Purgatoire Watershed Weed Management Collaborative

Toxic Plants to Livestock in Southeastern Colorado

July 19th, 2016

Welcome!

Thanks to Our Sponsors

Morning Refreshments - Spanish Peaks-Purgatoire River Conservation District

Lunch - Alligare, A member of the ADAMA Group

Plants Poisonous to Livestock in the Western States, Bulletin 415 - USDA **United States Department of Agriculture Agricultural Research Service, Logan UT**

Thanks to Our Presenters!

- Ben Berlinger

NRCS Range Management Specialist

- Dr. Gene Niles

DVM, CSU Rocky Ford Veterinary Diagnostic Lab

- Fred Raish

Regional Manager, Alligare

The High Cost of Noxious Weeds

Counties within the Purgatoire Watershed depend on their natural resources for economic well-being and quality of life.

Agriculture, recreation, and energy production; each of these industries depend upon quality natural resources and informed resource management as the basis to a sustainable economy.

Experienced land managers recognize that invasive plant species, or “weeds”, pose one of the biggest threats to the long-term health of the Purgatoire Watershed.

Whether through declining agricultural productivity, degraded wildlife habitat or simply the ongoing costs associated with noxious weed control, the economic costs are staggering.

The High Cost of Noxious Weeds

Colorado State University
Research on the economic impacts of weeds in CO (2014)
http://www.cwma.org/docs/2014%20Econ%20Impact.pdf

The report indicates that the annual direct cost to the State of Colorado is $14 million with agriculture, wildlife and recreational values all being similar (based on 10 plants evaluated).

This cost is too high, and will only increase unless local communities become more proactive and collaboratively tackle noxious weeds.

SOLUTION

The Purgatoire Watershed Weed Management Collaborative (PWWMC)

Ultimate Goal: Establish an independent, strategically focused, financially self-sustaining weed collaborative for the Purgatoire Watershed

<u>INDEPENDENT</u>—An entity that can partner with public agencies, landowners, NGO's and other organizations while maintaining its independence and sticking to its strategic priorities.

<u>STRATEGICALLY FOCUSED</u>—An entity with clear priorities and realistic goals that address:

1) **Threats to agricultural, natural resource and local economic sustainability.**
2) **Opportunities to attract additional partners and resources to increase effectiveness and sustainability of the organization.**

<u>FINANCIALLY SELF-SUSTAINING</u>—An entity with support from replicable/predictable local sources, with robust fundraising and grant writing to also draw support from outside resources.

Dave Powell, USDA Forest Service (retired), Bugwood.org

Steve Dewey, Utah State University, Bugwood.org

Mary Ellen (Mel) Harte, Bugwood.org

Colorado Dept. of Agriculture

Poisonous Plants to Livestock – Key Points

Key Point #1: Hundreds of plants are *potentially* poisonous to livestock and many are native plants not classified as *noxious.*

Source: USDA Agricultural Research Service, Bulletin #415 Plants Poisonous To Livestock

Noxious weeds are typically defined as non-native invasive plants that spread rapidly and have few to no natural controls, outcompeting native vegetation and doing damage to local economies (agriculture, recreation) and native habitats.

From the Colorado Weed Management Association http://www.cwma.org/noxweeds.html :

Noxious Weeds - What They Are

Noxious weeds are non-native invasive plants that displace desirable vegetation and degrade natural and agricultural lands. They threaten our drinking water supply, agricultural crops, pasture lands and native habitats.

Where They Come From and Why they are Successful

These plants have been transported accidentally from places as far away as Europe, Asia or Africa. Some have been brought here intentionally as ornamentals or forage crops but have then escaped.

Noxious weeds have an advantage in their new environment because the insects, diseases, and animals that would normally control them are not found here. The weeds are able to adapt to our varied climatic and environmental conditions.

Noxious weeds have well developed and specialized mechanisms to survive and can spread at alarming rates.

