970 Insecticide Recommendations

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EXTENSION DIVISION
VIRGINIA POLYTECHNIC INSTITUTE

INSECTS OF HERBACEOUS ANNUALS AND PERENNIALS

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In the following recommendations the chemical quantities are to be mixed with 1 gallon of water, unless otherwise specified. Abbreviations that are used are as follows: WP = wettable powder, EC = emulsion concentrate, D = dust, and G = granular.

ANTS

chlordane--5% D, 5% G

Use 1 to 3 tablespoons chlordane 5% dust or granular. Apply to nest or 6 to 8 oz. to 100 sq. ft. surface area. Insecticide should be watered into the soil.

Safety Precautions: See "Keys to Proper Use of Pesticides."

APHIDS

diazinon--50% WP
lindane--25% WP, 1% D
malathion--25% WP, 57% EC
*nicotine sulfate--40%

Use 1 teaspoon diazinon 50% WP, OR use 1 tablespoon lindane 25% WP or lindane 1% D, OR 3 tablespoons malathion 25% WP or 1-1/2 teaspoons malathion 57% EC, OR 2 teaspoons nicotine sulfate 40% in soapy water, OR plant-type aerosol spray.

Safety Precautions: See "Keys to Proper Use of Pesticides."

BEETLES - Flea Beetle, Japanese Beetle, etc.
carbaryl (Sevin)--50% WP
chlordane--40% WP
diazinon--50% WP
lindane--1% D, 25% WP
malathion--25% WP

Spray with 2 tablespoons carbaryl 50% WP OR 3 tablespoons chlordane 40% WP OR 1 teaspoon diazinon 50% WP, OR 1 tablespoon lindane 25% WP, OR 3 tablespoons malathion 25% WP. A miticide should be added to carbaryl when it is used repeatedly. (See Mites).

Safety Precautions: See "Keys to Proper Use of Pesticides."

* EXTREMELY POISONOUS. If you become ill while or after using, call a physician immediately.
BORERS

<table>
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<th>Insect</th>
<th>Active Ingredient</th>
<th>Formulation</th>
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<tbody>
<tr>
<td></td>
<td>carbaryl--50% WP</td>
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<td>lindane--1% D, 25% WP</td>
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<td>chlordane--40% WP</td>
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Use carbaryl, lindane, or chlordane, as given for beetles or aphids. Start iris or columbine borer control when new growth is 4" to 6" tall (late April or early May). Make a total of 3 to 4 applications at weekly intervals.

Safety Precautions: See "Keys to Proper Use of Pesticides."

CATERPILLARS

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<tr>
<td></td>
<td>carbaryl--50% WP</td>
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<td>chlordane--40% WP</td>
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<td>lindane--1% D, 25% WP</td>
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Spray with carbaryl, chlordane, or lindane as for beetles OR use a plant-type aerosol spray.

Safety Precautions: See "Keys to Proper Use of Pesticides."

CUTWORMS

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<tr>
<td></td>
<td>chlordane--5% D, 40% WP</td>
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Apply chlordane as a spray 40% WP to the ground around the plants or to the soil before planting. Do not cultivate for 5 to 7 days after application.

Safety Precautions: See "Keys to Proper Use of Pesticides."

GRUBS OR WIREWORMS IN SOIL

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<tr>
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<td>chlordane--5G, 5% D, 40% WP</td>
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On each 100 sq. ft. apply one of the following formulations and work into the soil before planting or when cultivating: 1/2 lb. chlordane 5% granular or dust, OR 4 tablespoons chlordane 40% WP in 2 gals. of water.

Safety Precautions: See "Keys to Proper Use of Pesticides."

LACEBUGS

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<tr>
<td></td>
<td>lindane--25% WP, 1% D</td>
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<tr>
<td></td>
<td>carbaryl (Sevin)--50% WP</td>
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<td>malathion--25% WP</td>
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Spray 1 tablespoon lindane 25% WP, OR 2 tablespoons carbaryl 50% WP, OR 4 tablespoons malathion 25% WP. Make one application against the nymphs in late May.

Safety Precautions: See "Keys to Proper Use of Pesticides."

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LEAFHOPPERS
carbaryl (Sevin)--50% WP
chlordane--40% WP
diazinon (Spectracide)--50% WP
lindane--1% D, 25% WP
malathion--25% WP

Use carbaryl, chlordane, diazinon, lindane, or malathion as suggested for beetles, OR plant-type aerosol spray. Repeat applications as needed for effective control.

Safety Precautions: See "Keys to Proper Use of Pesticides."

LEAF MINERS
lindane--25% WP, 1% D
malathion--25% WP, 57% EC
chlordane--40% WP

Spray with lindane OR malathion OR chlordane, as suggested for aphids.

Safety Precautions: See "Keys to Proper Use of Pesticides."

MEALYBUGS
malathion--25% WP, 57% EC

Use 3 tablespoons malathion 25% WP or 1-1/2 teaspoons malathion 57% EC. Make 2 or more applications at 10-day intervals.

Safety Precautions: See "Keys to Proper Use of Pesticides."

MITES
dicofol (Kelthane)--18.5% WP
tetradifon (Tedion)--25% WP
dimethoate (Cygon)--EC

Use 2 tablespoons dicofol 18.5% WP, OR 1 tablespoon tetradifon 25%, OR 1 tablespoon dimethoate EC. Make 2 or more applications at 7- to 10-day intervals. In late April or early May, start on delphinium. These can be used with other insecticides when needed.

Safety Precautions: See "Keys to Proper Use of Pesticides."

PLANT BUGS
carbaryl (Sevin)--50% WP
chlordane--40% WP
malathion--25% WP

Use carbaryl, chlordane, or malathion as suggested for borers.

Safety Precautions: See "Keys to Proper Use of Pesticides."
SLUGS AND SNAILS

commercial metaldehyde--calcium arsenate baits (pelleted)

* Use commercial metaldehyde-calcium arsenate bait (pelleted). Apply baits in the evening at first sign of injury. Repeat application after rains or when bait becomes moldy.

Safety Precautions: See "Keys to Proper Use of Pesticides."

SPITTLBUGS

carbaryl (Sevin)--50% WP
chlordane--40% WP
lindane--1% D, 25% WP

Spray carbaryl, chlordane, lindane, as recommended for beetles.

Safety Precautions: See "Keys to Proper Use of Pesticides."

THRIPS

dimethoate (Cygon)--EC
chlordane--40% WP
malathion--25% WP
lindane--1% D, 25% WP

Use 3 tablespoons chlordane 40% WP, OR 1 tablespoon dimethoate (Cygon), OR 2 tablespoons malathion 25% WP, OR 1 tablespoon lindane 25% WP.

Safety Precautions: See "Keys to Proper Use of Pesticides."

WHITE FLIES

chlordane--40% WP
diazinon--50% WP
lindane--1% D, 25% WP
malathion--25% WP

Use chlordane, diazinon, lindane, or malathion as recommended for beetles. Repeat applications at 5- to 7-day intervals for about a month.

Safety Precautions: See "Keys to Proper Use of Pesticides."

* EXTREMELY POISONOUS. If you become ill while or after using, call a physician immediately.

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.