

Principles of Weed Management in Reclamation

Beth Fowers and Brian Mealor
University of Wyoming





Why worry about weeds?

- Reduce
- Livestoc
- Change
 - Hydrolo
- Impede
- Outcomp
species



ability

native

Comm



UGA5164039

or p
quic



Species characteristics inform management



Weeds can be 'plastic' and difficult to control



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Photo by Joe DiTomaso*

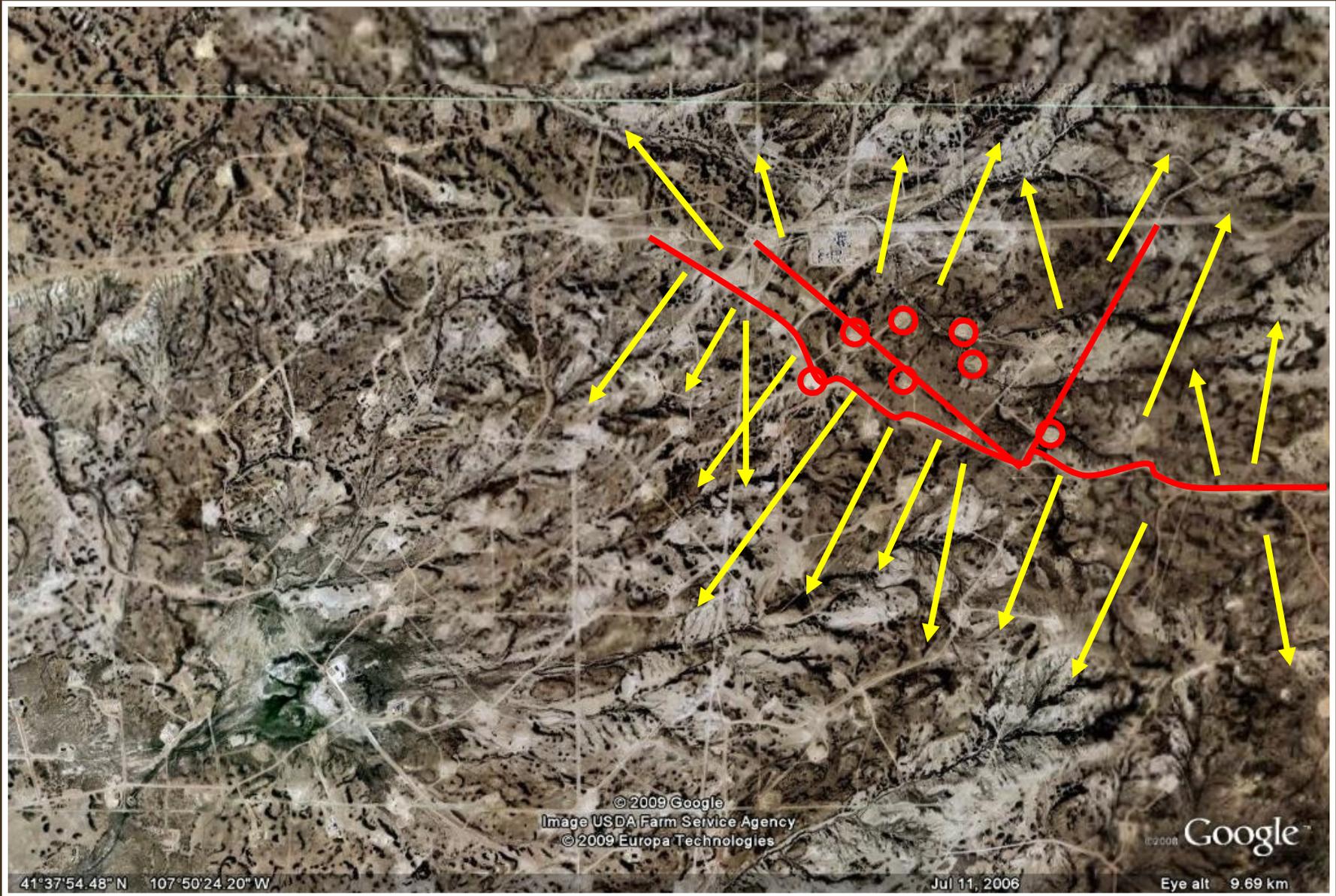


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Take a landscape perspective



Take a landscape perspective



An ounce of prevention...

