

KENTUCKY CHRISTMAS TREE PRODUCTION WORKBOOK

FOR-18



SITE PREPARATION

Bonnie L. Appleton and Deborah B. Hill

Site preparation, whether for first time planting of Christmas trees or for replanting after harvesting, should be done well before the actual planting time. The extent to which the site must be prepared depends on many factors including existing vegetation, site topography, available equipment and labor, cost, time of year and how the site will be maintained.

The many reasons for preparing a site include:

- to remove or reduce competition from existing vegetation, thus increasing seedling survival and tree quality,
- to facilitate laying out the planting design,
- to make planting and general maintenance easier,
- to increase access for labor, equipment and, ultimately, customers,
- to reduce disease and insect problems.

Rarely is non-intensive or zero site preparation appropriate. Intensive site preparation is especially indicated where fescue is the existing ground cover on the proposed plantation site. Generally one or more of the following will be necessary to ready a site for planting: clearing, cultivating, mowing, and/or chemical application.

Clearing

Where brush, trees, rocks, fencing or other major obstacles exist, these items should be cleared off prior to planting. Brush and trees can be cut and chemically treated to inhibit resprouting, or they can be pulled or pushed aside with equipment.

Bulldozers, front-end loaders and trackers can be used for clearing but care must be used to reduce soil compaction and to avoid stripping off topsoil. In many cases this work must be contracted out, so cost will be an important consideration. Occasionally animals (sheep, goats) and burning are also used for clearing.



Preparing new land

Cultivation

Cultivation may be necessary after a site is cleared, or may be adequate alone where heavy vegetation does not exist. An entire area may be plowed and disked, and a new cover sown, or individual planting strips may be prepared. If an area is sloped, contour plowing will be necessary.

Soil should not be worked when it is wet, so depending on planting time (fall vs. spring), cultivating should be done from at least one month to several months in advance. Air pockets in the soil must be allowed to settle so that roots will not dry out.

Cultivation is more important with heavy clay soils than with sandy or loamy soils to make planting easier, to increase root penetration and to keep slits from opening up in the ground when the soil is dry. Clay soils may also benefit from subsoiling (6-12 in. deep) to break up a deeper barrier which can inhibit water percolation. When you cultivate, you can also incorporate fertilizers if a soil test indicates that you need them.



Newly-planted land

Mowing

If an old field is the planting site, mowing may be all that is necessary, either the fall before spring planting or immediately before planting. While mowing is the least *expensive* method of site preparation, it may be the least *effective* if more extensive preparation is needed.

Applying Chemicals

An increasingly popular method of site preparation involves applying chemicals, alone or combined with mowing. A contact herbicide such as Roundup* can be sprayed in spots or bands for hand planting, or in bands or strips for machine planting. For spring

planting it is often preferable to apply the herbicide the previous fall.

Spot spraying can also serve to mark where individual trees should be planted. Broadcasting a herbicide for total vegetation kill is not recommended unless a new cover will be planted. Be sure to read all herbicide labels thoroughly and follow all instructions carefully.

Replanting

Where a site is being prepared for replanting, the extent of preparation will depend on whether the area has been partially and irregularly harvested (not full rows) or clear cut. Clear cutting makes site preparation easier but may mean some trees must be cut prematurely for the full tree market. See FOR-29 for marketing ideas for smaller trees.

Many growers leave old stumps as opposed to pulling them. Where old stumps are left, they should be treated with an insecticide (such as lindane*) so that the Pales weevil insect, which infests old stumps, will not feed on new seedlings. Waiting 9 months to a year before replanting near old stumps can also help reduce pest problems for new seedlings. Many growers leave cut fields for at least a year before replanting. Each rotation will deplete the fertility of the soil to some degree. Retest the soil before replanting to see if fertilization or a particular soil amendment is needed.

* Reference to a herbicide or insecticide, either by trade or common name in no way represents a recommendation or endorsement of that chemical.