Surveillance of Chronic Wasting Disease in Idaho’s Wild Cervids

CSG West 2019
Big Sky, Montana
Surveillance of Chronic Wasting Disease in Idaho’s Wild Cervids

CWD is:

- Caused by a mutated protein (prion) that can not be broken down in the body
- Progressive nervous system disease
- Infectious: transmitted by direct contact, soil, tissues, and fluids
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CWD is:

- Caused by a mutated protein (prion) that can not be broken down in the body

G. Richard Olds, MD
Cleveland Clinic Journal of Medicine, 1998
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CWD is:

- **Always fatal in cervids**
- **Getting closer to Idaho**
  3/6 states that border Idaho have CWD
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CWD is
  • *Getting closer to Idaho*: Distribution in North America
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CWD is

- **Getting closer to Idaho**: Utah first detection in 2002
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CWD is

- **Getting closer to Idaho:** Montana first detection in 2017

Libby, Montana 5/2019

Montana Fish, Wildlife and Parks, fwp.mt.gov
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CWD is
• Getting closer to Idaho Wyoming first detection in 1985

Wyoming Game and Fish Department, wgfd.wyo.gov
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CWD is

- **Getting closer to Idaho**: Wyoming expansion

Positive detection in Deer (2018)

Positive detection in Deer (2016) & moose

Positive detection in Deer (2012)

“expanded on average ~2.0 million acres per year”

Wyoming Game and Fish Department, wgfd.wyo.gov
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Positive detection in Deer (2018)

Positive detection in Deer (2016) & moose

Positive detection in Deer (2012)

Wyoming Game and Fish Department, wgfd.wyo.gov
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Deer 255 (Mo), summers in Idaho
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IDFG surveillance: 1997-2017

• 16,498 sample submissions
  • 11,712 Mule Deer
  • 2,101 White-tailed Deer
  • 2,317 Elk
  • 319 Moose
  • 49 other

• 1000/year

• Voluntary Hunter sample submissions & Suspect Necropsy samples
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New 2018 CWD Strategy

• Implemented BMPs provided by AFWA and WAFWA

1. Prevention
2. Surveillance
3. Management
4. Communication
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2018 CWD Strategy

1. Prevention:
   Recommended new rules to slow the spread of CWD entering Idaho

   IDFG Commission approved all rules
   *Idaho Legislature approval needed on 1 Rule
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2018 CWD Strategy

Approved Rule changes:

• **Urine ban**: bans the use of natural cervid urine for big game hunting

• **Winter Feeding risk Strategy**: Integrate Fish and Game’s CWD risk strategy into winter feeding planning

• **Restrict Winter feeding in CWD zones**: restrict the public from feeding deer and elk in designated CWD zones in the event CWD is detected

• **Ban importation of live wild cervids**: ban the importation of live mule deer, white-tailed deer, and moose with the exception of approved permits
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2018 CWD Strategy

Approved Rule changes:

• **Out-of-State Carcass Import Ban**: bans importing a carcass or any part of a wild deer, elk, or moose from another state, Canadian province or any other country with a documented case of CWD.

   Exemptions:
   
   - Meat that is cut and wrapped
   - Quarters or deboned meat (no brain or spinal tissue)
   - Edible organs that do not include brains
   - Hides without heads
   - Upper canine teeth, Ivories, buglers, or whistlers
   - Finished taxidermy
   - Dried antlers
   - Cleaned and dried skulls or skull caps
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2018 CWD Strategy

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2018 CWD Strategy

• Implemented BMPs provided by AFWA and WAFWA

2. Surveillance: Weighted surveillance with rotational sampling for deer populations

<table>
<thead>
<tr>
<th>Demographic Group</th>
<th>Mule Deer</th>
<th>White-tailed Deer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptomatic female</td>
<td>13.60</td>
<td>9.09</td>
</tr>
<tr>
<td>Symptomatic male</td>
<td>11.50</td>
<td>9.09</td>
</tr>
<tr>
<td>Road-killed male/female</td>
<td>1.90</td>
<td>0.22</td>
</tr>
<tr>
<td>Found dead male/female</td>
<td>1.90</td>
<td>7.32</td>
</tr>
<tr>
<td>Harvest adult female</td>
<td>0.56</td>
<td>1.30</td>
</tr>
<tr>
<td>Harvest adult male</td>
<td>1.00</td>
<td>3.23</td>
</tr>
<tr>
<td>Harvest Yearling female</td>
<td>0.33</td>
<td>0.85</td>
</tr>
<tr>
<td>Harvest Yearling male</td>
<td>0.19</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Walsh and Otis 2012, Jennelle et al. 2018
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2018 CWD Strategy

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2. Surveillance: Weighted surveillance with rotational sampling for deer populations

Population level sampling and statistics for Mule Deer statewide & White-tailed Deer in North Idaho

All suspect and collar mortalities should be sampled for deer, elk, & moose
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2018 CWD Strategy

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2. Surveillance: Weighted surveillance with rotational sampling for deer populations

Testing is performed on Lymph Nodes and Obex using ELISA and/or IHC

Idaho CWD Sampling Zones
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2018 CWD Strategy

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3. Management: Adaptive Management options for populations where CWD is detected
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2018 CWD Strategy

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3. Management: Adaptive Management options for populations where CWD is detected

Each population is evaluated:
- Herd Composition
- Movement
- Population Parameters
- CWD Prevalence

LONG-TERM!!!

- population dependent
- increase sampling
- increase funding will be important
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2018 CWD Strategy

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3. Communication: Engage in effective communication with the public and government agencies

Video: What is chronic wasting disease?

https://idfg.idaho.gov/cwd/status
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What does this mean for hunting?

Populations
- In areas of high prevalence wildlife managers have seen declines in deer populations
- A key to managing for lower prevalence is to reduce the age structure of the buck portion of the population.
  - Lengthen seasons
  - Extend seasons into the rut and beyond
  - Increase opportunity

Hunters
- Some will drop out of hunting
- Some will go elsewhere
- Some continue with testing every animal
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Hunter Perspectives on Managing CWD Prevalence in Colorado 2018

- Use Special Disease Management Hunts: 82%
- Use Hunters to Reduce Total Populations: 70%
- Increase Late Season Buck Hunting: 68%
- Increase Buck Tags in All Hunts: 52%
- Use Professionals to Reduce Herd/Prevalence: 38%
- Take No Action: 21%
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- Wyoming Hunter Surveys On CWD results:
  - Hunters want us to do something about CWD
  - Hunters prefer a balance between herd health and hunt opportunity with a greater emphasis on herd health
  - As prevalence of CWD increases hunters are more likely to hunt in different areas
  - Most carcasses are disposed of at the site or through a processor
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• Challenges Post Detection

  • Communication with the public
    • Disease
    • What we are doing
    • How can they be involved

  • Reducing the Prevalence/Slowing the Spread
    • Commission/Public
    • Managing for lower prevalence in the area

• Sanitation
  • Landfill issues
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Why is CWD important to manage for lower prevalence?

• Slow the spread of the disease

• Maintain healthy deer populations

• Maintain the big game hunting heritage

• Economics
  • 2015- Big game Hunting added $478 Million to Idaho’s Economy
  • Big Game Hunting is a multi-billion dollar industry in the US
Questions?