

CHRONIC WASTING DISEASE: AN ALBERTA PERSPECTIVE IN THE FALL OF 2002

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There is no question that chronic wasting disease (CWD) has become the topic of the day among a wide range of folks who manage, use, and/or appreciate big game cervids (primarily deer and elk) all across North America. However, this disease is not a new topic in Alberta. As early as July 1996, the Fish and Wildlife Division began looking for ways to survey wild deer and elk in the coming hunting seasons to see if CWD was present in Alberta. The survey seemed even more appropriate once Saskatchewan found the first case of CWD in a game farm elk in October 1996. Since then, Alberta has been a leader in assessing risks associated with this disease, designing surveillance programs in wild and farmed cervids, and encouraging other jurisdictions to take CWD seriously.

There is considerable misinformation circulating about CWD and readers should always scrutinize closely anything they read about this disease. If you have access to the internet, wildlife agency webpages are often the most reliable sources of trustworthy information. Similarly the webpages of the recently formed CWD Alliance (<http://www.cwd-info.org/>) provide responsible and accurate communications with the best interests of wildlife and the hunting public in mind. Armed with the facts, you can at least make informed decisions and develop credible opinions. Close to home, the Fish and Wildlife Division of Alberta Sustainable Resource Development, as well as Alberta Agriculture, Food and Rural Development, each have CWD information available on the web or from their public offices. Thus, there is good background information available about CWD so I will not cover the basics of the disease in this article.

What I do provide is an overview of the programs in place for the coming hunting seasons, the thinking behind these programs, and a review of some recent concerns. My focus is on a science-based assessment of the risks that CWD poses in Alberta.

PREVIOUS CWD PROGRAMS in Alberta

During the last four hunting seasons, the Fish and Wildlife Division asked some hunters to provide the heads of hunter-killed deer and elk in Alberta. We have always had excellent response to similar programs in the past and we were concerned about getting overwhelmed with more samples than we needed. Thus our request was designed to limit the number of heads to a scientifically credible sample size from which we could draw valid conclusions about the presence or absence of CWD. Starting in the 2000 season, we also tailored the request to focus on management units along the Alberta/Saskatchewan border between Lloydminster and Provost. This targeting of the request was done initially in response to the finding of CWD in various game farms in westcentral Saskatchewan and later (2001), in two wild mule deer on the Saskatchewan side of the border (as of September 1, 2002 there are only three known cases in the wild in Saskatchewan. All are within a few kilometers of each other).

In total, we have examined approximately 2500 heads of wild deer and elk from Alberta. **CWD WAS NOT FOUND IN ANY OF THE 2500 WILDLIFE HEADS.** From these data we conclude that CWD does not occur as a widespread natural occurrence in wild deer or elk in the province. This finding allows us to shift our programs for fall 2002 into two areas of concern, rather than the entire province.

2002 FALL CWD PROGRAMS

Alberta/Saskatchewan Border

We will continue to ask hunters in **Wildlife Management Units (WMUs) 234, 236, 256, and 500** (the AB/SK border region) to voluntarily submit the head of their hunter-killed deer and elk over one year of age (i.e., we do not test moose nor deer fawns or elk calves). As in previous years, these heads can be dropped off at any Fish and Wildlife office during regular office hours. In addition, during the hunting seasons freezers with 24-hr access for dropping off heads will be located at local businesses in some of the border communities (Chauvin, Edgerton, Lloydminster, Provost, Wainwright). Details are available from local Fish and Wildlife offices in the area. The freezers also contain bags, tags, and pencils as well as helpful instructions for labeling the heads. ***Be sure to include your WIN number. Hunters will be contacted directly in the unlikely event that your deer or elk tests positive for CWD.***

Central Alberta (WMU 507)

Most of the readers will know that CWD was found in one game farm elk in central Alberta in March 2002. The case was identified during the province's routine CWD surveillance of farmed elk going to slaughter. Chronic wasting disease is a federal reportable disease in Canada and once the case was found, the national CWD control and eradication programs kicked in. As part of the federal program, all potentially exposed cervids on the premises were removed and tested for CWD. Fortunately, CWD was not found in any of the herd-mates. Nor was it found in any of the traceout animals that had left the premises in the previous three years. Animals that left the premises within four to five years earlier are all under movement restriction and observation by federal veterinarians. None shows any sign of CWD. The source of infection in the one farmed elk continues to be investigated.

