Chronic Wasting Disease Prevention in Manitoba

Big Game Health Program,
Wildlife and Fisheries Branch,
Manitoba Sustainable Development,
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CWD Prevention

Questions we’ve asked:

• Where is the disease now?
• How is CWD being spread?
• Are there ways to prevent this spread?
• Are there direct actions we can take?
• Are we looking hard enough to detect the disease?
• Do we have legislative authority to do what’s needed?
• What will we do if we find it?
• What more can we do?
CWD is spreading in North America and elsewhere

- How is it being spread?
- How do we prevent this from occurring?
Failure to trace the origin (until 2000), allowed the source herd to ship animals to 40 game farms, infecting at least 21.*

*not geographically accurate
Environmental Contamination

CWD prions persist:
- Infectious outside of the cervid
- 5+ years?
- Resists disinfectants, protein enzymes, desiccation, radiation, freezing, and virtual incineration (must be burned above 600 C, near melting point of aluminum)
- Sewage treatments do not degrade or inactivate CWD prions

Conceptual model of horizontal transmission of chronic wasting disease (CWD). Items in italics are poorly studied or unknown in cervid CWD. (Adapted from Bartz, et al, 2012.)
CWD Transmission

• Direct contact
  – Nose to nose
  – Mother to fetus
• Indirect contact with infected saliva, urine, feces, placental tissue, and carcasses.
• Transferred at feeding sites, particularly unnatural sites:
  – Bait sites
  – Supplemental feeding
  – Livestock bales
  – Salt licks
  – Grain bins
• In the back of a truck
General wild cervid info for Manitoba

- ~100,000 – 200,000 **White-tailed deer.** Population goal is about 150,000
- ~5,500 – 5,900 **Elk.** Largest herd is in RMNP with about 3,500 on average (currently below 1,000 as a result of bovine TB program)
- **Moose** population ??? – some areas under Conservation Closure
- **Boreal (Woodland) Caribou** – low population, threatened and protected (no hunting)
- **Barren-ground Caribou** ~250,000
- **Mule Deer** – very low population, protected. (In GHA 27, 26 observed in 2018)

*Note that baiting cervids for hunting prohibited province-wide.*
Elk Farming in Manitoba


- Allowed capture of wild cervids (*Manitoban Elk*) for farming elk
- ~90 farms established
- Products included meat, antler, velvet, and breeding stock
- Provisions put in place to tag, record genetics, and prevent escapes
CWD Prevention

Elk Farming in Manitoba

Livestock Industry Diversification Act. (LIDA)

- In 2002, elk imports from all other jurisdictions prohibited (CWD concerns) unless direct to slaughter. Manitoba Wildlife Federation were instrumental in getting this restriction in place.
- 2007, above revised to allow import of live captive elk from jurisdictions free from CWD for last five (5) years and that have a surveillance program similar to MB’s
CWD Prevention

Elk Farming in Manitoba

*Livestock Industry Diversification Act. (LIDA)*

- Currently:
  - 16 Elk farms licensed
  - ~2,000 head
  - 3 or 4 farms have majority of stock
  - Slaughter animals may still be imported provided abattoir has adequate bio-security capacity including offal handling, rendering, and effluent control. None in MB are adequate.
CWD Prevention

Ban on the import of native/exotic cervids

No live native or exotic captive cervids permitted to prevent the introduction of CWD carriers

Note: under LIDA, live cervid imports and reproductive materials (semen and ova) may be allowed into MB with some restrictions
Ban on the import of unprocessed cervid carcasses

- Under *The Wildlife Act*, *Wildlife Protection Regulation 6(1)*:
  - “No person shall possess, import, or attempt import a cervid, or part from a cervid that has been killed outside of Manitoba, unless the head, hide, hooves, mammary glands, entrails, internal organs, and spinal column has been removed.”
- Deboned or processed meats allowed.
- Cape and antlers allowed in a sealed container.

