

to the roots. Tests will be necessary in each locality to set up standards.

The cost of Sodium TCA 90% is 40¢ per pound. At the rate of 120 pounds per acre the cost of treatment would be \$448.00 per acre plus cost of application. This cost is very cheap compared with hand digging.

The chemical can be applied with a power sprayer, gravity sprayer, or sprinkling can.

USE OF DOWFUME MC-2 AS INSECT AND WEED KILLING AGENT
IN A FOREST TREE NURSERY IN MAINE

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The poison gas used in this instance was Dowfume MC-2, a product of the Dow Chemical Co., Midland, Mich. No conclusive results were obtained because of insufficient data. This experiment was suggested and materials obtained through cooperation with Dr. Alton Prince, Plant Physiologist of the Maine Agricultural Experiment Station staff, who left to accept another position before the test was completed. It is to be noted that Dr. Prince very carefully screened many types of "cover" materials for this bed treatment. He selected "Scutan" NO. 1241-L, which has a 170 lb. ream weight, 57 lbs. per M sq. ft. - 84 inches width of roll. This product is manufactured by Union Bag and Paper Corporation of Hudson Falls 3, New York.

Two 4 by 12 ft. prepared seedbeds were treated in the spring of 1949 prior to seeding. These beds were adjacent to each other and a metal tray was placed in the space between them. A gasproof paper (mentioned above) was used to cover both beds and all edges were covered completely with soil to make an airtight seal. A plastic tube ran from the tray on the ground between the beds to the outside of the sealed area. The liquid gas, which is in specially designed pint size cans of one pound under pressure, was released by means of a special circular band attached to the tube, which when clamped on to the can, punctures it and discharges the liquid gas through the tube into the tray. The fumes then spread throughout the seedbeds. These gas fumes are very injurious to all animal life.

The beds were left undisturbed for 24 hours and then the gasproof paper was removed. The beds were left to aerate for 48 hours more

before seeding. After this period had elapsed, the beds were seeded to white fir (Abies concolor), by broadcast seeding.

Germination was poor in these treated beds, about 30%. No more of this seed was sown at this time. however, the following spring (1950), two untreated beds were sown beside the treated ones with seed from the same source. These beds had about 50 germination. (Preceding germination test had indicated a low viability for this species, thus no conclusion can be drawn from the above.) It is intended to continue the above experimental treatments in 1951 on species native to Maine.

Henry A. Plummer aided in the treatments.

Presence of weeds was noticeably minimized for the first six weeks after treatment. After that, weeds appeared about the same as in other seed beds. There was no sign of grubs or wireworms in these beds at any time. However, since this land has been worked each year, there are very few of these pests present.

Invitation

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