Control Techniques: An Introduction

This slideshow was adapted from that of Ryan O’Connor
thank you, Ryan!
Remember this!

Effective control:

► requires knowledge and experience
  ▪ biology of plant
  ▪ timing and technique

► many require permits and/or licenses

► site specific and environmental conditions

► shot gun approach rarely is effective long-term

► takes time
Control methods: Your arsenal

►► Manual
►► Mechanical
►► Chemical
►► Prescribed fire
►► Biological

►► All control methods seek to take advantage of the:
  ▪ biology of species
  ▪ ecology of system

►► Select best combination of treatments that:
  ▪ most efficiently controls the problem
  ▪ has least detrimental impact to site
Control: Manual/Mechanical Removal

- Handpulling
- Digging
- Cutting
- Mowing
- Brush-hogging
Control: Herbicides

Need to follow all laws and regulations, including permits and licensing

► Foliar
► Cut-stump
► Basal bark

- upland vs wetland
- selective vs not
- timing is critical
- % solution critical
- weather affects absorption rates

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Need to follow all laws and regulations, including permits and licensing.
Control: Prescribed Fire
Control: Biological

► Species-specific
► Intensive laboratory and field research required
► Can be very effective

Success story: Purple loosestrife

Garlic Mustard?

Photos courtesy Illinois Natural History Survey
Control: Replanting Natives

► Can be key to successful long-term control
► Usually need to remove invasives first
General Methods: Woody Shrubs

Mature Shrubs

► Cut-stump herbicide
  ➢ 30-60% glyphosate (RoundUp) or triclopyr (Garlon4)
  ➢ Apply herbicide within 5 minutes of cutting (if using glyphosate)
  ➢ Up to 100% success rate

Small shrubs

• Basal bark treatment
  ➢ Spray bottom 18 inches of stem (no cutting needed)
  ➢ Triclopyr (Garlon4, Pathfinder II) mixed with basal bark oil

Seedlings

• Prescribed burning
• Foliar herbicide
  ➢ 2% glyphosate or 1% triclopyr

ALWAYS READ AND FOLLOW THE LABEL
General Methods: Herbaceous Biennials

**Rosette Stage**

- Foliar herbicide
  - 2% Glyphosate (RoundUp) Oct thru March

**Flowering Stage**

- Hand pull
  - Bag plants and remove from site
General Methods: Herbaceous Perennials

- Best kill often in flowering/fruiting stage or just before plants senesce in late summer
- Do not let seeds disperse
- Minimize non-target damage
- Multiple treatments in same year may give better results
- Perennial species require a perennial commitment
Just because a plant looks dead, doesn’t mean it is.
Using control methods incorrectly or incompletely wastes time and money and can make things worse.
Control is always site specific:

- Type of species (herbaceous, woody...etc.)
- Size of infestation
- Size of plants
- Seed bank
- Site quality
- Natural features
- Topography
- Time of year
- Landowner goals
CAUTIONS/ CAVEATS:

- disturbance by treatment, may invite re-invasion or germination
- some herbicides are non-selective and can harm native plants
- once out there, it is out of control; birds and other animals, water, wind, humans will disperse it
- hybridization can occur, etc.
- control methods cannot be completely generalized; know your site and your species; experiment for best results and carefully document treatment effects
- know where your high quality natural areas are
- be sure you know the plant well before undertaking treatment