

2D  
5055  
A761  
m123  
mT-86  
c.2

V P I LIBRARY

AUG 8 1969

CONTROL OF UNWANTED HARDWOOD GROWTH

BLACKSBURG, VA.

The purpose of eliminating brush and unwanted trees from forest stands is to remove competition from desirable young trees and to provide more space and light for young trees or seedlings to grow. This may be done by anyone of the several following methods.

FELLING UNWANTED TREES OR BRUSH:

Method: Trees or brush cut off close to ground with whatever tool is available.

Advantages: Quickest and cheapest in small trees. May be more expensive with large trees.

Disadvantages: 1. Sprouting is almost sure to follow, except in old trees, with the result that there may be more competition than ever.  
2. Reproduction is apt to be damaged or covered up by the limbs of the fallen trees.  
3. Fire hazard will be greater with felled trees.

GIRDLING:

Methods:

1. Cutting a band two to six inches wide around the tree with axe. Axe cut should be deep enough to take out from 1/2 to 1 inch of sapwood. Special care must be taken to see that a clean cut is made; otherwise cut will bridge over and tree may not die.
2. Mechanical girdling with one of several powered router type tools or power saws which make a clean but narrower cut around the tree.

Advantages:

1. For method (1) no capital investment needed other than cost of axe.
2. Older trees will not sprout; or if they do, sprouting will not be vigorous.
3. Work may be done at anytime.
4. Faster than felling for trees over 4 inches DBH (diameter 4½ feet above ground). Young growth not damaged by felled trees.
5. Excellent when gradual release of planting or natural reproduction from old growth is desired.

Disadvantages:

1. Care must be exercised to assure a clean cut all around tree trunk. This should be stressed when hired help is used and where butt scarred trees are prevalent.

2. Some trees may not die for 3-5 years. Beech, blackgum, maple, and sweetgum are particularly hard to kill.
3. On young, vigorous growth sprouting is almost certain to follow.
4. A tree girdled with a power saw may heal over unless the work is carefully done. In trees hard to kill a double cut around the trunk, spaced an inch or so apart, is recommended.

POISONING STEMS WITH AMMATE SALTS:

Methods:

1. For use on trees 5 inches and over diameter breast high (4½ feet above ground).
2. Cut notches around the base of the tree to hold one to two tablespoons of Ammate. Leave three inches of space between notches.
3. For trees hard to kill use two tablespoonsful of Ammate salts in each notch. For others use one tablespoonful.

Advantages:

1. Work may be done at any time of year but quicker kill is accomplished if done after leaves have reached full growth.
2. If good techniques are used, sprouting is almost entirely eliminated.
3. The danger of the axe cut healing over and keeping the tree alive is eliminated.
4. Enough salts to treat a large number of trees can be carried easily.

Disadvantages:

1. Care must be used in handling Ammate. It is corrosive to metals and irritating to the skin.
2. Cost is greater than girdling, from one-half to one cent per inch of tree diameter plus labor costs. Ammate salts are easily obtained.

CHEMICAL CONTROL WITH 2,4,5-T (4 POUND ACID EQUIVALENT):

Methods:

1. Trees 1-4 inches DBH - Lower 12-15 inches of the tree trunk is saturated with the recommended mixture. Stem should be saturated to point where some of the mixture flows down over root collar. The root crown and collar is the area in which resprouting usually occurs.
2. Trees over 4 inches DBH - A frill (single hack girdle around the tree trunk without removal of chips) is made in the base of the tree, preferably as close to the ground as possible. Hacks should overlap. Fill frill with the approved mixture, making sure entire frilled area is wet with mixture. Application can be made with spray or pouring equipment.

Advantages:

1. Work can be done at any time of year, but late spring treatment will give best results.
2. Killing rate 90% or more if properly done.
3. Sprouting is very limited on most species.
4. Chemical is easily obtained.
5. Girdle may also be made with powered router type equipment or power saw.

Disadvantages:

1. More expensive than girdling. Cost of solution is roughly one cent for each eight inches of DBH. Basal spray treating of small stems is more expensive.
2. Special care must be exercised in the handling and use of 2,4,5-T around broad-leaved plants which are not to be eliminated.

POISONING OF STUMPS TO ELIMINATE SPROUTING:

Methods:

1. Ammate at the rate of one tablespoonful on edge of tree stump for each two inches of stump diameter or 2,4,5-T mixture sprayed on the tops and sides of freshly cut stumps.
2. A solution of Ammate at the rate of four pounds of Ammate per gallon of water may be swabbed or brushed on the sapwood portion of the stump.

NOTE:

1. Follow the directions of the manufacturer in mixing 2,4,5-T. Insist on the four pound 2,4,5-T acid equivalent solution.
2. There are many other preparations and methods which can be used to eliminate trees. The ones described should be successful if directions are followed carefully.

Cooperative Extension Service, V.P.I., Blacksburg, Virginia  
An Education Service of the Virginia Polytechnic Institute in  
Cooperative with the United States Department of Agriculture and  
County Governments.

MT-36

CJH/gew

February 7, 1967