

Managing Invasive Species on Tribal Rangelands



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What is a Weed?

- An unwanted plant
- A nuisance plant
- A plant that interferes with management objectives

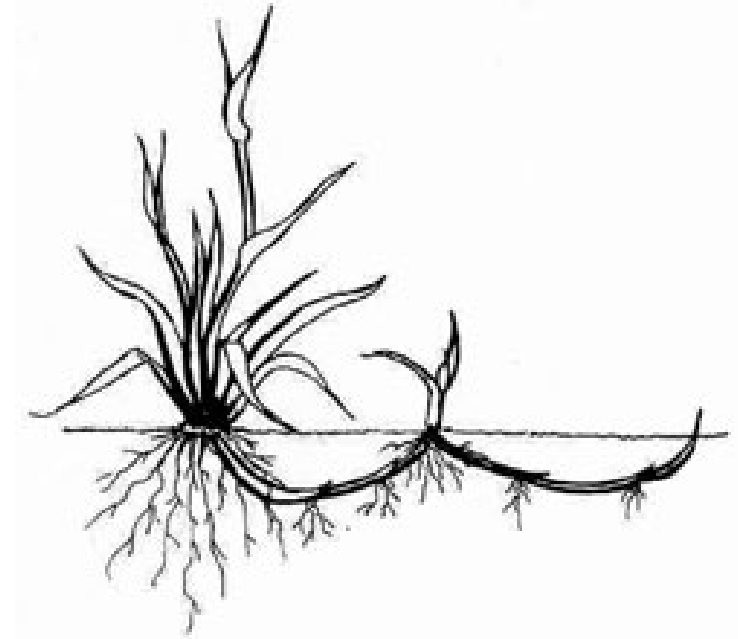


What is a Noxious Weed?

- Noxious weeds are plants specified by law or regulation to be particularly undesirable, destructive and difficult to control
- Often, the word “invasive” is used to describe species that may later become “noxious”
- Today, we’ll be talking about noxious and invasive weeds

Why Noxious/Invasive Weeds are Difficult to Manage

- Few natural predators
- Chemical protection
- Physical protection
- Abundant seed production
- Long seed viability
- Extensive root systems and or underground rhizomes



Why be concerned about Noxious/Invasive Weeds?

Noxious weeds can be costly to all because they can adversely affect:

- Agriculture
- Environment
- Fish and Wildlife
- Human Health
- Economics
- Recreation
- Cultural Values



Integrated Pest Management

1. Proper identification of damage and responsible "pest"
2. Learn pest and host life cycle and biology
3. Monitor environment for pest population
4. Establish action threshold (economic, health or aesthetic)
5. Choose appropriate combination of management tactics *
6. Evaluate results

* Cultural, physical, genetic, biological, chemical, and regulatory



Education



Prevention



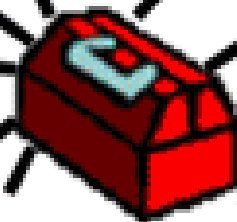
Mapping



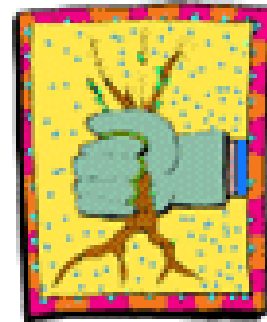
Research



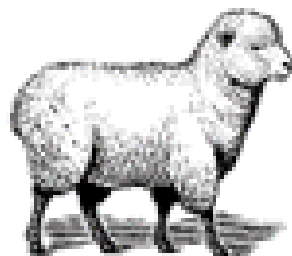
Herbicides



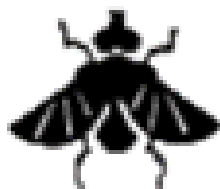
IPM Toolbox



Handpulling



Grazing



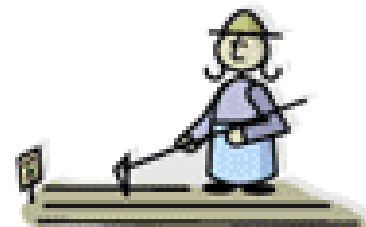
Insects



Mowing



Revegetation



Other Tools

Some Invasive Weeds of Concern

- Hoary Cress
- Russian Knapweed
- Spotted Knapweed
- Diffuse Knapweed
- Yellow Starthistle
- Malta Starthistle
- Dalmatian Toadflax
- Scotch Thistle
- Musk Thistle
- Leafy Spurge
- Cheatgrass
- Buffelgrass
- Camelthorn
- Russian Olive
- Salt Cedar
- Tree of Heaven
- Siberian Elm



Hoary Cress (Whitetop)

