### Recommendations for Cranberry Production in Washington

### Spray Chart for Cranberry Insects*

<table>
<thead>
<tr>
<th>Spray Materials to use</th>
<th>When to apply</th>
<th>Insect controlled</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. DDT</td>
<td>As soon as the buds start to open</td>
<td>Fireworms</td>
</tr>
<tr>
<td>2. DDT</td>
<td>In hook stage of blossom</td>
<td>Fireworms, fruitworms, tip worms, and oyster-shell scale</td>
</tr>
<tr>
<td>3. <strong>DDT, as above†</strong></td>
<td>When ½ or more of blossoms have dropped</td>
<td>Fireworms, fruitworms, tip worms, girdler moths, and scale</td>
</tr>
<tr>
<td>4. <strong>Parathion or malathion</strong></td>
<td>When lecanium scale eggs have all hatched</td>
<td>Fruitworms, fireworms, and lecanium scale</td>
</tr>
</tbody>
</table>

**CAUTION:** Be sure to follow the instructions in the warning label on parathion containers.

* Spray formulas and mixing directions are on page 4.

† DDT should not be applied after July 10 because of residue hazards. Parathion or methoxychlor may be substituted for DDT after July 10.
# Cranberry Weed Control Chart

Where there are only a few weeds, hand weeding is the best control method. Chemicals must be used where hand weeding is not practical.

<table>
<thead>
<tr>
<th>Weed Type</th>
<th>Control Method</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Horsetail rush</strong></td>
<td>Apply paint thinner in late March or early April when the new horsetail shoots are a few inches long. In order to prevent bud injury, the oil should be sprayed on the ground rather than over the vines. Apply at the rate of 800 gallons per acre. Scattered plants may be treated throughout the season. For best results, water table should be one foot below surface at time of treatment.</td>
</tr>
<tr>
<td><strong>Yellowweed</strong></td>
<td>Treat as for horsetail in early spring. Spot treating of individual plants may be carried on throughout the season.</td>
</tr>
<tr>
<td><strong>Sedges, rushes, cut grasses, etc.</strong></td>
<td>Apply paint thinner in spring before cranberry buds break, or spot treat with thinner throughout the season.</td>
</tr>
<tr>
<td><strong>Skunk cabbage</strong></td>
<td>Pour ½ cup of stove oil or thinner in center of plant.</td>
</tr>
<tr>
<td><strong>Fall aster</strong></td>
<td>Apply sodium arsenate at the rate of 1½ pounds to 100 gallons of water after August 15.</td>
</tr>
<tr>
<td><strong>Clover</strong></td>
<td>Treat in spring before cranberry buds break with gasoline or mixture of gasoline and thinner as for horsetail rush. Spot treat new infestations any time. Ferric sulfate is effective but will burn vines if not applied properly. Apply at the rate of 20 pounds to the square rod when vines are dry, and brush material off vines immediately.</td>
</tr>
<tr>
<td><strong>Spanish needles or beggar ticks</strong></td>
<td>Applying bluestone at the rate of 1 pound to 5 gallons of water after August 15 prevents blossoming.</td>
</tr>
<tr>
<td><strong>Moss</strong></td>
<td>Apply Bordeaux mixture 10-6-100 in late April when moss shows some growth.</td>
</tr>
<tr>
<td><strong>Louse grass</strong></td>
<td>Treat young bogs in early spring with light application of gasoline or thinner applied by hand sprayer; avoid hitting plants. Fertilizing young bogs promotes growth of louse grass.</td>
</tr>
<tr>
<td><strong>False dandelion</strong></td>
<td>Spot treat with thinner or stove oil</td>
</tr>
<tr>
<td><strong>Field sorrel or sour grass</strong></td>
<td>Apply bluestone at the rate of 1 pound to 5 gallons of water after August 15.</td>
</tr>
</tbody>
</table>
Violets (Viola sp.)
Spray with bluestone at the rate of 1 pound to 7½ gallons of water after August 15.

Upland grasses
Flood in spring for three weeks or treat with thinner.

