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1962

Chemical Weed Control in Trees

Cooperative Extension, South Dakota State University

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Replaces F.S.-52

Chemical Weed Control in Trees

Weeds affect trees the same way they affect other crops. They rob them of moisture, plant food, and light.

Tree survival and growth is always better in plantings that are kept free of weeds.

Preventing weed growth in tree rows is especially important. Chemical weed killers which control weeds in the rows for a full growing season will eliminate hand work or special equipment.

Soils of medium or heavier texture and those with high organic matter content make application of herbicides safer for the trees. Applications on very sandy soils should be made on an experimental basis only.

WHEN, HOW TO APPLY

Trees should be at least one year old before treatment. Early spring treatment, before weeds come up, gives best results. The soil surface should be free of trash. Do not disturb the treated area after application.

Recommended rate of application must be carefully observed. Do not use the principle, "if a little's good, a lot's better." Apply the herbicide to a band 2 feet wide in the tree row. A trip down each side of the tree row spraying a 12-inch band is the best method of application. When spraying it is necessary to frequently shake the sprayer to keep the chemical from settling out. This is important.

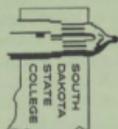
By Lyle Derscheid, agronomist; E. K. (Jim) Ferrell, forestry specialist; and Kenneth R. Frost, Jr., weed specialist Cooperative Extension Service



The experimental strip between the markers was sprayed with diuron at 10 pounds per acre in early June. Picture taken in August. The chemical has eliminated the weeds in the treated area.

Chemical Weed Control in Trees

Cooperative Extension Service



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A hand operated sprayer works well. Suitable nozzle tips are TeeJet 8002, 8003 or 8004. The nozzle screen should not be finer than 50 mesh. Maintain a pressure of 30 to 50 pounds in the sprayer.

WHAT HERBICIDE TO USE?

Diuron. This chemical is sold under the brand name "Karmex." It has been tested a number of years and has given satisfactory results at an application rate of 8 pounds active ingredient per acre treated. The percentage of active chemical on the manufacturer's label will make it possible to determine the rate of application. For example, if the chemical contains 80% active ingredient, you would apply 10 pounds per acre of the chemical as it comes from the container (80% x 10 lbs. = 8 lbs. active ingredient).

Measure or pace off 135 feet of tree row. Mix 1 ounce 4 level tablespoons) of diuron in about 1 gallon of water. Spray this mixture on a band 1-foot wide on each side of the 135 feet of tree row. You will be applying diuron at the rate of 8 pounds per acre if your chemical is 80% active ingredient.

Simazine. This chemical is sold under the trade name of Simazine 80W, a wettable powder containing 80% active ingredient. It has been tested in other states for several years, but only 2 years in South Dakota. Results have given good annual weed control in some cases and poor control in others. Use 4 pounds active ingredient per acre treated. Spray a 3-foot band over the row or 1½-foot band on each side, using 0.45 ounce (3½ level tablespoons) in enough water to spray 100 feet of row.

Amitrole and Amitrole T. Amitrole is wettable powder containing 50% active ingredient and Amitrole T is a liquid containing 2 pounds active ingredient per gallon. They are the best chemicals available

for controlling noxious weeds in trees. One treatment seldom eliminates the weeds, but there is little risk of injuring established trees.

Use 6 pounds of active ingredient of Amitrole or 4 pounds of Amitrole T per acre. Mix 3 tablespoons of Amitrole or 3½ tablespoons of Amitrole T in enough water to spray 1 square rod. Be sure to keep the spray off the leaves of trees.

Amitrole at 4 pounds per acre or Amitrole T at 2 pounds per acre mixed with simazine at 4 pounds per acre used as a band treatment makes quackgrass or brome grass control more effective.

GENERAL SUGGESTIONS FOR OLDER TREES

1. The amount of water used is not important. Use enough to get uniform distribution of the chemical. You may find that you can cut the above suggested amount of water in half.

2. When cultivating between the rows avoid throwing soil onto the treated area in the row.

3. No attempt need be made to keep the spray off the tree trunks or the leaves of cedar and pine. Leaves of other trees and shrubs can be damaged by the spray.

4. Keep the sprayer agitated.

5. **Remember**—When chemicals are not used as

recommended they may give good weed control but can also kill the trees.

NEW TRANSPLANTS AND YOUNG TREES

Very little is known about the use of chemicals for weed control in newly transplanted trees and young trees. Several chemicals appeared promising in 1960 and 1961 research plots and may be used on an experimental basis if you realize that they may not work like they did in 1960 or 1961.

Atrazine, simazine, amiben, and diuron at all rates between 2 and 8 pounds active ingredients per acre gave good annual weed control when applied shortly after trees were transplanted and before weeds came up in 1960. There did not appear to be any injury to caragana, redb cedar, Ponderosa pine, green ash, cottonwood, American elm, or apricot. However, Lilac treated with Simazine showed some injury.

The same chemicals were applied to the same species of trees 1 year after transplanting in 1961. Lilac was severely damaged, but none of the others appeared to be injured. In addition, amiben and simazine applied to honeysuckle, wild plum, boxelder, Siberian elm, Russian olive, and cotoneaster did not appear to cause any injury.