

though, these leaves will never develop but will wither and die. This phenomenon is often termed "flagging." It in no way approaches the unsightliness associated with "brown-out."

It should be noted that dormant basal sprays should *not* be expected to give a complete kill when the predominate brush species are the root-suckering types, such as black locust, sumac, sassafras, aspen, and persimmon. Dormant basal sprays give almost 100% top kill of these species and control root-collar sprouting, but do not prevent root suckering. Root suckering is best controlled with 6 lbs. aehg of amine D & T in water applied as a ground stem-foliage application during the growing season or by 6 lbs. per acre of D & T ester applied as a thickened material from helicopters.

The above-mentioned application methods should be used only on woody material with a diameter no greater than 5-6 inches. They are most effective when used on woody plants with stems in the 3-4 inch diameter range. Bark thickness may be a limiting factor in these applications. The greater the bark thickness the more difficulty will be encountered in getting adequate amounts of chemical into the live internal tissues to be killed. These treatments are geared for large-scale overall applications and not the more individual basal bark treatment which employs a more concentrated spray mixture. The coverage with all the above methods should also be such that the spray mixture completely encircles the circumference of the stems with special emphasis on hitting the root collar. On plants with smooth bark and only 1-2 inches in diameter, the "creep" of the oil often will accomplish this with normal coverage. However, on broader, rough-barked species, a special effort should be made to hit as many sides of the stem as possible, since the natural creeping tendency of the oil will be impeded. This may be accomplished by handling the spray gun in a sweeping motion and spraying any given stem

area (1) as one approaches the stem area, (2) when directly abreast of the stem area, and (3) as one passes it. Where more than one gun is mounted on a stand, the guns should be aimed at different heights and different angles. On mounted truck rigs, the rate of speed should be maintained at about five miles per hour.

#### **Time of Application**

There appears to be no best time of application during the dormant season. The first and last dates are fairly well defined, however. The first dormant season application should be made in the fall after the leaves have dropped. Once growth has stopped, material sprayed on the leaves will only be lost upon leaf drop. The last application should be made no later than two weeks prior to the initiation of bud growth in the spring. The reason is not clear, but treatments made just prior to or just following bud opening are relatively less effective and should be avoided.

Applications should not be made immediately following heavy rain. Bark absorption and penetration are greater when this oily material is applied to dry stems. It is also best if dry weather prevails for several hours following application. Successful applications have been made where an inch or two of

#### **Conn. Ag Station Works On New Dutch Elm Study**

Plant pathologists at Connecticut Agricultural Experiment Station, New Haven, are experimenting with a new group of chemicals that may provide one method to combat Dutch elm disease.

Among the materials being tested are mixtures of isomers of aminotrichlorophenyl acetic acid. Dr. Lloyd Edgington and investigators in Wisconsin have determined that the compound causes changes within the tree that mechanically block the spread of the fungus. The exact nature of this blocking action is now under intensive study.

snow has covered the ground. However, spray applications over deep snow should be avoided, since coverage of the critical root-collar area would be adversely affected.

A review of the ideas presented above will show the following advantages of a dormant season application:

1. Elimination of objectionable "brown out."
2. Elimination of crop damage complaints. Annual crops are not growing at the time of application, and by early spring the 2,4,5-T is broken down by soil microbes and is inactive.
3. Extension of the operational program in brush control to 6 to 8 months.
4. Less sprouting of resistant species as compared to stem-foliage or basal treatment (due often to more complete spray coverage).
5. One-half of the volume is required as compared to stem-foliage treatment.
6. Application requires less time than basal treatment (and often less than stem-foliage treatments).
7. Lower pressure and smaller hoses are required than used with stem-foliage treatment.

Dormant season spraying has proven to be a definite addition to the useful techniques the rights-of-way maintenance man has available to him. Therefore, it would be of extreme importance to everyone who cannot possibly control brush to his complete satisfaction using a summer spray program to consider and investigate spraying woody plants while they are in a dormant condition.

**Next Month:  
Why a  
National Organization  
of Applicators?**