January 1971

WEED CONTROL IN APPLE & PEACH ORCHARDS

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The use of weed control chemicals in both bearing and non-bearing orchards has increased significantly in recent years, largely because of the labor saving potential. Maximum weed control depends upon selecting proper herbicide for the weed problem and applying at proper time and rate. Too much herbicide can injure trees.

All rates both of active ingredient and of product are for use on 1 acre of treated soil. The sprays are for use in 20-100 gallons of water per acre (gpa). Volumes of 20-50 gpa are adequate for most preemergence sprays, whereas 100 gpa may be needed for good coverage with foliar contact sprays.

In applying herbicide sprays, use a low pressure spray (20-40 psi) and a fan-type nozzle that distributes a flat spray pattern. The sprayer should have mechanical or by-pass agitation to keep chemicals from settling out. The sprayer should be carefully calibrated to insure the correct amount and distribution of the spray. It should be kept for use with herbicides only.

Sprayer Calibration

A. Band treating:

1. Adjust pressure 20-40 psi, forward speed, and nozzle tip size according to sprayer manufacturer's directions for rate of water discharge desired.
2. Use water in the sprayer and spray a 4' band 544.5' long, or 5' band 424.6' long, or 6' band 363 long for 0.05 acres.
3. Measure discharge by collecting water from nozzles or replacement in tank.
4. Compute rate of water applied per acre covered with spray from following table:

<table>
<thead>
<tr>
<th>Amount collected</th>
<th>Rate/Acre sprayed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 gal to 0.05 A.</td>
<td>20 gals.</td>
</tr>
<tr>
<td>2 &quot; &quot; &quot; &quot; &quot;</td>
<td>40 &quot;</td>
</tr>
<tr>
<td>3 &quot; &quot; &quot; &quot; &quot;</td>
<td>60 &quot;</td>
</tr>
<tr>
<td>4 &quot; &quot; &quot; &quot; &quot;</td>
<td>80 &quot;</td>
</tr>
<tr>
<td>5 &quot; &quot; &quot; &quot; &quot;</td>
<td>100 &quot;</td>
</tr>
</tbody>
</table>

5. Add recommended amount of herbicide to gallons of water being applied per acre. DO not change your pressure, forward speed or nozzle tips.
B. Individual tree treating:

1. Use procedure above.
2. Use water in sprayer and spray 4' band 6.8' long on each side of tree (13'7" total length). Collect discharge and measure: 1 pt or 2 cups = 100 gpa, 1/2 pt or 1 cup = 50 gpa, 1/4 pt or 1/2 cup = 25 gpa.
3. Adjust, record, and use same pressure, forward speed, and nozzle tip size when spraying with herbicide.
4. Do not apply by making a circle around the tree, heavy distribution occurs at the center (the tree) and injury may result.

Caution

1. Apply herbicides according to current label directions. Do not use any herbicide or brand unless it has specific instructions for use in fruit areas.
2. Golden delicious apples have shown minor injury from certain herbicides but there is little chance of this if applied accurately and properly.
3. Experimentally, combinations of certain herbicides listed below have resulted in better weed control. However, unless the specific combination has federal approval (label cleared), the user is responsible for any illegal chemical residue on the fruit or injury to the tree.
4. Do not graze livestock on treated areas.
5. As of date of publication, the recommendations listed are in accordance with U.S.D.A. registrations. Residue tolerance restrictions, as established under the Federal Food, Drug and Cosmetic Act, will be met if applied according to directions on the label.
6. Read and heed all label instructions for safe and effective use.
7. The labels of herbicides suggested below lists the susceptibility of 45 different weeds found in the orchard. See these lists for solution to your particular weed problem.

APPLES

WEEDS: Most annual broadleafed and grasses, some perennials.
HERBICIDES:

AMITROLE 2 lb/A ai (Amitrol-T Cytrol-T 1 gal/A)*. Apply as a directed spray in fall after harvest or early spring before fruit sets. It kills most existing vegetation and has little or no residual activity. In non-bearing orchards, may be used for poison ivy control. Thoroughly wet poison ivy foliage when plants are in full leaf. Do not spray stems, foliage or trunk of trees.

AMITROLE 1.05 lb and SIMAZINE 3.15 lb/A ai (Amizine 7 lb/A)*. Apply as a directed spray around trees 1 year or more old. Apply in fall after harvest or early spring before fruit sets. It will usually kill existing broadleaf weeds and grasses and prevent regrowth of annual weeds for most of the summer. Keep chemical off of leaves, branches and stems of trees. Do not apply to sandy soils.

DICHLLOBENIL 4-6 lb/A ai (Casoron G-4 100-150 lb/A)*. Apply granules late winter (preferred) or early spring. Kills most existing weeds including quackgrass. Short soil residual activity may permit regrowth of annuals to occur in late summer. Shallow incorporation may improve weed control. Do not graze livestock in treated areas.
TERBACIL 1.6-3.2/A ai (Sinbar 80W 2-4 lb/A)*. Do not apply until trees have been established for 3 years or more. Apply once in early spring as a directed spray. Kills most existing weeds and gives full season control of annual weed seedlings. Use lower rates on light soils or soils with low organic matter (less than 2%). Do not use on sand, loamy sand, or gravelly soils, nor on soils with less than 1% organic matter, nor on eroded areas where tree roots are exposed. Do not replant treated areas to any crop within 2 years after last application. Keep sprays off crop foliage and fruit.

