Intentional Vegetation Management for tree growth and early seral dependents
What are your objectives?

- Kill weeds or brush?
- Noxious weed control?
- Grow conifers for reforestation?
- Maximize wildlife habitat?
- All of the above?
Who else uses herbicides?

- The Nature Conservancy
  - Glyphosate and imazapyr – Japanese Knotweed

- Washington State Dept. Fish and Wildlife
  - Glyphosate and imazapyr – Spartina in Willapa Bay

- National Park Service, National Wildlife Refuges – controlling invasive weeds
Imazapyr to control Spartina in Willapa Bay, Washington
Why we do what we do: Prevent weeds, grow bigger trees

• First year weed free is most important
• Herbaceous weeds are very competitive!
• Overtopping brush damages seedlings, blocks light
Why spray?

- Weed prevention benefits last throughout the early years and beyond
  - Grow trees faster above the animal browse
  - Grow trees faster to capture the site from competing vegetation
  - Prevent brush and tree seed germination
Hand Cutting
Hazards: Cuts, noise, vibration, exhaust
Turn 400 stems into 4000?
Good timing for alder cutting
Chemical Weed control terminology

- **Foliar herbicide**
  - controls weeds/brush through leaves
  - Accord XRT II, Rodeo, Garlon 4 Ultra

- **Soil active herbicide**
  - taken up by the roots and kills germinating seeds
  - Oust XP, Velpar, Atrazine, Westar
Herbicide selectivity

- Some herbicides control mostly grasses, others control mostly broadleaf weeds and brush.
- Herbicide physical characteristics are selective: foliar uptake or soil uptake
- Herbicide molecules can be very selective! Transline (clopyralid)
Herbicide selectivity

• Placement of the molecule
  • Soil active: clings to the top 1-3 inches of soil

• Apply only to the target weed or brush
  • Foliar, basal spray, hack and squirt

• Choose a selective herbicide
  • Grass selective, broadleaf selective, or clopyralid
Spraying types

- **Broadcast**: An even spray across a large area. Can be a strip sprayed or complete coverage.

- **Spot Spray**: An individual spray such as a circle or square around a tree. An individual brush plant.

- **Basal spray**: Individual plant control by spraying the bark of brush species
Broadcast spray
Broadcast spray
Broadcast spray
Waving wand broadcast
Spot Spray
Spot spray for herbaceous weeds

• Don’t circle the tree with herbicide

• More herbicide at the center of the tree, less on the outside of the circle = damage to tree!
Meter Jet  Spot Spray
**Meter Jet**

- Solid cone nozzle makes even 5 foot diameter circle over a tree: tree safety
- Dial milliliters per trigger squeeze. (12 ml)
- Call us and we’ll calculate the amount of herbicide per gallon to mix for you!
- Accurate, safer for trees
Meter Jet results
Percent foliar spray
Percent sprays

- Not with soil active products!
- Rodeo, Accord XRT II, Garlon 3A, Garlon 4 Ultra spraying
- Try to spray “lightly to wet”
  - No need to spray to dripping point
- Easy to do, but easy to over do it!
Percent Foliar Spray
Percent sprays

• Glyphosate: Rodeo, Accord XRT II
  • Green and growing grasses, broadleaf weeds
  • Typical 1 to 2 % in water, add ¼% surfactant

• Garlon 3A for blackberries, Scotch broom
  • 2 to 3% in water + ¼% SylTac surfactant

• Garlon 4 Ultra
  • 1.5 – 2% in water + ¼% SylTac surfactant
Individual plant foliar spray
2% Imazapyr + ½% Surfactant in water
Percent spray

Imazapyr results on Bigleaf Maple
Cut Stump Treatments
Treat the specific plant

- Cut low and flat
- Treat immediately
- Garlon 3A 50:50
- Glyphosate 100%
  (Rodeo or Accord)
**Basal Spraying**

- Spray the bark of lower stems of small or resprouting brush with backpack sprayer
  - 25% Garlon 4 + 75% WEB Oil (no water)
  - Lightly spray lower 8-12 inches of stems
  - Spray all around all stems
  - Avoid treating during spring growth or freezing weather
Hack and Squirt

- Controls standing trees
  - Thinning out hardwoods in conifer stands
  - Thinning conifers, leaving them standing dead

- 50:50 Arsenal AC + Water
  - 1 hack per 4-6 inches around a stem
  - < 1ml per hack

- 100% glyphosate for conifers
Site of Action: where the magic happens

- Once translocated inside the plant, how does a herbicide control a plant?
- Growth Regulators (group 4)
- Photosynthesis inhibitors (group 5 & 6)
- ALS inhibitors (group 2)
- EPSP inhibitors (group 9)
For best brush control

2,4-D, Garlon, Milestone, Capstone
  • Spray when the food reserves are low and growth is rapid (Spring) Fall great too!

• Glyphosate, Arsenal AC, Escort XP, Polaris
  • Spray when the food is moving down to the roots
**SU Herbicides**

- Oust XP, Telar XP, Oust Extra
  - Work at extremely low doses
  - Move primarily from the roots up in herbaceous weeds

- Spray when weeds are small
- Spray when moisture will move it to root zone
Cover the entire plant, all sides
Questions, comments?

Bruce Alber, CF
Wilbur-Ellis Company

BAlber@wilburellis.com
503-227-3525