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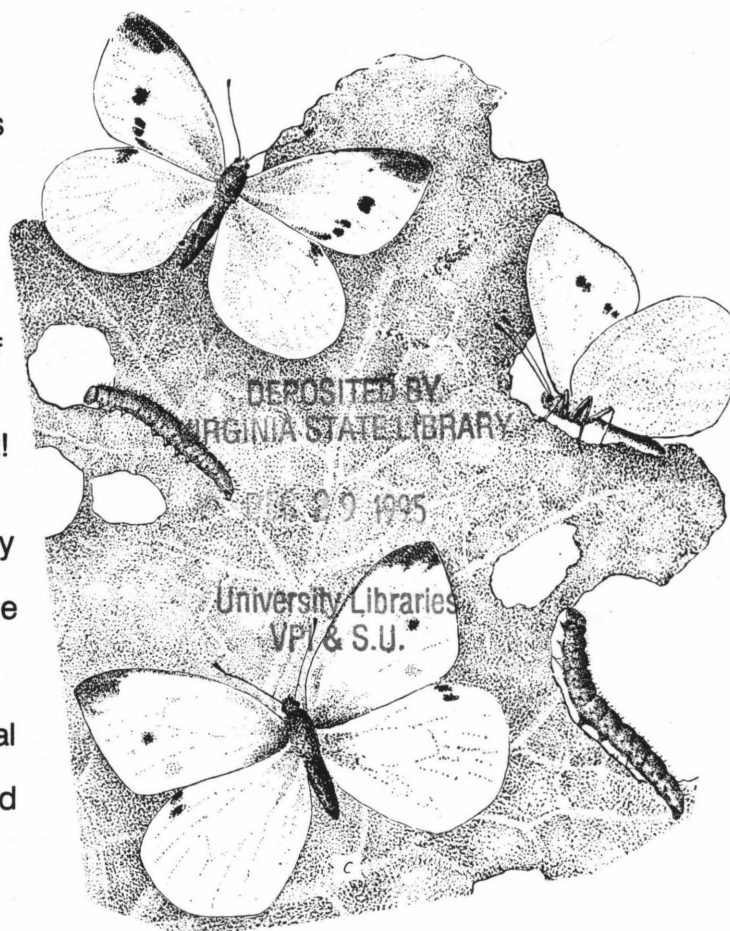
No. 252
June 6, 1994



INSECT NOTES

VEGETABLE GARDEN PESTS

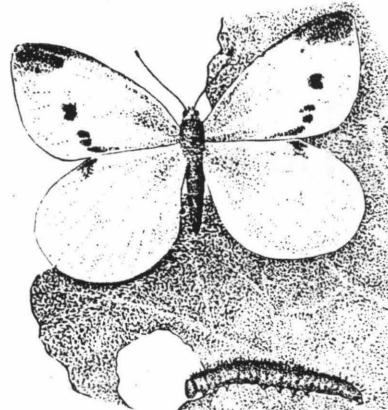
Vegetable gardens have remained as an important activity for many Americans. Whether as a necessary part of providing food for the family, or for providing a supplement to their purchased vegetables, people that have gardens become very aware of when some other animal [2 legs, 4 legs, or 6 legs] is getting a significant part of the harvest! The pests with 6 legs are perhaps the most serious, since they attack the vegetative and the fruit parts of the plant! When this becomes serious, control is necessary. Effective control of vegetable-garden insect pests can be accomplished by non-chemical means, such as removing adults and larvae from the plants, altering the planting time or variety, or using some environmentally friendly materials. Some of these can be effective, some less so. However, there are situations when chemical control is necessary and prudent. At that time be certain to use material that is labelled for vegetables, and make certain that the "waiting period" [time between application and harvest] has been followed.



Some of the common vegetable garden pests are included here, primarily as a review of their identification, biology and habits. Specific control measures are not presented, as this may change according to the insecticide or biological control method used.

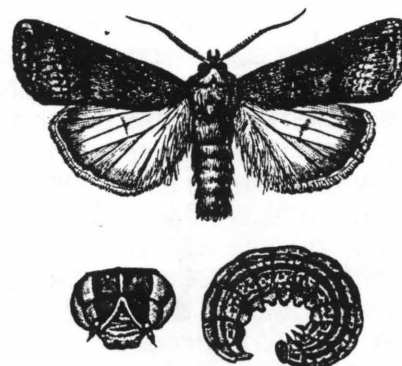
Imported Cabbage Worm -- This insect is a pest of all crucifers, such as cabbage and cauliflower. The caterpillars eat holes in the leaves and often tunnel into the heads of these plants. The caterpillars grow to about 1 inch and are bright green--so they can blend into the color of the leaves of the host plant.

The adults are well-known butterflies, and are often the first butterflies seen in the spring and the last seen in the fall. They have 3 or 4 black spots on white or pale yellow wings. Severity of infestation depends on the weather in the spring. In the fall be certain to destroy all remaining crucifer plants to prevent overwintering of this pest.



