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CC154 Adjusting to Drought... Grasshopper Control

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adjusting to drought...

Grasshopper Control

DROUGHT FAVORS GRASSHOPPER DEVELOPMENT.

PREVENT DAMAGE BY EARLY CONTROL.

EXTENSION SERVICE - UNIVERSITY OF NEBRASKA
COLLEGE OF AGRICULTURE AND U. S. DEPARTMENT
OF AGRICULTURE COOPERATING W. V. Lambert, Director
**GRASSHOPPER CONTROL**

Grasshoppers can be controlled with insecticide sprays, dusts, or poison baits. Under average conditions, sprays are usually most satisfactory. They give higher initial kill and continue to kill over a longer period of time than do dusts. Baits are preferred in fall-seeded grains and legumes when the plants are small. Sprays are less effective in fall-seeded crops because the treated leaf surface is not large.

**Sprays**

For greater protection to crops, spray early in the season in field margins and hatching beds, before grasshoppers migrate into cultivated or hay crops. Spraying should be repeated as necessary as the hatch continues and when the insecticide is lost from vegetation. For best results, spray in the late evening when the wind is quiet. For early season control, usually from May until late June, use one of the following:

<table>
<thead>
<tr>
<th>Insecticide and Formulation</th>
<th>Amount per acre (to be mixed with water)</th>
<th>No. of days that must elapse before cutting hay or pasturing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aldrin (2 lbs. per gallon)</td>
<td>1 cup</td>
<td>21</td>
</tr>
<tr>
<td>Dieldrin (1.5 lbs. per gallon)</td>
<td>1 cup</td>
<td>30</td>
</tr>
<tr>
<td>Toxaphene (6 lbs. per gallon)</td>
<td>1 quart</td>
<td>40</td>
</tr>
</tbody>
</table>

After grasshoppers have reached a half-grown stage, and when daily temperatures are higher, and vegetation is heavier, the amounts of insecticide must be increased per acre. After late June use one of the following:

<table>
<thead>
<tr>
<th>Insecticide</th>
<th>Amount per acre (to be mixed with water)</th>
<th>No. of days that must elapse before cutting hay or pasturing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aldrin (2 lbs. per gallon)</td>
<td>1 pint</td>
<td>21</td>
</tr>
<tr>
<td>Heptachlor (2 lbs. per gallon)</td>
<td>1 pint</td>
<td>7</td>
</tr>
<tr>
<td>Dieldrin (1.5 lbs. per gallon)</td>
<td>½ pint</td>
<td>30</td>
</tr>
<tr>
<td>Toxaphene (6 lbs. per gallon)</td>
<td>¾ quart</td>
<td>40</td>
</tr>
</tbody>
</table>

**Poison Baits**

Use one of the following insecticides to prepare 100 pounds of bait:

<table>
<thead>
<tr>
<th>Insecticide</th>
<th>Amount per acre</th>
<th>No. of days that must elapse before cutting hay or pasturing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aldrin (2 lbs. per gallon)</td>
<td>1 pint</td>
<td>21</td>
</tr>
<tr>
<td>Heptachlor (2 lbs. per gallon)</td>
<td>1 pint</td>
<td>7</td>
</tr>
<tr>
<td>Toxaphene (6 lbs. per gallon)</td>
<td>1 quart</td>
<td>30</td>
</tr>
<tr>
<td>Chlordane (4 lbs. per gallon)</td>
<td>1 quart</td>
<td>40</td>
</tr>
</tbody>
</table>

Mix the insecticide of your choice with about 10 gallons of water. Use 25 pounds of bran and 3½ bushels of sawdust (or 100 pounds of bran). Mix the insecticide and water with the bran and sawdust to make a moist, crumbly mash. Mix with a shovel or paddle, or in a cement mixer. Spread wet bait uniformly at the rate of 20 pounds per acre. Bait may be spread by hand by using rubber gloves, or with a spreader.

**Alfalfa**

If alfalfa is within three weeks of cutting, the recommended insecticide is heptachlor. Alfalfa can be cut seven days after heptachlor is applied without harmful residues remaining. If alfalfa is more than three weeks from cutting time, aldrin can be used. If dieldrin or toxaphene is used on alfalfa, spray just after a cutting is made. Strips around the border of alfalfa fields and through the center of the field should be left as traps for grasshoppers. After they congregate in these strips, spray with any of the recommended insecticides. This strip-trap method of control is usually very effective, especially under drought conditions when margin vegetation has dried.

**Corn**

Early control in field margins will prevent injury to corn. If infestations are not controlled in margins, and damage occurs in corn, spray several rows into the field from the limits of the feeding. If corn is to be used for ensilage, use aldrin or heptachlor according to the recommendations. If corn is not to be used for ensilage, use dieldrin or toxaphene.

**Pastures**

When possible, remove animals from pastures and then spray with heptachlor or aldrin. Return the animals to pasture after the waiting period suggested in the control chart. If pastures are not used, or are being conserved for winter pasture, use dieldrin or toxaphene. When animals cannot be removed from pasture, or when grass is extremely thin, use a poisoned bait spread thoroughly.

**Winter Wheat and Newly Seeded Legumes**

Fall-seeded crops are often subject to severe grasshopper injury. When margins are dry or vegetation sparse, grasshoppers will rapidly eat large portions of newly planted wheat or legumes. Sprays often are not satisfactory because the vegetation is too sparse; however, sprays using dieldrin or toxaphene in the old stubble and margins will
provide moderate control. In most cases the use of a poisoned bait is recommended.

Community Action

When infestations are heavy, all property owners in a community should cooperate in controlling grasshoppers. Regardless of the materials or methods used, control is most effective when everyone in an infested area cooperates in control activities. Insecticides can be purchased at a substantial saving when the needs of several individuals are combined and purchased at one time. Pooling of equipment and labor will also result in lower costs.

Precautions

All of the insecticides recommended for grasshopper control are poisonous to man and animals, but the diluted sprays are not dangerous to handle if ordinary precautions are taken. In the concentrated form they may cause acute poisoning when in contact with the skin, inhaled or swallowed. Follow the directions on the containers and the suggestions listed below:

1. Bathe and change clothing immediately after spraying.
2. If material is spilled on the skin, wash with soap and water immediately.
3. If insecticide is swallowed, induce vomiting by taking 1 tablespoonful of salt in a glass of water; repeat until vomit fluid is clear. CALL A DOCTOR.
4. Store insecticides where children, irresponsible adults and livestock cannot reach them. Keep under lock if possible.
5. Do not feed forage or chaff contaminated with insecticides to poultry, dairy animals, or beef animals.
6. When spraying, keep out of the drift.