

# Hardwood Silviculture

Technical information on hardwood silviculture for foresters

The following information and guidelines were developed to assist foresters in evaluating labels of glyphosate herbicides and providing a legal and effective recommendation to landowners. Glyphosate products marketed by firms other than Monsanto, coupled with the repackaging of Roundup, has resulted in a large number of glyphosate products on the market with products and labeling changing annually. This has resulted in confusion over labeling and forester's oftentimes recommending off-label and illegal use of a number of glyphosate products.

## Clarifying the Use of Glyphosate Herbicides

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### How to Determine What Product to Prescribe

Glyphosate is commonly used in a wide range of silvicultural operations. However, what glyphosate product can be used in what operation is based to a large degree on the landscape where the operation occurs. Currently only one brand is labeled for use in forests (regenerating or intact). However, a number of brands can be used for tree plantings in agricultural lands and in industrial non-crop areas.

The EPA views the release of herbicides in forest environments to be fundamentally different from their use in agriculture and industrial settings, where natural ecosystems have been seriously disturbed. The limited demand for forest use herbicides compared to the demand for herbicides that can be used in agriculture, industrial, and turf and ornamental areas has induced many companies to abandon the labeling requirements needed for authorizing a chemicals use in a forest environment in favor of more lucrative labeling. Fortunately, a number of agriculture and industrial chemicals can be used for site preparation treatments prior to tree planting in previously cropped areas or general noncrop areas (excluding forests). For example, Roundup Pro can be used in tree plantings in fields but not for silvicultural treatments in forests.

### Forest Use

A review of the labels of the most widely used and commonly available glyphosate products indicates that only one currently manufactured product, Accord, can be used in forest environments for site prep, release, thinning, and

improvement work including the removal of invasives from forests.

Brand Name	Manufacture	Label Type
Accord (all types)	Dow AgroSciences	Forestry

Label information: "For control of annual and perennial weeds and woody plants in noncrop areas and industrial sites, forests, habitat management areas, railroads, roadsides and similar sites." This product is basically the original Roundup product and can be used for injection, cut-stump, hack and squirt, and foliar application in forests

### Tree Planting in Agricultural Fields

A large number of brands can be used in crop fields that are fallow and in grass fields for the pre-plant removal or burn-down of grass and weeds prior to planting and for directed and spot spraying after planting. They have non-crop labeling but do not include forests as a non-crop area.

Brand Name	Manufacture	Label Type
Roundup Original (Max)	Monsanto Company	Agriculture
Roundup UltraMaxII	Monsanto Company	Agriculture

Label information: "Tree, Vine, and Shrub Crops: Preplant (Site Preparation) Broadcast Sprays, General Weed Control, Middles, Strips, Selective Equipment, directed sprays, spot treatment, perennial grass suppression, cut stump." and "Non-Food Tree Crops - This product may be used as a post-direct spray and spot treatment around established poplar, eucalyptus, Christmas trees and other non-food tree crops."

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**Roundup Pro Monsanto Company Industrial**  
Label information: "General Noncrop Areas and Industrial Sites

Use in areas such as airports, apartment complexes, Christmas tree farms, ditch banks, dry ditches, dry canals, fencerows, golf courses, industrial sites, lumberyards, manufacturing sites, office complexes, ornamental nurseries, parks, parking areas, petroleum tank farms and pumping installations, railroads, recreational areas, residential areas, roadsides, sod or turf seed farms, schools, storage areas, substations, warehouse areas, other public areas, and similar industrial and noncrop sites."

These products listed for use in tree planting in agricultural fields, as well as other similar glyphosate products, can be used prior to the planting of trees or for the removal of woody plants in general non-crop areas. However, once trees have been planted and/or the area is deemed a forest environment they can not be used, and only a forest use label (Accord) can be prescribed. In many areas, the site is considered forested as soon as trees are planted.

There are a number of other glyphosate products that can be used for silvicultural operations in agriculture or non-crop areas outside of forests. For a list of glyphosate herbicides, go to [www.cdms.net](http://www.cdms.net).



## Home and Garden Products

A number of glyphosate products are packaged in small containers that are available locally at discount retailers, hardware, and lawn/garden stores for use home and garden use. Some of the common brands (with the % glyphosate) include: Roundup Brush Killer (27%), Roundup Concentrate (18% + 0.73% Diquat), Roundup Weed and Grass Killer (<2 %). However, these are specifically marketed for home and garden use and should not be used in forested environments.

*Note: The brand names listed are the ones more commonly available in Kentucky and do not constitute endorsement. A wide range of effective glyphosate products are available that have similar uses and properties as the ones listed.*

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