



Living On A

FEW ACRES

Herbicides for Tree Sites



Chemicals used to kill weeds are called herbicides. The decision to use herbicides may be difficult; some people choose to avoid herbicides under all circumstances, whereas others use herbicides to supplement other weed control options. The Washington Conservation District has a fact sheet, “Controlling Weeds in New Tree Plantations” that outlines several options for homeowners, including non-chemical methods.

All herbicides are federally registered by the Environmental Protection Agency (EPA). One of the steps in the registration process includes rating the product for toxicity. Pesticides are placed in one of three categories of toxicity; **Danger** (highly toxic), **Warning** (moderate toxicity), and **Caution** (low toxicity). These terms, called Signal Words, are listed in bold letters on every pesticide label.

Most herbicides in the “Danger” category, and some herbicides in the “Warning” category are also listed as “**Restricted Use**”. Only licensed applicators can purchase and apply “Restricted Use” products. Most herbicides, however, are available for purchase by homeowners without being licensed.

For information about becoming a licensed private applicator, contact the Washington County Extension Service at (651) 430-6800. The process includes a self-study course and the passing of a competency exam.



The WCD transplanter is placing trees into existing sod. The transplanter scalps off a layer of sod, allowing for easier placement of the trees. The exposed soil is then treated with a granular pre-emergent herbicide. Without the herbicide barrier, this exposed soil would be colonized by any number of weedy plants.

The WCD has successfully banded pre-emergent herbicides right during the transplanting process without injury. Some herbicide labels indicate that you should wait for the soil to settle firmly around the transplants before treating.

The sod cover between the rows in this photo will, ideally, be mowed monthly throughout the growing season. Alternately, the area may be treated with post-emergent herbicides to maintain a buffer area of several feet surrounding each plant.



What to Buy? Where to Buy?

This discussion is limited to products that are in the **Caution** toxicity category, and may be available in some of the farm supply stores in Washington County. Some of these products are not routinely stocked by dealers, so plan ahead by calling in advance. Some hardware stores may also stock these products, but the selection is usually quite limited.

Some local farm supply stores that may retail herbicides for tree plantings include:

- Hugo Feed Mill, Hugo
(651) 429-3361
- Houle's, Forest Lake
(651) 464-3326
- Houle's, Stillwater
(651) 777-7229
- Stillwater Farm Store, Stillwater
(651) 439-6143

The Washington Conservation District lists these businesses as a service to our tree clients. It does not endorse these businesses, nor does it exclude those not listed.

Some products come only in 2.5 gallon containers. If you're planting several thousand trees you might consider them, but if you're only planting 150, then you'd have enough to last a decade or more.

Active Ingredients

When selecting herbicides, it is much more important to understand the "active ingredients" than to focus on the trade name of the product. For example, Glyphosate is the active ingredient in the herbicide RoundUp, the original patented product. There are scores of product names that contain the active ingredient glyphosate. Not surprising, these "generic" products generally cost much less than the original.



The Washington Conservation District offers a tree planting service for larger projects. The transplanter can be pulled through existing sod vegetation, or it can be used in tilled sites. The transplanter is equipped with a granular applicator that places a pre-emergent herbicide in a band right over the row. This herbicide barrier significantly reduces the weed competition during the critical establishment year.

Pre-Emergent Herbicides

One of the most popular uses for herbicides in tree planting is to prevent weeds from emerging. This type of product kills weed seedlings early in the germination process; they do not control weeds that have already emerged.

Pre-emergent products are applied to bare soil after transplanting. Read the label for recommendations about how soon after planting to apply the products. Most labels state that you should wait for the soil to settle around the transplants; if the soil is loose and the herbicide contacts the tree's root system, the tree can be injured.

Most pre-emergent herbicides are sold as dry, granular products. From a personal safety perspective, the use of granular products is preferred; contact to skin and eyes is much less than herbicides that are applied as liquids.

Post-Emergent Herbicides



Post-Emergent liquid herbicides are generally applied through hand-held or backpack sprayers. Weeds need to be young and actively growing for best results.

Applicators should wear long sleeve shirts and long pants to keep herbicides off the skin. Some product labels will specify other types of personal protection equipment as well.

As the name implies, post-emergent herbicides are applied to weeds that have emerged and are actively growing. The trick is safely choosing a herbicide that can kill the weeds without damaging your trees. Post-emergent herbicides can be categorized as either Selective or Non-Selective. Selective types kill certain plants and leave others unharmed. Non-selective types kill all plants.

Because trees are broadleaved plants (even “needle” trees), there are no selective herbicides that can kill broadleaved weeds without damaging your trees. There are, however, products that can safely kill grassy weeds without injuring your trees.

Personal Protective Equipment

Wearing protective clothing when applying pesticides can reduce the risk of pesticide poisoning because it reduces the chance of exposure. Many pesticide labels instruct the user to wear personal protective equipment (PPE). PPE is clothing and devices that protect the body from contact with pesticides or pesticide residues.

The type of clothing you buy and how you wear it will determine your level of protection from pesticide exposure as well as your comfort. You will have some protection by just wearing regular work clothing. However, specialized liquid-proof, chemical resistant clothing will provide much greater protection—especially when applying liquid products. A summary of clothing guidelines includes:

- Always wear work clothing with long pants and sleeves.
- Wear un-lined, liquid-proof, chemical resistant gloves. Do not wear leather gloves.
- At the very least, in addition to the above, wear a chemical-resistant apron over cloth overalls when mixing, loading, or handling undiluted pesticides.
- Wear liquid-proof, chemical-resistant coveralls or suit with a hood or wide brimmed hat if there is any chance of becoming wet with spray.
- Wear a respirator whenever there is a risk of inhaling pesticide vapors, fumes, or dust.
- Wear eye or face shields whenever there is a risk of pesticide coming in contact with the eyes.

Pre-Emergent Herbicides for Tree Sites

Active Ingredient	Trade Name(s)	Notes
Trifluralin	Treflan, Preen, others	Granulars \$45 per 40 pound bag; Liquids \$70 per 2.5 gallon container.
Dichlobenil	Casoran, Barrier, others	Granulars \$200 per 50 pound bag
Pendimethalin	Pendulum, Corral, others	Granulars \$60 per 40 pound bag
Isoxaben	Gallery	Liquid
Simazine	Princep	Granular; withdrawn by manufacturer
Prodiamine	Barricade, Stonewall	Granulars
Oryzalin	Surflan, Weed Stopper	Granulars

Post-Emergent Herbicides for Tree Sites

Active Ingredient	Trade Name(s)	Notes
Glyphosate	RoundUp, Killzall, others	Non-selective. For spot treatment or site preparation only. Liquids. \$60 per gallon
Glufosinate	Finale	Non-selective. For spot treatment or site preparation only.
Fluazifop	Fusilade, Ornamec, Grass-B-Gon, others	Selective control of grasses only. Liquids. \$56 per gallon
Sethoxydim	Poast, Vantage, others	Selective control of grasses only. Liquids. \$80 per gallon
Pelargonic acid	Scythe, Quick	Non-selective. Kills by contact only. For spot treatment or site preparation only. Most effective on annual weeds only. Fast acting.

Mention of trade names and products does not imply endorsement by the Washington Conservation District. Always follow label directions.



Living on a Few Acres is a cooperative project of the Washington Conservation District and the University of Minnesota Extension Service.