- Eliminate transport of seeds on equipment, vehicles, etc.
- If using a mulch, use only certified weed-free materials
- Cultural control (establishing healthy desirable species) is crucial

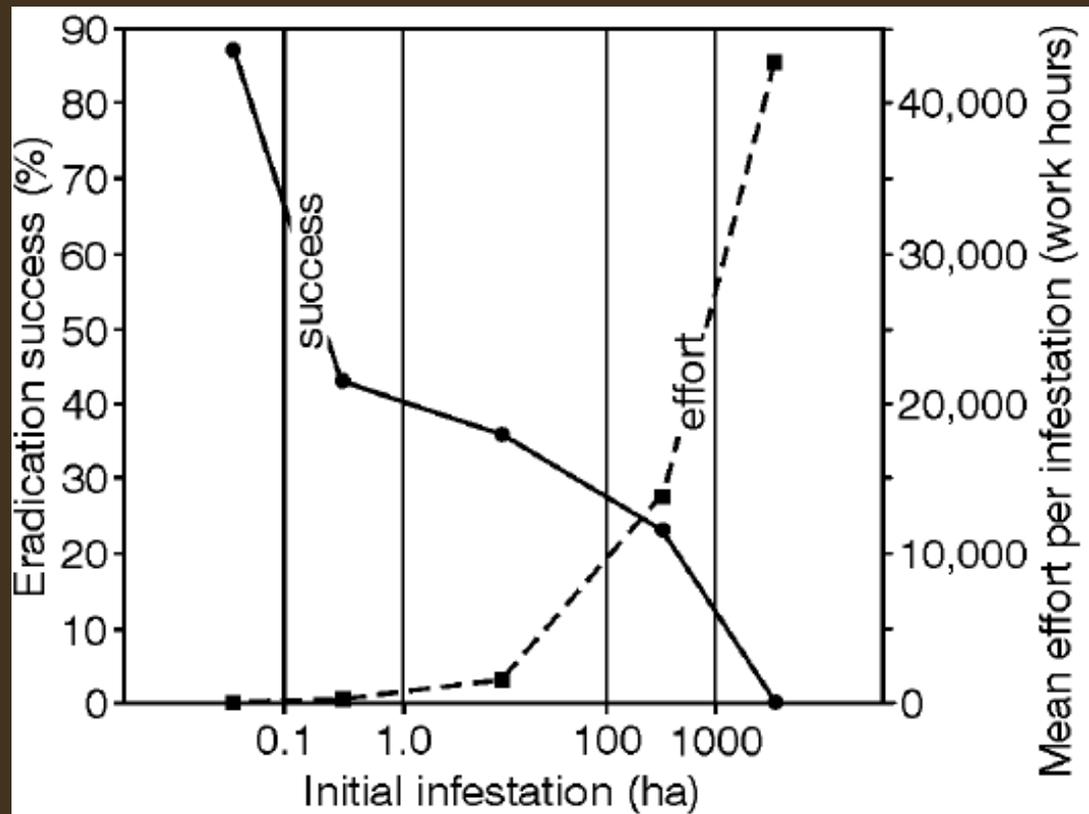


Fig. 1 The dependence of the eradication success (%) and the mean eradication effort per infestation (work hours) on the initial size of infestations. Based on the data for eradication projects of 18 noxious weed species and 53 independent infestations in California (see Table 1).