Cardaria draba



Russian Knapweed

Centaurea repens



Spotted Knapweed

Centaurea maculosa



Diffuse Knapweed

Centaurea diffusa



A Comparison of Spotted Knapweed vs Diffuse Knapweed



Yellow Starthistle

Centaurea solstitialis



Malta Starthistle

Centaurea melitensis



A Comparison of Yellow Starthistle vs Malta Starthistle



Dalmatian Toadflax

Linaria genistifolia ssp. *dalmatica*



Scotch Thistle

Onopordum acanthium



Musk Thistle

Onopordum acanthium



Leafy Spurge

Euphorbia esula



Buffelgrass

Pennisetum ciliare



Cheatgrasses

Bromus tectorum
and others



Ripgut brome



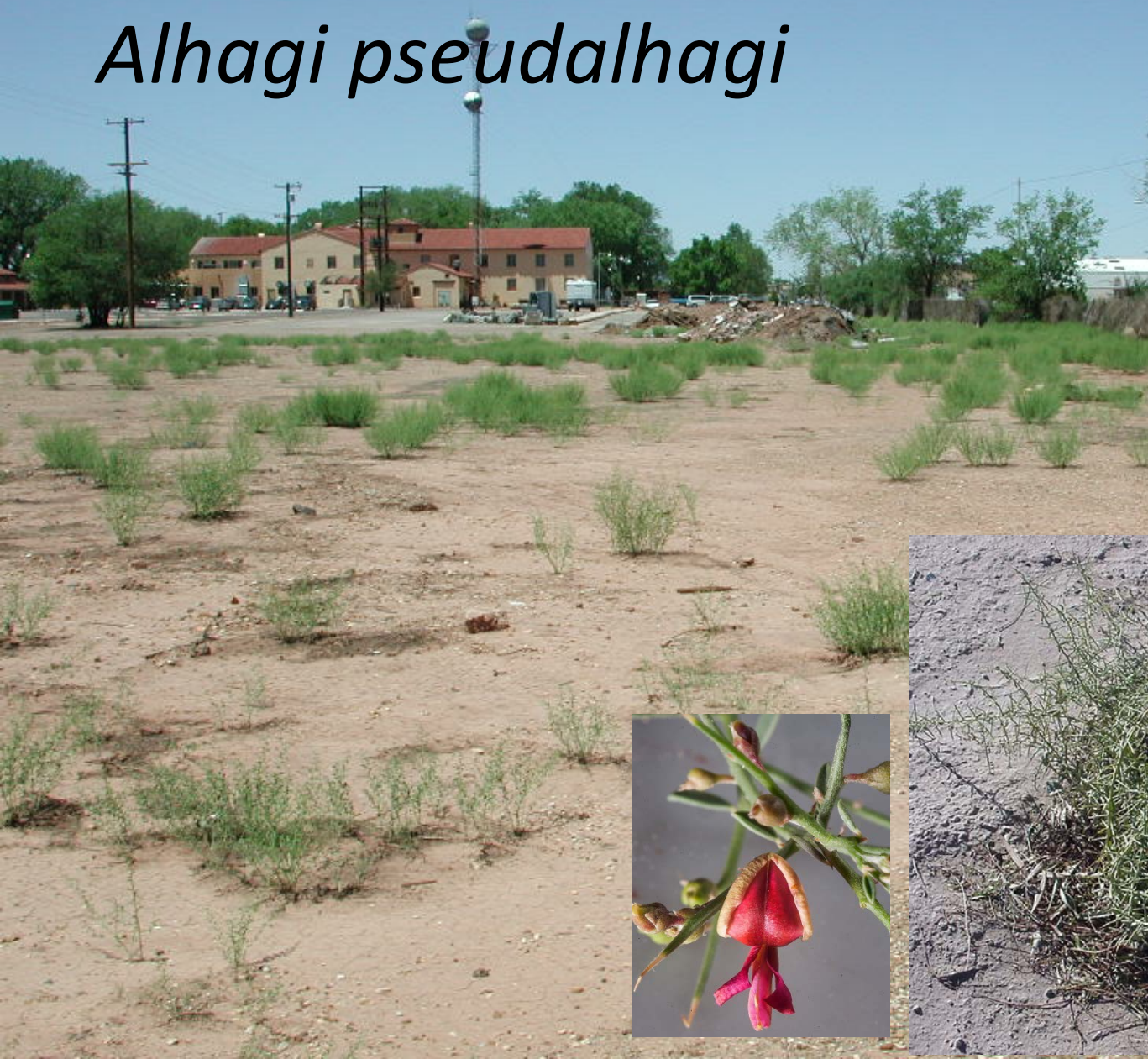
Downy brome



Downy brome

Camelthorn

Alhagi pseudalhagi



Additional Invasive Woody Plants in Arizona and New Mexico

- Tree of Heaven (*Ailanthus altissima*)
- Russian Olive (*Elaeagnus angustifolia*)
- Salt Cedar (*Tamarix ramosissima*)
- Siberian Elm (*Ulmus pumila*)



What You Can Do

- Learn to recognize noxious weeds so you can help control/contain them
- Collect a sample safely for identification and provide explicit directions (GPS if possible) so it can be located and potentially treated
- Kill Weeds When You Find Them!!!