



Tools and Techniques: Principles of Integrated Pest Management

Prevention

Stop seeds at the source, stop weed propagules



- One flowering stem of Canada thistle can produce as many as 40,000 seeds, which can lie in the ground for 20 years and still germinate.

Prevention

Stop movement of weeds



Vectors = hay, soil, animals, equipment, vehicles, etc
USE WEED-FREE MATERIALS

Prevention

Don't be a vector!
Plan your work routes



Prevention

Clean vehicles, equipment,
clothing, & animals

Be sure to dispose of material properly



Prevention

Survey often for new weed growth
(early detection)



Annuals



Yellow
Starthistle



Mustard spp



Oblong spurge

Biennials



**Poison
hemlock**



Bull thistle



**Teasel with
seed heads**

**Teasel at
basal stage**

Perennials



Artichoke thistle,
Cynara cardunculus



Fennel,
Foeniculum vulgare

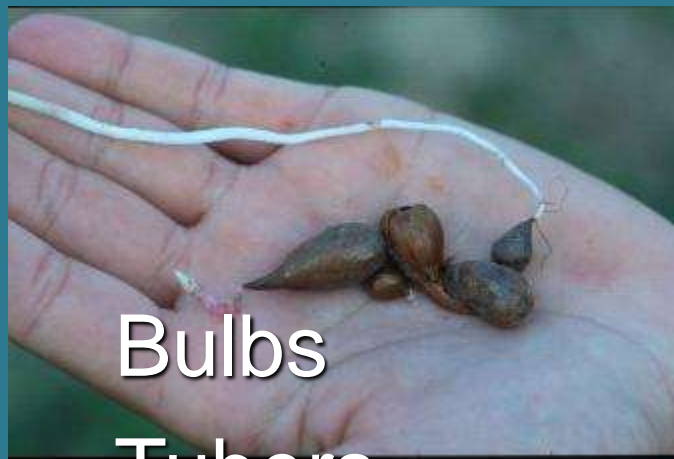


Perennial pepperweed,
Lepidium latifolium

Perennials

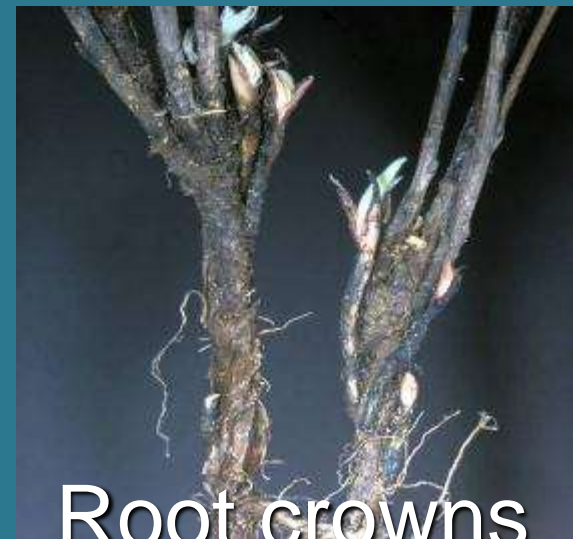
Types of vegetative reproductive structures

Rhizomes, stolons, or spreading roots



Bulbs

Tubers



Root crowns

Perennials

Timing of chemical techniques

- Spring
 - Sugars move from the roots to shoots
 - Exception: Lepidium
- Summer and Fall
 - Sugars move from shoots to roots



Monitor



Did you
meet your
Goals &
Objectives?

Be a **Steely-Eyed** Realist



- It is o.k. to let
- some areas,
- species
- or problems go

Be a **Steely-Eyed** Realist

- Focus on projects where you can make big impacts that can be sustained



Consider All Your Options

- - 1. Mechanical
 - 2. Chemical
 - 3. Cultural
 - 4. Bio-control
 - 5. All of the above
 - 6. No treatment



Prescribed fire is considered a
“cultural” control

Consider All Your Options



- Consult the web
- Ask an expert
- Experiment!

Share

- Share your successes, learning moments,
- and expert knowledge!

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