WEEDS: Most annuals, partial control of some perennials.

HERBICIDES:

DIURON 3.2 lb/A ai (Karmex Diuron Weed Killer 4 lb/A)*. Apply only to trees established 1 year or more. Do not use on dwarf or semi-dwarf trees. Apply to freshly cultivated soil. Does not kill existing vegetation. Apply only once per year as directed spray to orchard floor in spring (March through May) before fruit sets. Do not use on light (sand, loamy or gravelly) soils or when organic matter is less than 1%. Avoid contact with foliage or fruit. Do not replant treated areas to any crop within 2 years after last application.

SIMAZINE 2-4 lb/A ai (Princep 80W 2.5-5.0 lb/A)*. Use on trees that have been established for 1 year or more. Apply once per year to clean cultivated soil before weeds emerge. Kills weed seeds as they start to germinate and small weed seedlings (1-2”). Use lower rate on light soils and soils low in organic matter, higher rate on heavier soils. Do not use on sandy or gravelly soils. Keep spray off crop foliage and fruit.

WEEDS: Top kill of annual grasses and broadleafed weeds and perennial broadleaf; brambles, honeysuckle, and poison ivy.

HERBICIDES:

AMS 57 lb/A ai (Ammate X 60 lb plus 4-6 oz. of sticker-spreader)*. Apply as a directed spray to weeds, brambles, honeysuckle and poison ivy when they are actively growing. Can be used on bearing and non-bearing fruit trees. This is a contact herbicide and has no residue activity. Wash tank and sprayer thoroughly with clear water after spraying to avoid corrosion of equipment. Keep spray off both foliage and fruit. Repeat on perennials when new, active growth occurs.

DINOSEB, DNBP 1.9 lb/A ai (Dow General or Sinox General 3 pt/A)*. Mix in 10-25 diesel oil or any weed oil and with enough water to make 100 gallons of spray. Apply coarse directed spray. Use enough of mixture to wet weed foliage. Avoid spraying of base of young trees as girdling may result. Do not graze livestock on treated areas. Do not exceed 100 gpa.

PARAQUAT 1 lb/A ai + spreader sticker (Paraquat CL 2 qts + 4-8 oz of X77)*. Apply in at least 40 gpa of water as directed spray to emerged actively growing weeds. Repeat application as new growth occurs. Paraquat is a contact weed killer. Keep spray off of tree foliage, stems and branches. Do not graze treated area. Wash tank and sprayer thoroughly with clear water after spraying to avoid corrosion of equipment.
WEEDS: Grasses.

HERBICIDE:
DALAPON 7.4 lb/A ai (Dowpon 10 lb/A)*. Apply to trees established 4 years or more. Apply as a directed spray to grass 6-10" high. Wet grass foliage thoroughly without runoff. Repeat treatment in 2 weeks if necessary for good control of annual or perennial grasses. Do not graze livestock on treated areas. Do not apply within 30 days of harvest. Keep spray off of crop foliage and fruit.

WEEDS: Certain Broadleafed.

HERBICIDE:
2,4-D 2 lb/A ai acid or OSA (Weedone 638 5.3 pts or Dacamine 4D 2 qts/A)*. Apply as a directed spray to young weeds. Keep spray off of branches, leaves, fruit and trunks of trees. Do not allow drift to spread to susceptible crops.

PEACHES

WEEDS: See Apple above.

HERBICIDES:
Dichlobenil 4-6 lb/A ai (Casoron G4 100-150 lb/A)*.
Dinoseb, DNBP 1.9 lb/A ai (Dow General or Sinox General 3 pt/A)*.
Paraquat 1 lb/A ai (Paraquat CL 2 qts/A)*.
Simazine 2-4 lb/A ai (Princep 80W 2.5-5.0 lb/A)*.
Terbacil 1.6-3.2 lb/A ai (Sinbar 80W 2-4 lb/A)*.

See precautions, directions, warning, etc. as it applies to apples.

ESTABLISHED RESIDUE TOLERANCE

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<th>Chemical</th>
<th>APPLES</th>
<th>ppm</th>
<th>PEACHES</th>
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<th>ppm</th>
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<td>Dichlobenil</td>
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<tr>
<td>Terbacil</td>
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Trade and brand names are used only for the purpose of information and the Virginia Cooperative Extension Service does not guarantee nor warrant the standard of the product, nor does it imply approval of the product to the exclusion of others which may also be suitable.

KEYS TO PROPER USE OF PESTICIDES

1. Read the label on each pesticide container before each use. Follow instructions to the letter; heed all cautions and warnings, and note precautions about residues.
2. Keep pesticides in the containers in which you bought them. Put them where children or animals cannot get to them, preferably under lock and away from food, feed, seed, or other material that may become harmful if contaminated.
3. Dispose of empty containers in the manner specified on the label. If disposal instructions are not printed on the label, burn the containers where smoke will not be a hazard, or bury them at least 18" deep in a place where water supplies will not be contaminated.

SEE YOUR DOCTOR IF SYMPTOMS OF ILLNESS OCCUR DURING OR AFTER USE OF PESTICIDES.