

# Southern Forestry Notes



FOREST SERVICE, U. S. DEPARTMENT OF AGRICULTURE

*Southern Forest Experiment Station, New Orleans, La.*

~~Produced by [unclear] & [unclear]~~

No. 119

January 1959

## FRILLS MUST BE COMPLETE

When cull hardwoods are being deadened, frills or girdles must be complete. Even though a chemical is poured into the cut, the tree may survive if any of the cambium has been left unsevered.

At the Bluff Experimental Forest, near Vicksburg, Mississippi, American beech trees were encircled with cuts made with a 1-1/2-inch wood chisel. The trees, which were 17 inches or more in diameter, each received 6 chisel cuts at equal distances apart. Bark between the cuts was left intact. One cut on each tree was given no chemical. The other 5 each were dosed with 1 cc of propylene glycol butyl ether ester of 2, 4, 5-T acid at a concentration of 7.84 pounds of acid per hundred gallons of mixture. The diluents were either water, No. 1 diesel fuel, or one of three trade-marked herbicidal oils. Ten trees were treated in August, 10 in December, and 10 in April.

One year after treatment, the cambium was dead for 0.165 inch on each side of chisel cuts made in April and dosed with 2, 4, 5-T in diesel oil. All other treatments showed less lateral kill of cambium. Though the differences between treatments were statistically significant, even the best side kill was too small to be of practical importance. This study therefore reinforces what many practicing foresters have observed: 2, 4, 5-T is no substitute for sloppy ax work. — R. L. Johnson.

## REPELLENTS REDUCE CATTLE BROWSING ON PINES

Two recent tests in central Louisiana, planned in cooperation with the U.S. Fish and Wildlife Service, have shown that several chemicals are effective in reducing cattle browsing of planted slash pines. The most promising are ZAC, a zinc compound; TMTD, a thiram compound; ZIP, a commercial rabbit and deer repellent which contains 30 percent ZAC; and a mixture of copper carbonate and asphalt emulsion.

In a 1957 test, slash pine seedlings were hand-sprayed in the field immediately following planting. The native bluestem forage was heavily grazed by cattle from late winter through the summer. Sixty-four percent of the untreated seedlings were severely damaged or killed by mid-June. Losses of seedlings treated with copper carbonate, ZAC, or TMTD were only half as great.

In 1958, seedlings were treated with the same repellents plus ZIP. Moreover, three methods of application were tested--spraying in the nursery before lifting, bundle dipping just prior to planting, and spraying individual seedlings in the field after planting. Seedlings sprayed with copper carbonate and asphalt emulsion in the nursery and baled for shipping were seriously injured by the chemical. Apparently, close confinement of treated seedlings in the bale several days caused the damage. The other 11 combinations of application methods and chemicals substantially reduced grazing damage. By June, no more than 16 percent of the treated seedlings were damaged, as compared to 30 percent on untreated plots.

The mixture of copper carbonate and asphalt emulsion is relatively cheap and easy to prepare. Seedlings should be treated by dipping tops of bundles shortly before planting. Repellent materials will cost about \$0.20 per 1,000 seedlings.