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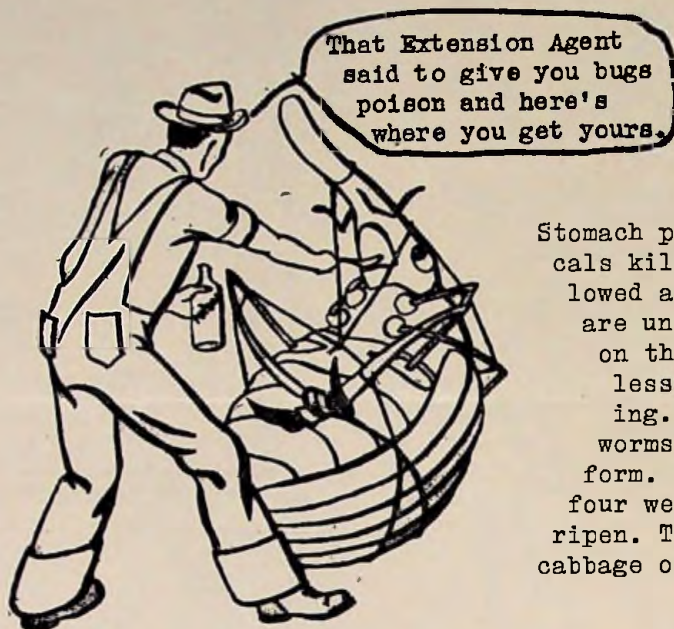
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Protect Your Garden From Insects

Agricultural and Mechanical College of Texas

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PROTECT YOUR GARDEN FROM INSECTS

THIS GUY DOES IT THE HARD WAY

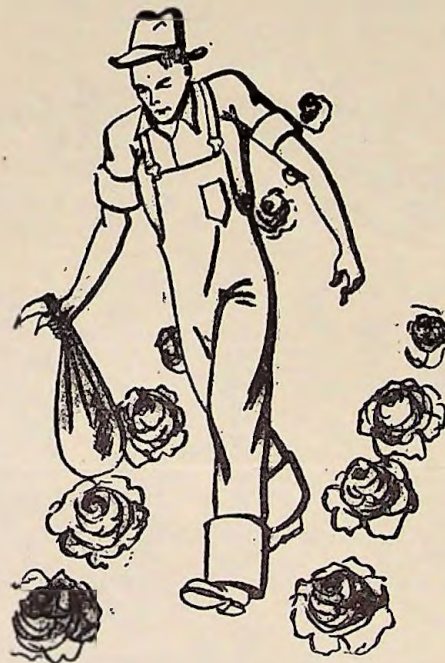
Put the poison on the plants and let this pest have all he wants.

Stomach poisons such as cryolite and arsenicals kill the insects when they are swallowed as the insects feed. These poisons are unsafe to man and should not be used on the parts of the plant to be eaten unless the poisons can be removed by washing. They may be used to control cabbage worms on cabbage until the heads begin to form. They are safe on tomatoes up until four weeks before the tomatoes begin to ripen. The principal damage to tomatoes and cabbage occurs early anyway.

USE WHAT YOU HAVE

It is better to have tried and lost than never to have tried at all.

Commercial dusters and sprayers are better than home-made ones, but commercial equipment may be hard to get. However, we can't afford to let the insects eat our vegetables. A muslin bag or a shaker can, if used carefully to place the insect powder where the pests are feeding, will often save your vegetables from destruction. It is much better to apply the dust when no wind is blowing, because that is the only time the dust will settle on the lower side of the leaves where most of the bugs will be found. It is very likely that even then much of the material will be wasted.



Your County Extension Agents,

PROTECT YOUR GARDEN FROM INSECTS**Shoot To Kill**

hit the pest



Some of the most injurious insects in the garden do not chew and swallow parts of the plant but live entirely by sucking juices from the plants. There is no poison that can be applied to the vegetables that would be absorbed into the juices, without either injuring the plant or being unsafe for human food. Therefore, in order to kill these so-called sucking insects, the poison

must be directed to hit the bugs.

In this group of sap-sucking bugs are the plant lice (aphids), tomato suck fly, cabbage bug, stink bug, and squash bug. As much as 5 pounds of .5% rotenone dust will be available to every Victory Gardener this year for controlling these pests. Except for the plant lice .5% rotenone dust is not a very effective control for the adult bugs but will kill the young ones. However, it is not likely that any other poison will be better than the rotenone as far as control of the adult bugs is concerned.

All sap-sucking insects feed principally on the lower surface of the leaves and can also be found on the underside of the foliage when not feeding, so shoot at these pests by dusting or spraying the underside of the leaves thoroughly. And remember that only those bugs hit with the poison are killed and that a few bugs are much easier to control than large numbers, so start early.

Repeated applications at 7-day intervals will be necessary as long as damage occurs, as the poison does not kill the eggs and a few bugs will be missed.

Your County Extension Agents,

PROTECT YOUR GARDEN FROM INSECTS**Hand-Pick Garden Insects**

your time working the garden, unless you are prepared to control the insect pests--and there are sure to be pests in every garden regardless of size or location.

POTATO BEETLES spend the winter in the adult stage and start feeding and laying their eggs on the foliage of potato plants soon after they come up. These beetles are easy to catch and destroy. The eggs are orange in color and are laid in clusters on the lower surface of the leaves; they should be destroyed along with the beetles. While the beetles prefer to feed on potatoes, they may also be found feeding on eggplants and tomatoes.