Ensure weed management practices are compatible with desirable species establishment needs



DuPont™ TELAR® XP Replant Interval

<u>Species</u>	<u>Rate oz/acre</u>	<u>(Months)</u>
Alkali sacaton	1/2	1
<i>Sporobolus airoides</i>	1	3
	2	>3
Bluestern, Big	1/2	3
<i>Andropogon gerardii</i>		
Brome, Mountain	1/2	1
<i>Bromus marginatus</i>	1	2
	2	>3
Gramma, Blue	1/2	1
<i>Bouteloua gracilis</i>	1	2
	2	>3
Gramma, Sideoats	1-2	>3
<i>Bouteloua curtipendula</i>		
Switchgrass	1-2	>3
<i>Panicum virgatum</i>		
Wheatgrass, Bluebunch	1 1/3	1
<i>Agropyron spicatum</i>		
Wheatgrass, Crested	2/3	1
<i>Agropyron cristatum</i>	1 1/3	1
Wheatgrass, Intermediate	1 1/3	1
<i>Agropyron intermedium</i>		
Wheatgrass, Slender	1 1/3	1
<i>Elymus trachycaulum</i>		
Wheatgrass, Siberian	1 1/3	1
<i>Agropyron fragile</i>		
Wheatgrass, Streambank	1 1/3	1
<i>Agropyron riparium</i>		
Wheatgrass, Thickspike	1/2-2	1
<i>Agropyron dasystachyum</i>		
Wheatgrass, Western	1/2	1
<i>Agropyron smithii</i>	1	2
	2	4

The recommended minimum intervals are for applications made in the spring to early summer. Because TELAR® XP

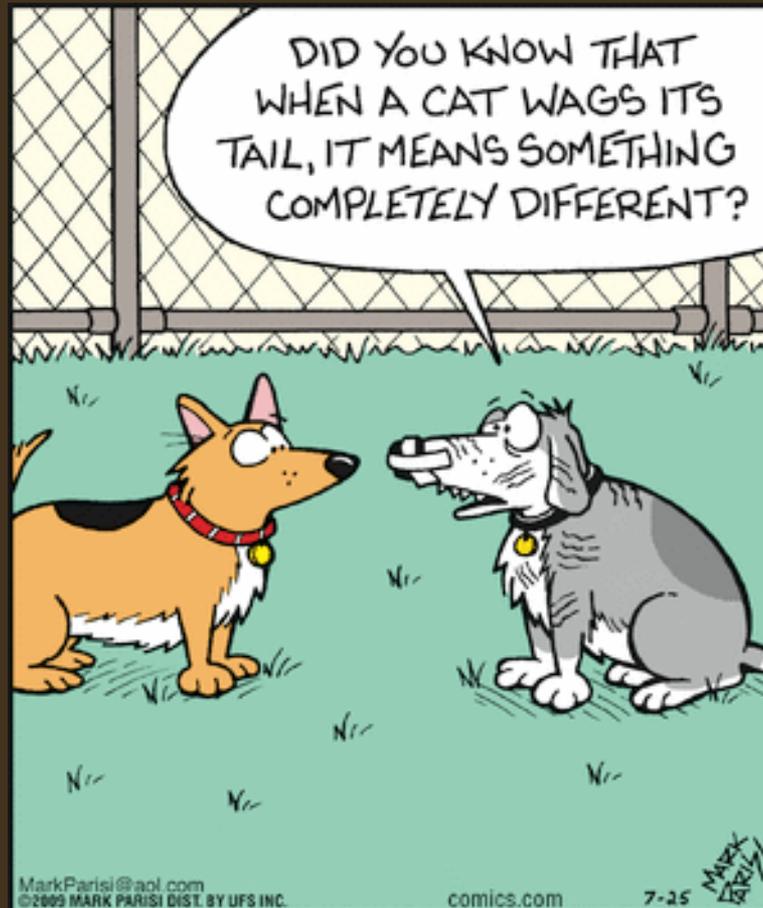
Telar® XP Replant Interval

Directly from Label

Precautions - herbicides

- Consider re-plant interval if using herbicide prior to seeding (start re-plant clock in spring if sprayed in fall)
 - Or use a bio-assay
- If newly emerged seedlings are present, consider waiting until they mature
- Especially important for forb and shrub seedlings when spraying broadleaf weeds
 - Consider a step-wise approach to reclamation (grasses then interseed with forbs, shrubs)

