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Miscellaneous Research Report No. 2
Forestry

RECOMMENDATIONS FOR
WEED CONTROL IN FOREST PLANTATIONS
for the
1961 GROWING SEASON

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Wisconsin Conservation Department
Division of Research and Planning

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NOTE: The following suggestions are based, in part, on experimental results of tests¹ conducted by the University of Wisconsin and the Wisconsin Conservation Department², as well as on manufacturer's recommendations. Growers who wish to evaluate these weed control measures under their own local conditions do so at their own risk. Final recommendations must await further research.

NEW PLANTINGS

Treatment 1: Simazine alone (preferably on freshly scalped or prepared planting strips)

- A. Apply 3 to 6 lbs. (active ingredient) of simazine in 50 to 100 gal. of water per acre (of area actually sprayed).

Calculating: Simazine is available at most local pesticide dealers either as 50W (50% active ingredient) or as 80W (80% active ingredient) wettable powders. In calculating correct amount of material, for example, use 6 lbs. of simazine 50W to provide 3 lbs. of active ingredient. Similarly, use 5 lbs. of simazine 80W to provide 4 lbs. of active ingredient.

Mixing: In using wettable powders it is better to prepare a slurry (a liquid paste) by mixing thoroughly the measured amount of chemical in a small volume of water in a bucket or drum. Then add the mixed slurry to the spray tank during or after filling with the required amount of water. Provide gentle agitation during mixing and spraying.

Applying: Apply the simazine suspension with coarse, fan-type, spray nozzles at low pressure in 24 to 36 inch bands ahead of the planting shoe. If scalpers are used, apply after scalping. Simazine is absorbed mainly through the roots. In several experiments, simazine has caused no injury to red or jack pine through foliage contact. Hence, it does not appear necessary to avoid spraying the tree foliage. Spray with enough water to distribute the simazine uniformly on the soil.

Some difficulty can be expected with strainer or nozzle clogging when spraying suspensions of wettable powders. It may be necessary to replace the standard strainer (usually 50 mesh) with a coarser screen (20 mesh) as well as the nozzles with others having a larger orifice.

¹For experimental purposes, simazine was supplied by the Geigy Chemical Corp., Yonkers, N. Y.; dalapon by the Dow Chemical Co., Midland, Mich.; and amitrole by Amchem Products, Inc., Ambler, Pa.

²For further information see T. T. Kozlowski and J. E. Kuntz, University of Wisconsin, or H. J. Hovind or T. W. Blomquist of the Wisconsin Conservation Dept.

Do not cultivate or otherwise disturb the soil surface following treatment.

The lower rates of application generally will suffice on light sand soils whereas the higher rates will be required on heavy, organic soils. One application usually will control weeds for one season; the higher rates may show effects the second year.

Treatment 2: Simazine in combination with dalapon or amitrole (where planting strips are not scalped or otherwise prepared and where weeds are well established).

- A. Where grasses predominate, apply a mixture of 3 to 6 lbs. (active ingredient) of simazine and 6 lbs. (active ingredient) of dalapon in 50 to 100 gal. of water per acre (of area actually sprayed).

- or -

- B. Where broadleaf weeds predominate, apply a mixture of 3 to 6 lbs. (active ingredient) of simazine and 4 lbs. (active ingredient) of amitrole in 50 to 100 gal. of water per acre (of area actually sprayed).

Calculating: Simazine is calculated as above.

Dalapon is formulated as a soluble powder containing 85% active ingredient. With this formulation, for example, 7 lbs. of material provide about 6 lbs. of active ingredient.

Amitrole is commonly formulated as a 50% wettable powder. With this formulation, for example, 8 lbs. of material provides 4 lbs. of active ingredient.

All of these materials are available at local pesticide dealers.

Mixing: As above.

Applying: As above, except that both dalapon and amitrole should not touch the tree foliage. Both chemicals are absorbed mainly through the foliage and may cause severe injury to trees, especially if the trees are actively growing. Therefore, apply ahead of the planting shoe or as directed sprays--on the weeds but off the trees. Cover weed foliage thoroughly and uniformly.

Both dalapon and amitrole are most effective when weeds are young, succulent, and actively growing. Either in combination with simazine will provide an "early knock-down" which the simazine will maintain.

ESTABLISHED PLANTINGS

Treatment 1: Simazine alone.

- A. Apply 4 to 6 lbs. (active ingredient) of simazine in at least 100 gal. of water per acre (of area actually sprayed).

For directions as to mixing and applying, see Treatment 1 - A, above.

Treatment 2: Simazine in combination with dalapon or amitrole.

Apply a mixture of 4 to 6 lbs. (active ingredient) of simazine with either 6 lbs. (active ingredient) of dalapon or 4 lbs. (active ingredient) of amitrole.

For directions as to mixing and applying, see Treatment 2 - A or B, above.
KEEP SPRAY OFF TREE FOLIAGE.

PRECAUTIONS

1. Read and follow carefully directions on label.
2. Clean sprayer and put in good working condition well in advance of treatment.
3. Calibrate your sprayer accurately so that the correct amount of herbicide will be applied to a known sprayed area. One method is to spray with water a known area (convenient length X known width of sprayed strip). Use a standard pressure and speed. Then measure the volume of water used. Next, calculate this rate of application on a per acre basis (1 acre = 43,560 sq. ft.). If this trial rate is not satisfactory, changes in the rate of application can be made by changing the pressure, nozzle size, or speed. Recalibrate once more and recalculate the rate of application. Repeat this procedure until the correct rate of application is attained.
4. Wash sprayer thoroughly with clean water after each use.
5. Store herbicides in a clean, dry place away from fertilizers, feeds, seeds, and plant materials. Keep labels intact so as not to confuse with other pesticides.