## Medusahead in Nevada

It's a problem...

#### Road Map:

- What is Medusahead (brief)
- What are the rangeland implications?
- What are the control options?
- Where is Medusahead in Nevada?
- Challenges/Needs

## What is Medusahead?

- Winter annual grass
- Class B noxious weed
- Oregon in 1887, Nevada in 1960, journal article in Idaho in 1961.

## What is Medusahead?

#### **Growth Patterns:**

- Germinates in autumn/winter, root growth through winter
- Seed rooting is very drought tolerant
- Seed set later than most annual grasses (July-ish)
- Dense and prolific seed production (10,000 m2)
- Extremely thick thatch build-up encourages establishment (40x)
- Noted to outcompete cheatgrass in areas
- Nutrient quality declines with time

## Medusahead thatch



# What are the rangeland implications?

#### <u>Livestock:</u>

- Decent nutrition/high silica = reduced grazing (70-90%)
- Livestock do not select for this plant (may not avoid in low densities)
- Supplementation does not increase consumption
- Animal health concerns

Dire situation for livestock producers

#### Wildfire Cycle:

• Exacerbates fire cycle with thatch layer



## What are the rangeland implications?

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#### Wildlife/GRSG:

- Ungulates will not utilize
- Upland Game birds will not utilize seeds
- Obvious habitat degradation
  - Is it invading new areas or already compromised areas?

## What are the rangeland economic implications?



### Significantly worse than cheatgrass

## "It's like a piece of land that's stolen from you or from your ranch that no longer produces feed." -California Rancher

Photo courtesy of Utah State University Extension



## n cheatgrass

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#### <u>Livestock:</u>

- Decent nutrition/high silica = reduced free grazing (70-80%)
- Controlled grazing requires high stocking rates, and tight window to achieve biomass reduction of 50-75% (3.3-6.7 AUM/ha, 2 wk)
- Animal health concerns (injury, weight loss, supplements do not help)

#### <u>Mechanical:</u>

- Mowing has been effective in some circumstances with a very tight window
- Ground work (tillage, harrow, etc) can be effective at burying seeds and removing thatch.
  - Use in coincident with restoration methods (pre-emergent and reseeding)

#### <u>Fire:</u>

- Prescribed burns most effective at reducing thatch, often don't damage seeds.
- More effective at low elevation, warm winter sites.

#### **Chemical Control:**

- Post-emergence
  - Glyphosate (non-selective)
  - Aminopyralid (disrupts seed production, lots of testing)
- Pre-emergent
  - Imazapic

### What are the potential largescale treatments?



## Medusahead in Nevada

Medusahead is a rapidly spreading winter annual grass. This noxious weed is a major catalyst for wildland fire and is non-palatable to livestock. Medusahead establishes thick thatch layers and can outcompete native communities, especially in areas with disturbance. Medusahead poses a serious threat to Nevada's natural and agricultural resources.

#### Humbold Elko 00 Washo Persitie Eureka Lander Churchil White Pine ougl Mineral Nye Esmeralda Medusahead Locations Lincoln, Nellis An Acres Infested: 0 - 59 60 - 320 321 - 1052 Unknown Size 0 12.5 25 50 75 100 Clark **Current Area Infested** (2019) = 9,496 Acres Reference the Medusahead Management Guide earn more about Medusahead from the for the Western States for control methods. Montana Department of Agriculture.

Data used in this report is provided by eddmaps.org, USDA Forest Service, Bureau of Land Management. Reports of unknown size within 1 km of reports with known size are removed for visualization. This map was created using Arc GIS® software by Esri. Arc GIS® and Arc Map™ are the intellectual property of Esri and are used herein under license. Copyright © Esri. All rights reserved. For more information about Esri® software, please visit www.esri.com.

## Where is Medusahead in Nevada?

http://agri.nv.gov/Plant/Noxious\_Weeds/Noxious\_Weeds\_Home/

## Challenges/Needs:

## What's the best way to tackle this problem?

#### Perceptions:

- Brad Schultz (2009) found 1.8% of producers listed Medusahead as problematic (Humboldt & Pershing surveyed at 5%).
- 13% of public land managers listed Medusahead as problematic.
- Studies have shown (Johnson et al 2011) an unwillingness to engage/support prevention until experience forces hand

SETT/NDA are coordinating communication products to raise the importance of the issue.

#### Mapping:

• Knowing how Medusahead is distributed across the landscape is important for triage and prioritization.

SETT/NDA are coordinating to get all possible data into EddMaps.org and will publish annually updated maps

Funding for treatments and EDRR:

Additional funding needed. Nuff' said.

SETT to coordinate with CD program to assist CWMAs in pursuing funding options.

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https://www.researchgate.net/publication/303002416\_Nevada's\_Priority\_Agricultural\_Weeds\_Medusahead https://wric.ucdavis.edu/publications/MedusaheadManagementGuide\_pub\_2014.pdf 15