Good communication is crucial

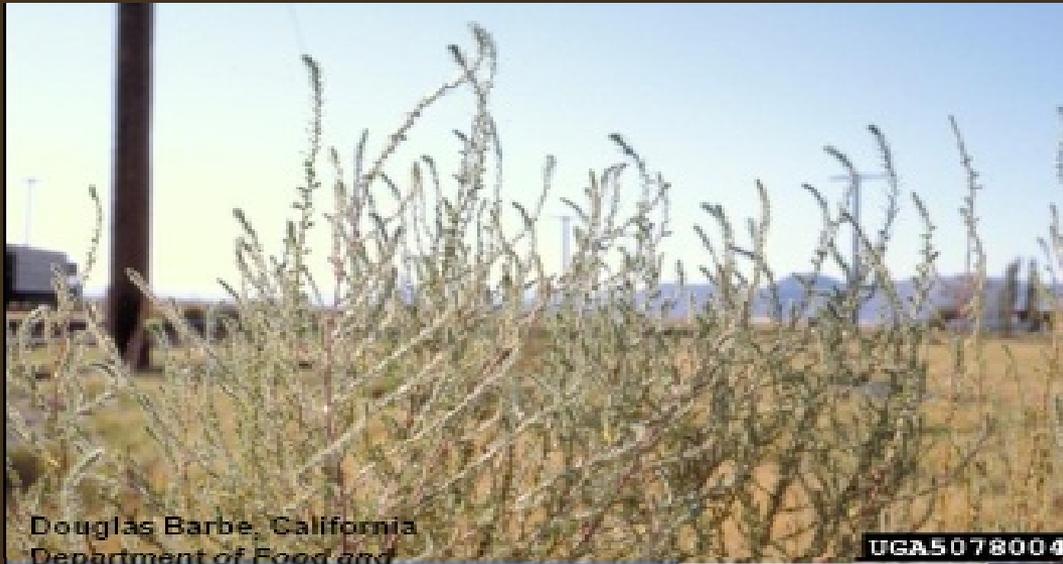


Russian thistle (*Salsola iberica*)



Clint Shock Oregon State University

Kochia (*Kochia scoparia*)



Douglas Barbe, California
Department of Food and
Agriculture,
www.forestryimages.org