How they Spread

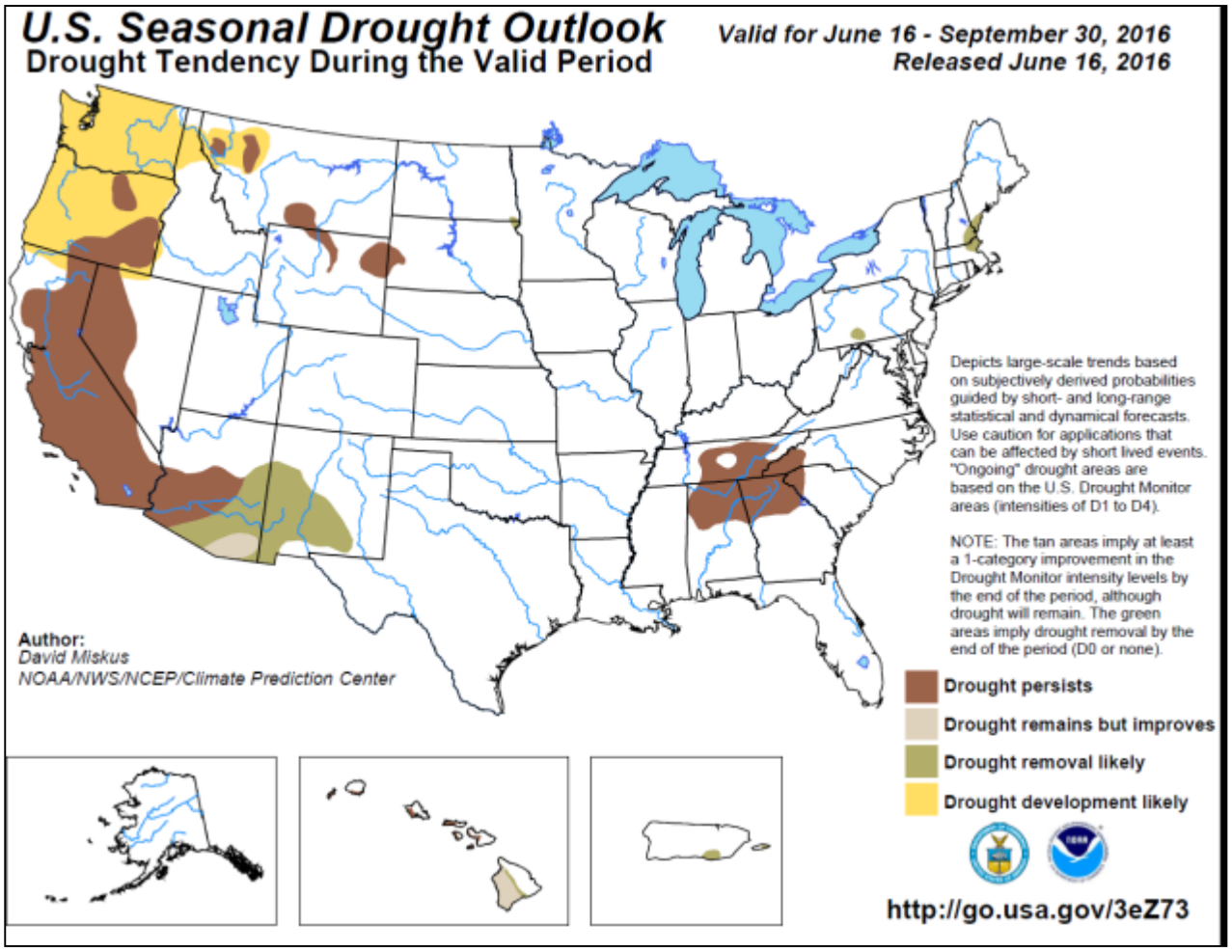
Noxious weeds are spread by animals, humans, water, and wind. Noxious weeds can easily be introduced as seeds in soil, ornamental planting mixes, nursery stock, or hitch-hike on vehicles. Prime locations for noxious weeds to become established are on disturbed sites such as roadsides, land cleared for construction, range that is overused by animals or humans, wetlands, along riparian corridors and in lakes and streams.

Key Point #2: Many plants are toxic at all times, but many are only toxic under certain conditions or growth stages – under normal grazing conditions, many poisonous plants are typically part of livestock diets without causing negative effects.

Howard F. Schwartz, Colorado State University, Bugwood.org

Source: USDA Agricultural Research Service, Bulletin #415 Plants Poisonous To Livestock

Key Point #3: Your number one tool against losses to poisonous plants is range and livestock management!



Variables that Increase Poisoning Potential

- Drought conditions (compounds stress on both plants and animals)
- Overgrazing
- Failure to know and understand the plants growing in your pastures/rangeland
- Stressed livestock
- Livestock introduced to entirely new pasture and thus new plants

Source: USDA Agricultural Research Service, Bulletin #415 Plants Poisonous To Livestock

Economic Considerations

- Every year adversely affect 3-5% of livestock in the Western US (horses, cattle, sheep, goats)
- Direct Losses - Effects on Animals:
  - Death of animal
  - Loss in utero
  - Birth defects
  - Lengthened calving intervals
  - Decreased fertility
  - Decreased overall health/immune system

Source: USDA Agricultural Research Service, Bulletin #415 Plants Poisonous To Livestock

Economic Considerations

- Indirect Losses - Management Costs
  - Fencing
  - Supplemental Feed
  - Medical Treatment
  - Decreased forage
  - Decreased land values
  - Lost time and stress to increased management needs
  - Opportunity costs
    - Ex) A bull dies from plant poisoning: you now have a cash outlay to buy a new replacement bull, plus the time spent for managing the situation. That cash and time could have been spent towards more beneficial operation activities (i.e. installing a new division fence, stock tank etc.).

Source: USDA Agricultural Research Service, Bulletin #415 Plants Poisonous To Livestock