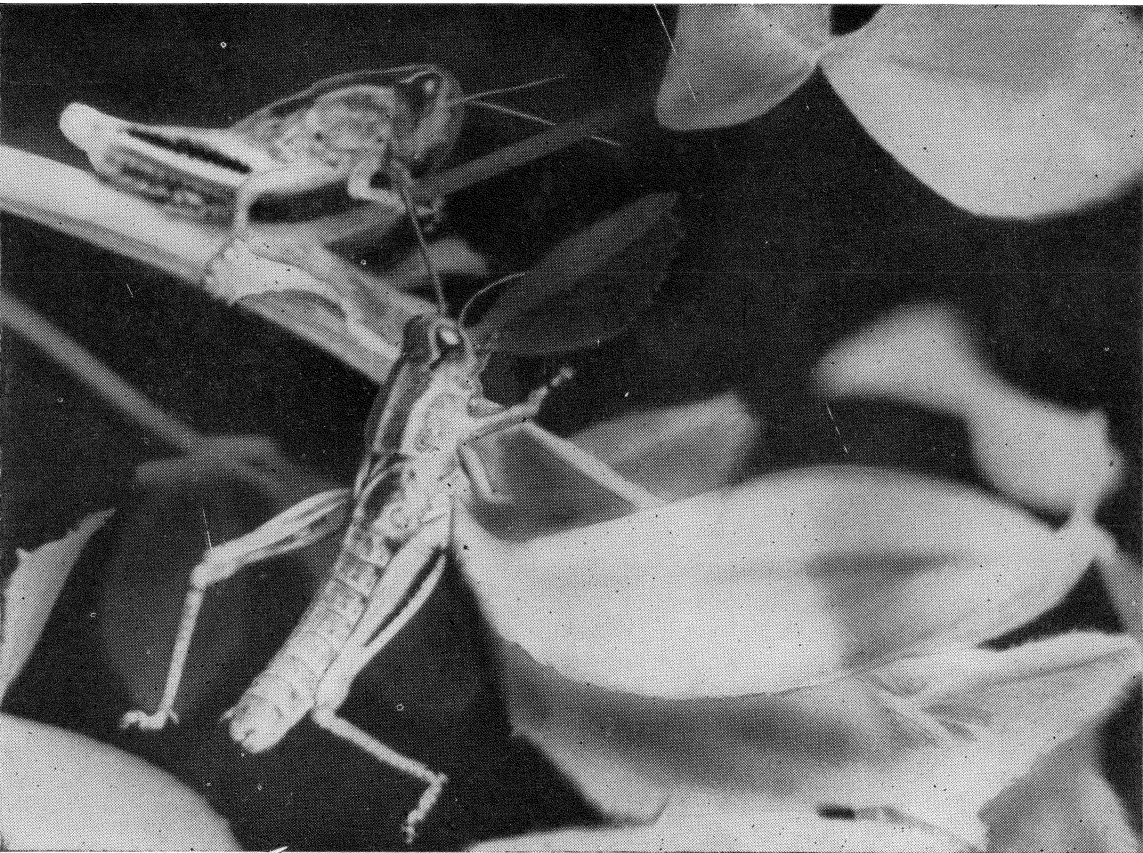


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Chlordane and Toxaphene *for* GRASSHOPPER CONTROL



Circular No. 483

Extension Service Oklahoma A. and M. College
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Chlordane and Toxaphene Grasshopper Control

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What To Use

Although many of the new insecticides have been tried on grasshoppers, chlordane and toxaphene seem to be the most effective to date.

How To Use Chlordane

Chlordane seems to give best results against grasshoppers when used as a spray.

Suggested dosages are 1 pound of actual chlordane per acre in the spring and early summer and 1½ to 2 pounds per acre in late summer and early fall.

One pound of actual chlordane is contained in 1 quart of a 45 to 50 percent chlordane emulsifiable, 1 pint of 75 percent chlordane concentrate, or 2 pounds of 50 percent chlordane wettable powder.

It does not matter how much water is mixed with the chlordane when the spray is prepared. The above amounts should be applied per acre and the amount of water to mix with it is best determined by the type of sprayer to be used. For instance, with hand sprayers small amounts of water will be most convenient. Large amounts will work best with power sprayers. Enough water should be used, however, to apply the chlordane evenly over the sprayed area.

If chlordane is used as a dust, the recommended dosage is 1½ pounds of actual chlordane dust per acre, regardless of the strength of dust used.

How To Use Toxaphene

Toxaphene also gives best results against grasshoppers when used as a spray.

The suggested per acre dosage is 1½ pounds of actual toxaphene

in the spring and early summer and 2 to 2½ pounds during late summer and early fall.

One pound of actual toxaphene is contained in 2½ pounds of 40 percent toxaphene wettable powder, or in one pint of 75 percent toxaphene emulsifiable concentrate.

The amount of water to use when preparing the spray is not important; however, the above amounts of toxaphene must be applied on each acre to secure control.

If toxaphene dust is used, the recommended dosage is 1½ to 2½ pounds of actual toxaphene dust per acre, regardless of the strength of dust used.

Lasting Qualities

The lasting qualities, or residual action, of these materials depend partially on weather conditions. Normally, for at least 10 days after the spray is applied, all grasshoppers that move into the sprayed areas will be killed.

When To Apply Sprays or Dusts

Best results with least expense can be obtained by using control practices early in the spring (usually during May and early June) while young hoppers are still in the hatching beds. Spray or dust small vegetation along fence rows, ditch banks, and other spots where young hoppers are first seen, thus killing them before they have a chance to move into the field.

The importance of killing Grasshoppers early in the season cannot be overemphasized.

Early in the season, sprays or dusts on lush vegetation given good kills. Later in the summer, however, control is harder to get since hoppers feed less on the dried-up vegetation. Therefore, dosages must be stepped up, and since hoppers have spread out over more area, more acres must be treated. This results in a large increase in cost of control.

Usually when sprays or dusts are applied early, only field borders need to be treated. This results in a big reduction in the cost of control.

Sometimes grasshoppers hatch out in grassy alfalfa fields. When

this happens, it is usually best to spray or dust immediately after cutting the first crop of hay. When the hay is cut, hoppers will move out of the field and into field margins or ditch banks until the new crop starts greening up. Or, if uncut strips of up hay are left, they will congregate in them. By spraying or dusting these spots where the hoppers are feeding, the infestation can be cleaned up at relatively little expense.

Cautions

Do not feed forage that has been treated with chlordane or toxaphene to dairy animals, or animals that are to be slaughtered. It is not yet known what effects an accumulation of these materials might have on livestock or human health.

Avoid spraying or dusting legumes while in bloom. However, if this must be done to save a seed crop, use a spray and apply it late in the evening or early in the morning.

Remember that best results with the least materials will be obtained if control measures are used early in the season. **Do not wait until damage is severe and expect to get good, cheap control.**

Chlordane and toxaphene are both slow killers. Do not expect to find many dead hoppers until about 72 hours after the spray or dust is applied. Although they do not die immediately, grasshoppers stop feeding soon after the insecticides are applied.