UGA5078004



California
Department of Food
and Agriculture
Archives,
www.forestryimages.org

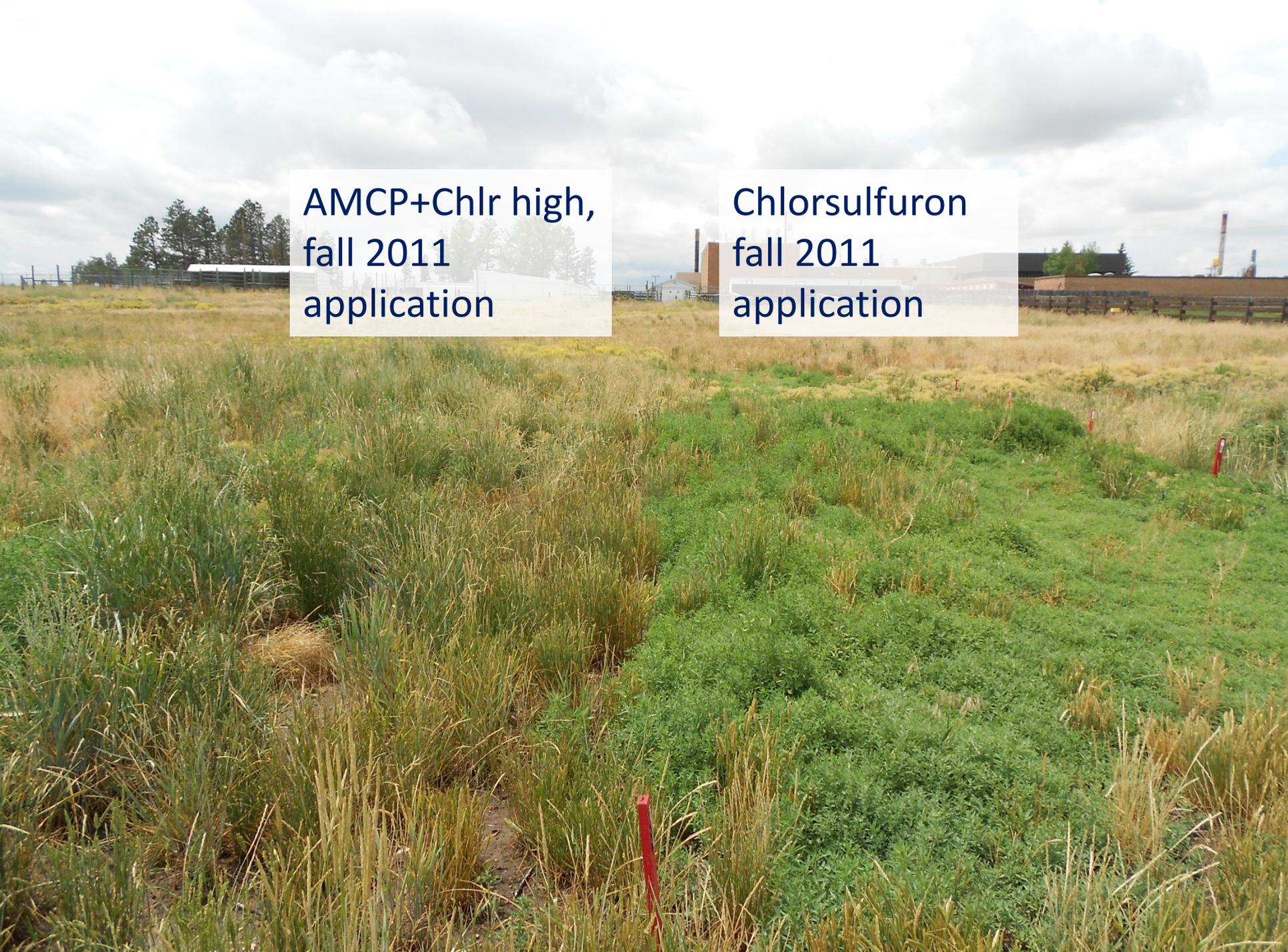
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Kochia and Russian thistle

- Chemical control
 - Many different herbicides (dicamba; 2,4-D; glyphosate) are effective; resistance can be a problem
 - May not be necessary if weed density is low



AMCP+Chlr high,
fall 2011
application

Chlorsulfuron
fall 2011
application

- Annual
- Prolific seed producer
- Highly toxic

Halogeton

(Halogeton glomeratus)



