

# FOREST RESEARCH NOTES

NORTHEASTERN FOREST EXPERIMENT STATION

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## Use Ammate In Notches For Deadening Trees

### Only During The Growing Season

One of the commonly recommended methods for deadening weed and cull trees for timber-stand improvement is by use of ammate crystals in ax notches or cups spaced about 6 inches apart around the base of the tree.

Peevy, who pioneered in developing and publicizing the method in the South during the late 40's, stated that the treatment is effective on blackjack oak at any season. Chaiken, in his well-known paper on use of chemicals to control inferior trees, stated that the hardwoods associated with loblolly pine in the Carolinas can be killed by use of ammate in notches at any time of year. He attributed failures to inadequate dosage and recommended a heaping tablespoonful of chemical in each notch rather than the level spoonful prescribed by Peevy.

As the work in the South became known, forest managers and researchers in the North began using the method and, accepting southern experience, gave little heed at first to season of treatment. Results sometimes were good, sometimes poor. Soon evidence began to accumulate that pointed to season of treatment as an important factor. For instance, in 1950 on the Pocono Experimental Forest in northeastern Pennsylvania, in stands composed mostly of beech, red maple, and yellow birch, cull trees on one compartment were treated in August, and on another compartment in October. The kill of the August-treated trees was generally good; among those treated in October practically no kill resulted except a few trees that were already weakened by suppression.

In New Jersey and the Eastern Shore of Maryland, observations on several jobs indicate summer treatment to be much more effective than winter treatment on red maple. On oaks and black gum, effects of season were less pronounced, but a tendency toward better kills after summer treatment was apparent.

On the Beltsville Experimental Forest, a mid-November treatment of various oaks, gums, and red maple largely failed except on the smaller suppressed trees. No summer treatment for comparison is available in this instance.

The above observations, though strongly suggestive, were not based on controlled experiments. For additional

evidence, a planned test was started with beech and red maple on the Pocono Experimental Forest in 1952. Twelve trees of each species were treated in July, a similar set was treated in September, and a third set in November. Tree sizes ranged from 4 to 18 inches d.b.h. with the majority--about 85 percent--falling in the range of 4 to 10 inches. Each seasonal set of trees contained approximately the same distribution of tree sizes. All treating was done by the same man, with attention to good notching; and a heaping tablespoonful of ammate was used in each notch.

Table 1.--Trees dead or severely injured (75 percent or more of crown killed) two growing seasons after treatment

Month treated (1952)	Beech		Red maple	
	Number	Percent	Number	Percent
July	12	100	11	92
September	12	100	12	100
November	8	67	2	17

After two growing seasons, in August 1954, results were as shown in table 1. No sprouting was observed on any of these trees. It is possible, however, that some sprouts started but were eaten off by deer.

The kill figures from the experiment bear out the earlier observations that, in the North, the ammate notch treatment definitely is more effective when done during the growing season than during the dormant season. Though the seasonal effect seems to be particularly pronounced for red maple, operators probably would be well advised to restrict treatment of all species to the growing season.

#### Literature References

- (1) Chaiken, L. E.  
1951. The use of chemicals to control inferior trees in the management of loblolly pine. Southeast. Forest Expt. Sta., Sta. Paper 10. 34 pp., illus.
- (2) Peevy, Fred A., and Campbell, Robert S.  
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--W. E. McQUILKIN

Northeastern Forest Experiment Station  
Forest Service, U.S. Dept. Agriculture