SEEDING AND WEEDING [1/]

BEAUREGARD NURSERY EXPERIMENTAL WEED CONTROL (1968)

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The herbicide experimental work this year at Beauregard Nursery consisted chiefly of three things. These were practices, or new chemicals, that have been tried and tested and may be interesting to other nurserymen.

First, we used a new fumigant applicator. The machine is constructed like a Scovall blade and is 6 feet wide. A spray boom is welded on the underneath side and has regular outlets with orfices of 8001 size. A John Bean spray rig is used for pressure and supply source. A tractor equal, or larger than, a 460 Farmall is used for power supply. The blade undercuts the soil surface at a 6-inch depth and sprays the chemical into the soil as it passes over the blade.

This applicator was built for use in applying the herbicide Eptam. We use 2 gallons (12 pounds technical) per acre in 60 gallons of water. This is a heavy rate for our light sandy soil, but it gave us the best results. We apply Eptam ahead of the cover crop and have found that it keeps the field free of nutgrass for the next crop year. Then the seedling crop following the cover crop is almost entirely free of nutgrass during the growing season.

Secondly, we have been testing a new chemical for grass and weed control, primarily for nutgrass control in seedling beds. This chemical called Toluene is a petroleum derivative and is purchased from Hess Oil and Chemical Corporation, Galena Park, Texas, at a cost of $0.39 per gallon. It is mixed with mineral spirits and applied as a post-emergent. The material has been tested at several different rates and the best rate we found was 3 ounces of Toluene per gallon of mineral spirits. This is applied every 10 days at the rate of 75 gallons per acre. Toluene seems to have a transmitting property and is able to kill the nut as well as the cocograss plant. Anyway, less plants occur after each spraying, so this chemical shows much promise. The nutgrass control has been very good and no seedling damage has been noted.

The initial mineral spirits application on young seedlings was only 20 gallons per acre and no Toluene was used. The rate was gradually picked up over a 2-month period and the Toluene wasn't added until the rate per acre was up to 30 gallons. During this period, we

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1/ Panel presentation. Papers of panel participants are included.

sprayed twice weekly. Only after the Toluene was added did we find we could reduce the sprayings to once every 10 days.

Finally, we tested two new herbicides manufactured by Mobil Oil Company. They are also hydrocarbons derived from the petroleum industry. These chemicals are water soluble herbicidal oils. The sample numbers are emulsifiable oil XNTY 100 G and XMTY 100 J. Tests were conducted at four different rates using one part oil to one, two, three, and four parts water. The first three rates were very effective and are potent weed and grass killers. They cannot, however, be used on pine tree seedlings as a post-emergent. All of these first three rates killed the seedlings as well as the weeds and grasses. The last rate, 1:•, burned the seedlings but didn't kill them. However, it also did the same to the weeds and grasses, just burned them back and didn't kill them.

In summary, these two herbicides work fine in areas away from the seedling beds, but have no practical use as a post-emergent on young pine seedlings.