

# BASIC HERBICIDE INFORMATION AND RECOMMENDATIONS

**Herbicides** can be divided into two main categories. Non-Selective herbicides generally target all plants including grasses while Selective Broadleaf herbicides target only broadleaf plants and generally do not harm grasses. There are many Non-restricted Use herbicides available in quantities of one gallon or less, whereas Restricted Use herbicides require a pesticide applicator license for purchase. If you are interested in obtaining a pesticide applicator license contact the WSU Extension Office for information and study materials.

**Surfactants**, also known as stickers and spreaders, aid in the coverage and penetration of herbicides on the plant surface. Adding a non-ionic surfactant to the tank mix is highly recommended because it can significantly improve the efficacy of the herbicide.

**Timing** of an herbicide application can mean the difference between success and failure. Young, healthy, actively growing plants are usually most susceptible to chemical control. Mature, flowering plants have generally stopped growing and are less susceptible to herbicide uptake. A good strategy for flowering plants is to mow them to prevent seed production and then spray the active regrowth in a week or two.

**Safety** is extremely important when using herbicides. Read and follow the label recommendations for mixing and applying herbicides because the label is a legal document. Always wear proper personal protective equipment and follow pesticide application regulations.

**IPM** or Integrated Pest Management strategies combine chemical, mechanical, cultural, and when possible, biological control methods. This multi-pronged approach will yield the most effective results.

**Revegetation** with desirable plants where weeds have been removed may be required in order to discourage reinfestation of noxious weeds. Bare ground provides ideal conditions for noxious weeds whereas a thick cover will provide competition.

**Back Pack Sprayers** can be purchased at local farm supply and hardware stores for a reasonable price and will last for years if maintained properly. As a public service to private landowners the Kittitas County Noxious Weed Control Board loans out back pack sprayers free of charge on a first come, first serve basis. Call 509-962-7007 for availability.

## COMMONLY RECOMMENDED SELECTIVE BROADLEAF HERBICIDES

- **Milestone or Whetstone** - *Aminopyralid* - A Selective Broadleaf Herbicide with long residual activity.
  - Generally labeled for Pasture, Rangeland, and Non-cropland. Excellent on knapweeds, thistles, daisies, Sunflower family.
  - Can be purchased at local farm supply and chemical retailers (no applicator license required). Usually in 1qt containers.
  - Mix according to the label for specific needs (generally .07 to .16 ounces per 1000 sq ft or 4 to 7 ounces per acre) and add surfactant.
  - In backpack sprayers (calibrated at 50 gallons per acre) generally 1 Teaspoon per gallon of water and add surfactant.
- **Weedmaster** - *2,4-D amine + Dicamba* - A combination of two Selective Broadleaf Herbicides
  - Generally labeled for Pasture, Rangeland, Hay, and General Farmstead. Good on annuals and biennials, mustards, Pigweed family.
  - Can be purchased at local farm supply and chemical retailers (no applicator license required on purchases of one gallon or less).
  - Mix according to the label for specific needs (generally 1 to 2 ounces per gallon of water or 2 to 4 pints per acre) and add surfactant.
- **Escort or MSM 60DF** - *metsulfuron methyl* - A Selective Broadleaf Herbicides with moderate residual activity.
  - Generally labeled for Pasture, Rangeland, and Non-cropland. Excellent on mustards, mullein, tansy, bindweed, Borage family.
  - Can be purchased at local farm supply and chemical retailers (no applicator license required). Usually in 8oz or 16oz containers.
  - Mix according to the label for specific needs (generally ¼ teaspoon per gallon or 1 to 2 ounces per acre) and add surfactant.
- **DuraCor** - *Aminopyralid + florypyrauxifen-benzyl* - A new Selective Broadleaf with long-term residual activity.
  - Generally labeled for Pasture, Rangeland, and Non-cropland. Excellent on carrot, hemlock, plantain, thistles, knapweeds.
  - Can be purchased at local chemical retailers (no applicator license required). Usually in 1 gallon containers.
  - Mix according to the label for specific needs (generally ½ ounce per gallon of water or 16-20 ounces per acre) and add surfactant.

## COMMON NOXIOUS WEEDS OF KITTITAS COUNTY

For a complete noxious weed list and other useful information visit the Kittitas County Noxious Weed Control Board website at <http://www.co.kittitas.wa.us/noxiousweeds> or contact them at (509) 962-7007 to arrange a meeting to identify weeds on your property.

- **Knapweed**  
Rosette to bud stage is optimum, making spring or early summer the best time to treat knapweed. Many broadleaf herbicides will control knapweed, however we generally recommend Milestone or DuraCor. Treat plants before flower to be most effective. Flowering plants may require mowing to prevent seed production but regrowth will occur. Plant regrowth can be effectively treated with herbicides. Follow-up treatments may be required for missed plants, reintroductions, and germination of existing seed banks. Fall spraying with residual herbicides can also be very effective for knapweed control. Hand pulling can be effective for smaller populations of this biennial weed.
- **Kochia**  
Treat plants before maturity to be most effective as plants less than 12 inches are most vulnerable to herbicides. Herbicides effective in controlling kochia include 2,4-D, Dicamba, and Fluroxypyr. Tank mixes of more than one herbicide can provide more complete control and discourage herbicide resistance bio-types in successive generations. Up to four treatments per year may be required to control multiple, delayed seed germinations. Mowing can effectively control this annual weed if done before seed production.
- **Canada Thistle**  
Most effectively controlled if application is made in the bud to early flower stage. Some herbicides effective in controlling Canada thistle include Aminopyralid, Picloram, and Clopyralid, however we generally recommend Milestone or DuraCor. Well established stands of this perennial may have an extensive root system requiring repeated herbicide applications. Fall applications with residual herbicides can be very effective in discouraging regrowth the following year. Mowing can stop seed production but will not kill this rhizomatous perennial.