Given the lack of additional CWD cases, the risk to surrounding wildlife populations is minimal. There was no urgency to examine wildlife adjacent to the affected farm; however, we do need to take a closer look for CWD in the general area. **Therefore, starting with the 2002 season, we are asking hunters to voluntarily submit the heads of mature (greater than one year of age) deer and elk killed in WMU 507. We propose to assess this population for the next three years and, depending on the results, we will adjust the program accordingly.** Based on estimated populations of wild deer and elk in the unit, we would like to receive approximately 250 heads each year. The combined estimated harvest of white-tails, mulies, and elk in WMU 507 last year was 923 so we are confident that with the help of you, the hunters, we will reach our target goal.

Similar to the border region, the heads can be dropped off at any Fish and Wildlife office during regular hours OR at 24-hr freezers that will be placed at local sites. Contact any of the local Fish and Wildlife offices in the area for specific details.

**PLEASE MAKE SURE YOU PROVIDE ALL OF THE REQUESTED INFORMATION
WHEN YOU DROP OFF A DEER OR ELK HEAD.**

**Identify species, sex, age (adult, yearling), date and location of kill,
AS WELL AS YOUR WIN NUMBER.**

**If you are using the pre-printed labels,
!!! FILL OUT BOTH SIDES OF THE LABEL !!!**

OTHER ISSUES FOR HUNTERS

HEALTH RISKS ??

Alberta's CWD programs are based on scientific evaluation of risks posed to the health of wildlife, game farm cervids, traditional livestock and humans. All of the evidence indicates that the risk of CWD occurring in the province is extremely low. We have looked for CWD in farmed and wild deer and elk, and we have looked hard (well over 5000 heads in total) . Yet we have found it in only one farmed elk. There is no evidence that it occurs naturally in wild cervids in Alberta and we have had a moratorium on importation of farmed or captive cervids since October of 1988. We have never imported deer into Alberta and most of the imported farmed elk that arrived prior to the moratorium were killed in the early 1990s as part of the federal bovine tuberculosis eradication programs. Imported elk that were not killed, have been given particular attention and they do not show any signs of either TB or CWD.

Further to this, all of the scientific data to date, including experimental research with cattle, genetic manipulation with mice, and retrospective review of human cases of naturally-occurring prion diseases indicates that CWD does not readily infect anything other than members of the cervid family. Researchers did not find any link between CWD and human disease. At a recent CWD Symposium in Denver, the US Centers for Disease Control concluded that the risk of CWD to humans, ***if any exists***, is extremely low. When we apply this conclusion to Alberta, where there has been limited opportunity for the disease to enter the province and where we have searched diligently for CWD in the wild and have not found it, Alberta Health and Wellness concludes that the human health risk from consuming wild game collected in Alberta is 'near-zero'. [Note that no one can ever say that any disease risk is "absolute zero"]

Similarly the World Health Organization states that there is no known CWD risk from eating wild cervids. However, to err on the side of caution in areas where CWD is known to occur in a significant proportion of wild deer and elk (that is, adjacent portions of Colorado, Wyoming, and Nebraska, as well as perhaps parts of Wisconsin), health officials advise hunters to voluntarily wear gloves when cleaning their kill, bone out the carcass, and avoid eating the brain, spinal cord, spleen, eyes, tonsils, or lymph nodes.

INDIVIDUAL TEST RESULTS ??

As indicated above, the risk of CWD occurring in free-ranging deer and elk in Alberta is considered extremely low. As such, testing of individual hunter-killed heads, beyond those requested for surveillance programs along the border or in WMU 507 is not available at the government diagnostic labs. As long as you provided your WIN number, you will be notified directly by the Fish and Wildlife Division in the unlikely event that the deer or elk is found to have CWD. You will not be notified if it is negative for CWD.

Nor are we aware of any private lab in Alberta that is certified to provide CWD results. Apparently some labs in the US may offer quick and inexpensive test results; however, these tests and many of the labs have not been validated nor approved. Whitetails Unlimited, a major national hunting organization in the US cautions hunters against buying unproven test results offered on a fee-for-service basis.

DISPOSAL ??

Recent international business decisions by rendering companies across North America may make disposal of bones and scraps of big game animals more difficult, or at least, may force hunters to change their normal routine. Following a recent review of current legislation, five legal means of disposal of cervid parts in Alberta were identified and the information circulated to butchers, processors, and primary wildlife stakeholder groups. In a nutshell, hunters can bury non-edible parts of big game kills on private land with landowner permission, take them to a Class I or Class II landfill (check with the municipality or landfill operator), or leave the parts on private land with landowner permission for natural disposal by scavengers and decomposers. Other options include commercial incinerators or commercial composters; however, these opportunities are limited for disposal of hunter-killed critters.

Note that it is an offence under the *Alberta Environmental Protection and Enhancement Act* to dispose of dead animal parts on Crown lands, including roadside ditches.