Note that MB and ON collaborated on producing highway signs.
CWD Prevention

Hunters from Quebec

Harvested deer in SK and AB

14 carcasses

Seized and tested negative for CWD
CWD Prevention

Possession of any substance containing cervid bodily fluids (blood, urine, feces, etc.) is prohibited

– Does not include synthetic attractants

– Little impact on hunting supply industry, synthetic attractants readily available
CWD Prevention

SD responses – designated CWD control zones

• In 1997 – Voluntary sample submission along US border in response to positive in ND. Discontinued after five (5) years
• 1998, Bovine TB found in RMNP area. Began surveillance, risk mitigation, collaboration for eradication. Sub-sample selected for CWD surveillance.
• 2003, CWD Surveillance Zone created. Later extended to along most of SK border.
• 2018, CWD Surveillance Zone increased to all areas of White-tailed deer habitat along MB-SK border and MB-US border.
Deer and elk are managed in these areas to control diseases.

**Chronic Wasting Disease (CWD)** is an always fatal disease of cervids that will reduce or even eliminate populations.

**Bovine Tuberculosis (TB)** has no effect on cervids but is an important disease of farmed cattle.
Licensed hunters must submit samples (heads) from all elk and white-tailed deer harvested in GHA’s 5, 6, 6A, 11, 12, 13, 13A, 18 and 18B west of PR 366, 18A, 18C, and that part of 22 west of PTH 83, 23, 23A, and 27.
CWD Prevention

Surveillance

• Licensed hunters requested to submit samples (heads) from all elk and white-tailed deer harvested in that area within two (2) townships of the US border.
1997 to 2018
- 10,200 white-tailed deer
- 4,700 elk
- 210 Moose
- 20 mule deer
Feeding Cervids

- Baiting for purposes of hunting cervids is illegal in MB for licensed hunters
- Feeding is allowed for supplemental, intercept, and wildlife viewing
- In 2014, issue sparked controversy and led to proposing a feeding ban in disease control areas
- Undertook Section 35 consultations with First Nations and Metis communities
- 2017, feeding cervids in disease surveillance and eradication areas prohibited year-round
CWD Prevention

CWD Risk Site Identification and Mediation

By Helicopter
100% coverage at 500m intervals
Count and record:
• All cervids
• Check for ear tags
• All unnatural concentrations
CWD Risk Site Identification

Risk Assessment Surveys
CWD Risk Site Identification

Risk Assessment Surveys
Accidental feeding sites
CWD Risk Site Identification

Illegal baiting

[Image of a snowy landscape with a tire and trees]
CWD Risk Site Identification

Illegal feeding
CWD Prevention

SD Response
- Order to remove
- Area posted ‘No Hunting’ for 800m
- Charges for Baiting Cervids for Purpose of Hunting
- Charges for Feeding Cervids in Disease Control Areas
Deer concentrating at farm site
Bale grazing
CWD Prevention

Hay Storage Fences
CWD Prevention

What If...?

SD Response – CWD Action Plan

Currently, working with AG and CFIA to ensure appropriate response
CWD Action Plan

Containment & Eradication

– In collaboration with AG and CFIA
– Positive cervid (wild or Farmed Elk) found:
  • Depopulation of a positive farm
  • Trace in/out investigation
  • **70 km Surveillance Zone**
    – Mandatory sample submission
    – Feeding ban
    – Aggressive risk site mitigation
    – Additional selective sampling and/or population reductions
  • **20 km Target Zone**
    – Complete depopulation of all cervids before next calving season
    – Minimum for five (5) years
Additional Steps?

MB currently CWD-free

- Options for Enhancement:
  i. How long for test results?
  ii. Increase surveillance areas?
  iii. Ban ALL cervid and cervid parts imports (venison, hides, antlers)?
  iv. Increased communications
  v. Other?

Contact:
richard.davis@gov.mb.ca
(204) 622-2474