Matt Lavin photo

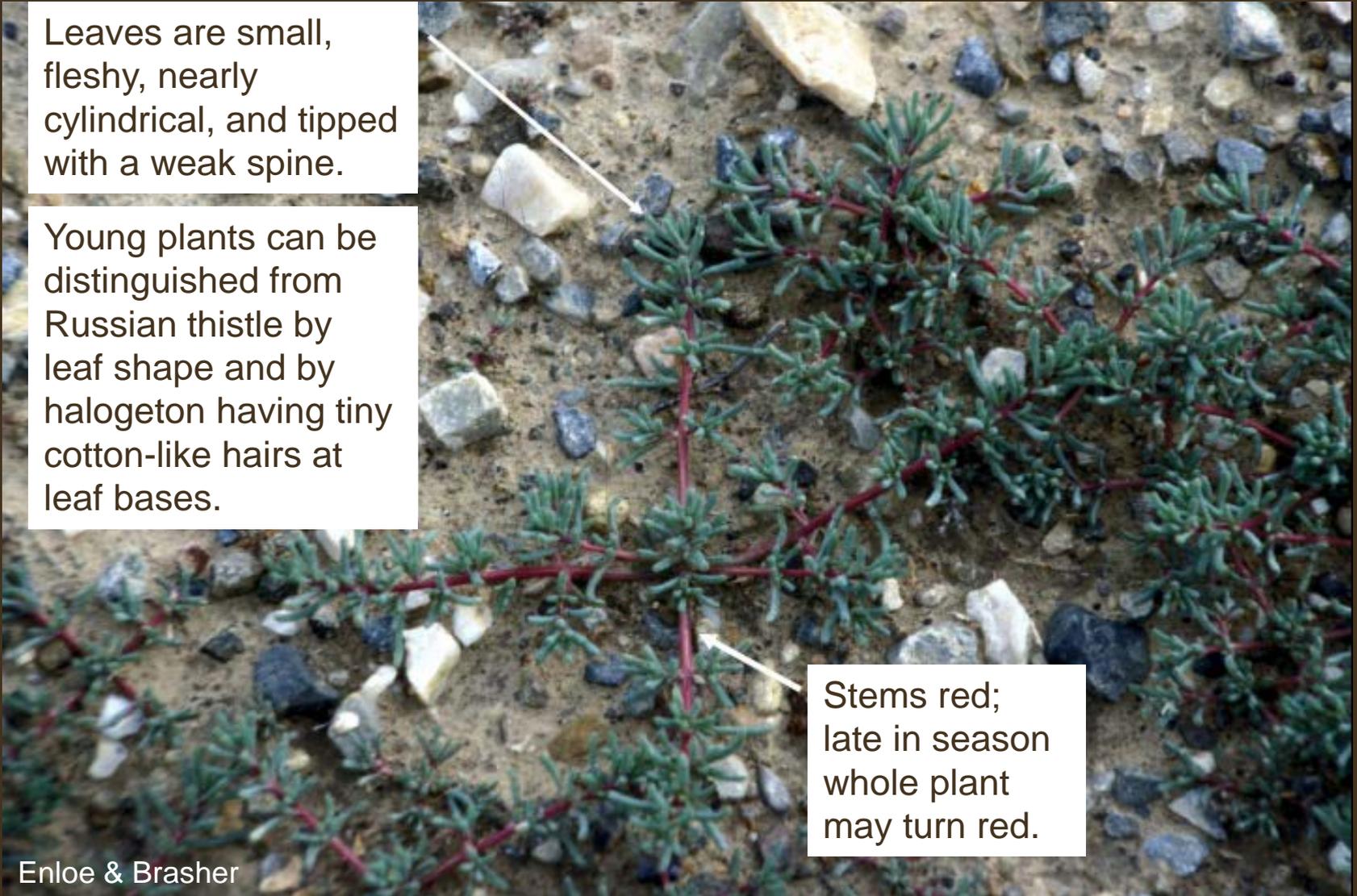


Halogeton

Leaves are small, fleshy, nearly cylindrical, and tipped with a weak spine.

Young plants can be distinguished from Russian thistle by leaf shape and by halogeton having tiny cotton-like hairs at leaf bases.

Stems red; late in season whole plant may turn red.