Two-leaf Solomon seal
No satisfactory chemical. Hand weed where practical.

To reclaim badly infested bogs, clean dikes and headlands—Dow general or Chipman general 1 quart plus 49 gallons paint thinner plus 50 gallons water. For broadleaf weeds and horsetail rush, use 1 pint of amine form of 2,4-D to 100 gallons of water. Apply about September 10. Do not add a spreader or sticker to 2,4-D. This spray will injure vines if they are not dormant or if high temperatures follow application (over 70° F.).

Frost and Scald

**Frost**—Sprinkle for every frost period after April 1.
**Scald**—Sprinkle whenever temperature reaches 80° F.

**Spray Chart for Cranberry Fungi***

<table>
<thead>
<tr>
<th>Diseases</th>
<th>Materials to use</th>
<th>Control Measures</th>
</tr>
</thead>
</table>
| Cotton ball                     | Ziram or ferbam—3 to 4 pounds per 100 gallons of water, or Bordeaux mixture 10-6-100 | **First Spray:** When buds break in spring  
**Second Spray:** About one week later  
**Third Spray:** About hook stage  
Apply if "rose bloom" becomes plentiful |
| Rose bloom                      | Bordeaux mixture—10-6-100 or Copper hydro '40'—3 to 4 pounds per 100 gallons | Apply if red leaf spots become plentiful  
Eliminate shade and avoid excessive fertilization |
| Red leaf spot and black spot    | Any of the above sprays                                   |                                                                                   |
| To improve keeping quality of   | Ziram or ferbam—3 to 4 pounds per 100 gallons of spray, or Bordeaux mixture—10-6-100 | Apply in hook stage                                                                |
| berry                           |                                                                                                        |

* For fresh market berries, apply two fungicide sprays—the first during the hook stage and the second when about two-thirds of blossoms have dropped.

Ziram or ferbam, or Bordeaux mixture can be used with DDT or methoxychlor. If moss is a problem, use the Bordeaux mixture.
Spray Formulas
(For 100 gallons of spray)

STANDARD SPRAYS

A—DDT
Use wettable type 50 per cent DDT—2 pounds
MIXING DIRECTIONS
Mix DDT with water to form thin paste and pour in tank when 1/3 full.

B— METHOXYCHLOR
Use wettable type 50 per cent methoxychlor—2 pounds
MIXING DIRECTIONS
Same as for DDT

C—1 pound or 1 pint of 25 per cent parathion or 1½ pounds or 1½ pints of 25 per cent malathion

D— BORDEAUX MIXTURE
Requires 10 pounds of bluestone; 6 pounds of unslaked or hydrated lime to 100 gallons of water. For mixing directions; consult your County Extension Agent or local authorities.

Root Weevil Control

Make one application of weevil bait early in April. Make subsequent applications of bait beginning when new weevils appear in late May and early June and continuing at intervals of one week to ten days until no more weevils appear. Bait should be broadcast at the rate of about 50 pounds to an acre. Commercial weevil baits are satisfactory.

Emergence of the weevils may be determined by laying a plank five feet long near that part of the bog showing injury. The new weevils are light brown in color and can be found on the underside of the plank.

This circular was prepared by the following staff members of the Institute of Agricultural Sciences:

D. J. CROWLEY
Former Superintendent
Cranberry-Blueberry Experiment Station
Long Beach, Washington

DAVID H. BRANNON
Entomology Specialist, Extension Service
State College of Washington
Pullman, Washington

CHARLES C. DOUGHTY
Acting Superintendent
Cranberry-Blueberry Experiment Station
Long Beach, Washington

M. R. HARRIS
Plant Pathologist, Extension Service
State College of Washington
Pullman, Washington

H. S. TELFORD
Entomologist
Washington Experiment Station
State College of Washington
Pullman, Washington

RALPH E. TIDRICK
County Extension Agent
South Bend, Washington

Published and distributed in furtherance of the Acts of May 8 and June 30, 1914, by the State College of Washington Extension Service, R. B. Toottell, Director, and the U.S. Department of Agriculture cooperating. (2m-354)