative for CWD**

Importance for Wildlife Management

The natural extent and impact of CWD in wild cervids appears to be extremely limited. Mortality of deer and elk does not seem to affect overall productivity in infected populations in the short term, although some models applied to data collected in Colorado suggest that mule deer populations at the heart of the affected area may decline in 40-50 years.

The finding of CWD in wild and farmed white-tailed deer in Wisconsin is causing significant concern for wildlife managers in the east. The high number of deer and elk farms (~1000) and high density of wild deer (in the range of 75-100 white-tails/mi^2) provide added risk of transmission. More information is needed before all the risks can be properly assessed.

The primary concern about CWD is related to the potential for misrepresenting it as being equivalent to bovine spongiform encephalopathy (BSE), the infamous "mad cow disease", a prion disease of bovids (cattle). BSE has been associated with a similar infection in humans

and poses worldwide concern for public health and agricultural economics. ***However, CWD and BSE are not the same.***

Based largely on the perceived human health concerns, wildlife managers throughout western Canada and the US expend considerable time, effort, and monies on surveillance programs aimed at defining exactly where CWD occurs or does not occur in the wild.

To date, infections in wild deer and elk populations are known from a small area where Wyoming, Colorado, and Nebraska have shared boundaries. Wildlife agencies across Canada and the United States recently increased the surveillance efforts to look for CWD in wild deer and elk. A total of 68 cases in wild deer have been found in Saskatchewan. In addition, CWD has been found in Wisconsin, Illinois, South Dakota, New Mexico, Utah, and New York.

Alberta began surveillance of wild deer and elk in 1996. Voluntary submission of heads of hunter-killed animals is the primary source of surveillance samples. Particular emphasis is placed in getting heads of deer killed along the Alberta/ Saskatchewan border and a specified area in central Alberta. ***Prior to the case found near oyen, Alberta, over 6,00 samples of wild deer and elk in Alberta have been negative for CWD.*** Please see the CWD Surveillance Program in Alberta page for more information.

There are numerous research projects underway to better define the host range, method of transmission, diagnostic tests, impact on wild cervids, and risk to the public and livestock.

Public Significance

This disease poses significant economic problems for farmers of elk and deer. CWD was introduced into captive (=farmed) elk populations via live wild elk taken from affected areas in the US. It was then unintentionally translocated to farms in various states as well as to Alberta, Saskatchewan, and Korea. As a result, the economics of trade in live elk and their products (primarily antler velvet) have been seriously affected. Also, the association with BSE has led to possible public health concerns.

To date there is no scientific evidence to suggest that CWD can infect humans and growing evidence that it is indeed quite different from BSE. The US Centres for Disease Control advise that the human health risks from CWD, ***if any exist***, are extremely low. However, as a precaution, the World Health Organization (WHO) recommends that all products from animals known to be infected with any prion disease should be excluded from the human food chain.

Prevention/Control
CWD is a federal reportable disease in Canada and appropriate surveillance and control programs are underway. The procedures parallel those used to control and eradicate other federal reportable diseases and include

- ongoing surveillance (testing of slaughtered animals, report of clinical signs),
- quarantine of suspect and confirmed affected premises,
- detailed traceouts from all known affected premises,
- destruction of infected herds, and
- compensation of owners of infected elk or deer.

Affected premises are thoroughly cleaned and disinfected before they can be restocked. Similar programs are underway in the US.

In addition, Alberta has stringent programs developed among government agencies, game farmers, and other stakeholders to continually search for evidence of CWD in farmed and wild cervids as well as limit the possibility of introducing infections in animals imported into the province.

Summary

CWD has been identified in one farmed elk and two farmed white-tailed deer in Alberta and one wild mule deer near Oyen, Alberta. It is a serious health issue for wild deer and an economic concern for elk and deer farmers in Alberta. The province is committed to taking every precaution to avoid the spread of CWD in wild cervid populations. Strict programs are in place to provide continual surveillance.

Additional information concerning CWD programs and surveillance data in Alberta is available at:

www.agric.gov.ab.ca/surveillance/tse/index.html - Alberta Agriculture, Food and Rural Development

Chronic Wasting Disease (CWD) test results in Farmed and Wild Cervids in Alberta

CWD Alliance - for updates on this wildlife disease across North America (external site)

For further information visit website at
http://www3.gov.ab.ca/srd/fw/diseases/CWD/index.html

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