SQUASH BUGS are easy to catch and destroy; their eggs are laid in clusters on the underside of leaves and should be destroyed. These bugs feed on vine crops such as squash, pumpkin, cucumber and the like.

CABBAGE WORMS are easy to destroy. As soon as the first sign of damage occurs, the underside of the leaves should be examined for small worms that might be present.

Hand-picking is one of the best methods of control for the GREEN STINK BUG and the CABBAGE BUG, since both of these pests are easy to catch and are very resistant to most poisons.

In small gardens hand-picking has proved to be a very effective control for many of the most injurious insects. It is also helpful in large gardens, because it will delay the application of poison and consequently reduce the number of poison applications and lower the cost of production.

The old saying,

"A STITCH IN TIME SAVES NINE,"

may well be paraphrased,

"A BUG IN TIME SAVES NINE HUNDRED
AND NINETY-NINE,"

because destructive infestations of such pests in gardens start from relatively few insects.

It is unwise to spend your money on seed and fertilizer and waste

Your County Extension Agents,



Fruit on the Farm



By
Extension Horticulturists and Entomologists

IT'S THE COVER THAT COUNTS



Fruit trees, especially peaches, plums and pecans, require a soil in which there is an ample supply of humus. To get from one to three tons of humus material into the soil, the best and most economical way is to plant a winter green manure crop.

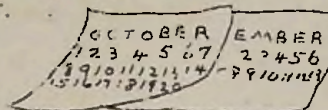
For East Texas, vetch is best. To get the most from the crop, seed should be in the ground during October. Use 200 pounds of 20% phosphate per acre and 20 to 30 pounds of vetch seed to insure an adequate supply of humus for the trees next season. The phosphate will double the yield of vetch and will also add an excellent supply of this plant food to the soil for the trees next year.

If the seed are too high to sow broadcast at the above mentioned rate, then put down the fertilizer and bed on it and plant the vetch seed in rows, using 8 to 10 pounds of seed per acre. H. F. Morris of the Nacogdoches Experiment Station recommends this practice for planting vetch in East Texas orchards. The elevation which is provided in bedding the land gives this method a distinct advantage in wet seasons. It also allows the vetch to make an early spring growth so that it may be turned under during the month of April.

When the vetch has attained a height of 8 to 10 inches in April, it is ready to be turned under. A crop of this type will be the equivalent of applying 300 pounds of nitrate of soda per acre. Research workers are pointing more and more to the fact that plant vigor and high production in fruit trees is directly connected with the maintenance of a high nitrogen level in the soil. The vetch route is the most economical one for orchard owners in East and Central Texas.

In the western part of the state where rainfall is less than 30 inches, vetch has not proved to be a satisfactory cover crop. Small grain crops, such as wheat, oats or rye, are more tolerant of the dry season and when turned under in the spring afford a humus supply that is helpful to the trees. The major consideration in this area is to get the cover crop turned under sufficiently early that the moisture reserve in the soil is not removed by the cover crop. In the sandy orchard areas of the cross timber belt, the cover crop will pay for itself in preventing the soil from blowing during the late winter and early spring.

TIME FOR PEACH TREE BORER CONTROL.



In many cases the peach tree borers cause serious injury and the premature death of many fruit trees whenever treatment is neglected. Peach and plum trees that are weakened by the attack of peach borers are susceptible to attack by other insects, such as shot hole borers and lesser peach tree borers, and scale. When the trees become heavily infested with these borers, there is little that can be done to save the trees or make them productive again. The presence of dark brown, moist sawdust and exuding gum, two to three inches below the ground or eight to ten inches above the ground, is a good indication that borers are working in the tree.

The control of borers is simple, effective, and not expensive. Paradichlorobenzene crystals (PDB) are commonly used to control peach tree borers. Use one ounce of PDB crystals per tree for mature trees, one-half to three-fourths ounce for immature trees, and one and one-half ounces for extremely large trees. Before the PDB crystals are applied around the tree, they should be rolled or crushed to a fineness about the size of sugar grains.

When to Control Peach Borers. For North Texas applications should be made between October 1 and October 20. For South Texas applications should be made between October 20 and November 15, or in other words make treatment before temperature drops below 65° F. and remains there for several days.

How to Apply PDB Crystals. Remove all the grass and weeds three or four inches from the tree trunk, and if the borers are working above the ground, build the ground line up above where the borers are working. Apply the crystals in a one-inch band, one to one and one-half inches from the trunk, then cover the crystals with a few shovelful of dirt and pack it down. (Caution: Soil should be fairly dry.) In about four weeks go back and remove mound and crystals from the tree.

* * *

The lesser peach tree borer works in the upper part of the tree trunk and also in the scaffold branches. This pest causes considerable damage in much the same way as the base borer or the true peach tree borer. Treatment for control should be given at the same time that they are given for the peach tree base borer. Dissolve one pound of PDB crystals in one-half gallon of crude cottonseed or linseed oil. Paint with a small paint brush on the infested parts only, after removing the exuding gum and frass.

Reference: B-73, "Orchard Management"
MS-440, "Control Insects and Diseases Attacking Peaches and Plums"

* * *

Note: Ethylene dichloride emulsion is another insecticide that can be used to control peach borers, but this material is not available now.