Undoubtedly some butchers or processors will continue to conduct business as they have in the past. Others may choose to accept wild big game carcasses but return the bones and scraps (along with the meat) to the hunter. Still others may choose not to accept big game carcasses any more. Each individual business will make its own decision. Hunter sharing information about where they can get meat cut this year can help reduce the confusion and difficulties within the hunting community.

SCENT LURES ??

There have been comments and written concerns regarding the CWD risk that may be posed by hunters using commercial scent lures and attractants during hunting activities. This issue has swirled in the US for quite some time and recently entered the Canadian discussion of CWD. There is indeed an unknown risk that CWD could occur in urine or faeces of infected deer or elk. However, let's look at the level of risk.

No one has been able to find altered proteins (=prions) in urine or faeces of animals infected with CWD; although, there has been minimal effort directed to such a search.

We also do not know how long or during what phase of the infection an infected animal excretes prions (if they are excreted at all). However, it is reasonable to assume that this is not the primary means of transmission of this disease, otherwise we should have some evidence of this from the CWD investigation and research to date.

The risk assessment does not stop there. Assuming that the prion was present in the initial excretion; it would have to survive the procedures associated with processing, preserving, packaging, and transporting the product, as well as survive the time and conditions during distribution, sale, and storage of the product before and after it gets into the hunter's possession. Then the hunter takes it out into the field and applies it to boots, trees, etc. So again the prion must survive long enough and in sufficient amounts to establish an infection in enough local deer or elk to sustain a viable population of CWD that would lead to a new focus of infection in the wild. Thus, there is a cascade of risks that may well start out quite small and be reduced at each step of the cascade. It is difficult to see how scent lures pose a significant risk to wildlife in Alberta.

ALBERTA PERSPECTIVE ??

How can we be confident that Alberta is not like Colorado? Or Wisconsin? Or even Saskatchewan? There are numerous factors that set us apart:

- Unlike many jurisdictions, we have had surveillance of farmed and wild cervids for four full years plus the early samples in 1996 and 1997. We have detected no CWD in the wild and only one infected farmed elk.
- A moratorium on the importation of game farm cervids began in October 1988 and a rigorous assessment of all disease risks associated with importing farmed cervids was completed by technical specialists from the Fish and Wildlife Division and Alberta Agriculture. The review included a wide range of potential risks to the health of livestock, wildlife, farmed cervids, and humans. Since 1988, only a limited number of farmed elk were imported and they only came after extensive review of the risks posed by each shipment. [Imports were approved only from the Yukon.]
- Current data indicate that CWD is most often introduced to new areas in farmed elk or deer that have links to animals imported from the US. Most of the US game farm cervids that were imported to Alberta in 1985-1987 (the only years when it was legal) were depopulated in 1991-1993 during federal programs aimed at eradicating bovine tuberculosis. Remaining US animals have been watched ever since, without any signs of TB or CWD.
- We responded immediately to the finding of CWD in a wild deer in Saskatchewan and subsequently did not find any evidence of the disease in adjacent deer in Alberta. We will continue to monitor this population for at least five years.
- We are implementing enhanced surveillance of wild deer and elk in the WMU that contained the single known case on a farm in Alberta. We propose to continue this enhanced surveillance for at least three years and will adjust the program accordingly if necessary.
- All CWD programs in Alberta are based on the best and most up-to-date scientific information regarding this disease. The programs are strengthened by a high level of cooperation between the government departments that manage wildlife and agriculture as well as the general support from a wide range of diverse stakeholders.

HUNTING ELSEWHERE ??

Persons who hold licences to hunt big game in other jurisdictions should make sure they are thoroughly familiar with the most up-to-date information from the appropriate wildlife agency. Some jurisdictions made recent changes to regulations that may affect your hunting activities in the province or state.

SUMMARY:

Chronic wasting disease is a concern for wildlife managers, agricultural managers, and all those who enjoy wildlife for a wide range of reasons. Alberta has adopted a policy of prevention and eradication of CWD. We have designed our programs to provide security for farmed and wild cervids and in response to the level of risks posed within the province. We have realistic programs aimed at preventing direct introduction of CWD into the province as well as suitable programs to find and eliminate CWD once it is identified. Fortunately this disease is not highly infectious in wild populations. With any new situation, we have time to gather information and develop programs that are appropriate to the risk. We have done so since 1996 and will continue to do so.

Targeted hunter surveillance for the 2002 seasons is focused in WMUs 234, 236, 256, 500, and 507. If you harvest mature white-tail, mule deer, or elk in these units, please consider providing the head for the CWD survey. In addition, if you see an emaciated deer or elk anywhere in the province, please contact a Fish and Wildlife office.