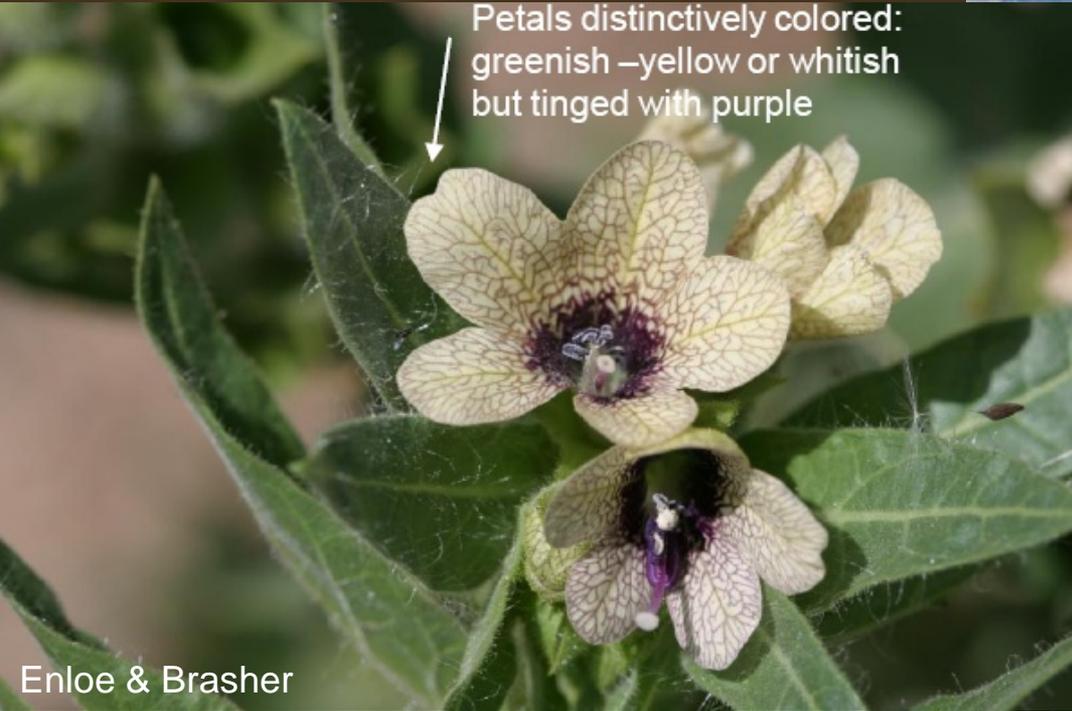


Halogeton

- Chemical control
 - Escort: 0.5-1.0 oz product / A
 - Early post-emergence for best control
 - Telar XP: 0.5-1.0 oz product/A
 - Early post-emergence for best control
 - 2,4-D Ester: 2 qt product / A
 - Apply to actively growing plants up to early bud stage, use COC for consistent control
 - Plateau: 4-12 oz product / A
 - Use pre-emergence at lower rates, increase to 6 or more ounces postemergence (+ surfactant)

Black henbane (*Hyoscyamus niger*)

Petals distinctively colored:
greenish–yellow or whitish
but tinged with purple



Enloe & Brasher



Black henbane



- Large rosettes have serrated leaves covered with fine hair.
- Pungent odor
- Has 2 rows of pineapple-shaped fruit with hundreds of tiny black seeds



Black henbane

- Chemical Control
 - Escort + 2,4-D: 0.5-1.0 oz + 1-2 qt product / A
 - Actively growing plants from rosette to bloom, larger plants may require the higher rate
 - Tordon: 1-2 pt product / A
 - Apply to plants from rosette to bolting stage, may tank mix with 2,4-D (1 qt / A)

Swainsonpea (*Sphaerophysa salsula*)



<http://www.nwcb.wa.gov/detail.asp?weed=133>

Swainsonpea

- Chemical control
 - 2,4-D LVE
 - 2 qt product / A (4EC)
 - 2.7 qt product / A (6EC)



<http://www.nwcb.wa.gov/detail.asp?weed=133>

Cheatgrass (*Bromus tectorum*)



Cheatgrass

- Plateau (imazapic)
- Glyphosate
- Matrix (rimsulfuron)
- Journey (glyphosate + imazapic)

Wrapup

- Make a fair and realistic evaluation of current situation
- Develop a weed management strategy that will move you toward your reclamation goals
- Catch new infestations EARLY before they gain a foothold
- Continue monitoring and follow-up treatments

Questions?