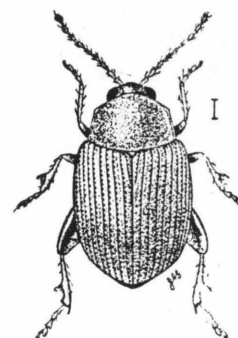
Cabbage Looper--The cabbage looper is also a pest of crucifers, and just as common as the cabbage worm! It is a pale green "measuring worm" [caterpillar] that grows to about 1.5 inches long. The adults are brown butterflies with whitish spots on their wings; there are about four generations in Virginia each year. The caterpillars are very susceptible to some insect diseases and viruses. When infected the loopers hang from the underside of leaves and then turn black and liquify (nasty stuff). The spores of these diseases are then released into the area and in turn can infest other looper caterpillars. So, leave the dead loopers on the leaves!

Cutworms--These are among the most common garden pests in Virginia. The caterpillars are dark grey to black, rather large, and are about 2 inches long when full grown. They do most of their eating damage at night (when the birds are not active and it is safe!), and usually cut off young plants at the soil line. Cutworm caterpillars will attack most garden crops, but major host plants include corn, tomatoes, peppers, and beans (all the good stuff). During the day they can be found beneath the soil near their favorite food plants. Chemical control of these pests is most effective when used before planting. Nonchemical control can include wrapping the base of young plants.

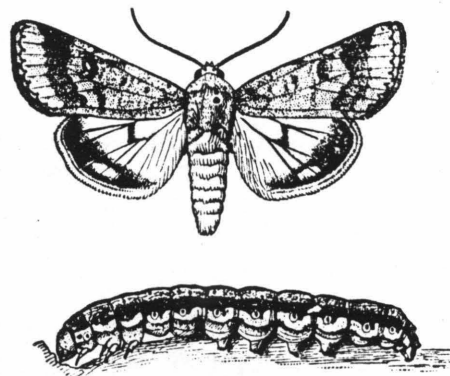


Tomato Hornworm--Easily the ugliest caterpillar out there in the garden. This ferocious-looking caterpillar is found most often on tomato and eggplant, but it also eats peppers and potato (related to the tomato plant). The hornworm is light to dark green and with white stripes down its sides. The red horn at the end (not the front) is ornamentation and can not be used as a stinger. When full grown these caterpillars can be very large and about 3 to 4 inches long. Hornworms mature into "hawkmoths". Usually, infestations of these caterpillars is light, perhaps just a few, and it is easy to pick them from the plants (yes, you gotta' use your fingers!). Try not to kill the ones that have small white cocoons on their backs. These are parasitic wasp cocoons which will emerge and help to control future infestations.

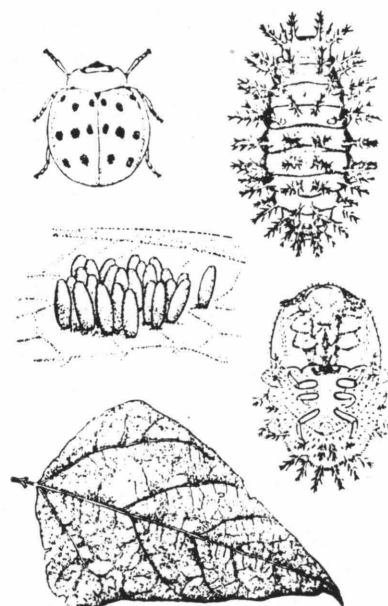
Flea Beetle--This is one of the early season pests that chew holes in the leaves of plants. They get their name from the habit of jumping when disturbed. The plants attacked include beans, peas, corn, eggplant, and tomato. These beetles are shiny black to blue-black in color. Dusting plants early in the season is a common practice--that may be overdone. Keeping the garden weed-free can help to control these pests.



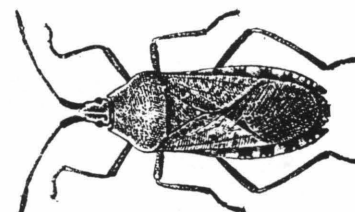
Corn Earworm--This pest is also known as the tomato fruitworm, and cotton bollworm and it is primarily a pest of sweet corn, but it will also attack tomatoes. Earworm caterpillars are about 2 inches when full grown and vary in color from pink, green, and brown. The adult moths prefer to lay their eggs on corn silks. The caterpillars enter the ear and feed at the tip and progress down the sides--chewing up the ear as they go. Insecticides can be directed at the corn silks to prevent egg laying, or mineral oil can be applied to this area. This may be rather time consuming--to oil up all your corn plants, but it can be effective.



Mexican Bean Beetle--The adult beetle resembles a ladybird beetle, but is larger (about 1/4 inch long) and has 16 black spots on its back (wings). The adults and the yellow, spiny-backed larvae eat the leaves of snap beans and lima beans. If not controlled to some extent, they can destroy an entire bean crop. There are 3 to 4 generations per year in Virginia, and the overwintering stage is the adult--so they are ready to go in the spring! The yellowish eggs are laid on the underside of plant leaves, and they hatch in about two weeks--that gives you time to look for and destroy them! If chemicals are used for control, be certain to direct the spray to the *underside* of the bean leaves.

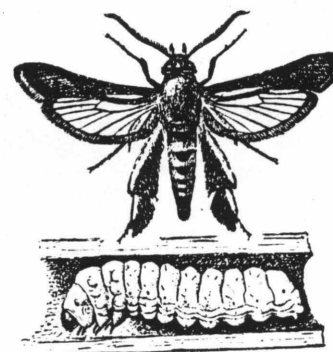


Squash Bug--The squash bug and its relatives are primarily pests of vine crops (squash and similar plants). They have piercing-sucking mouth parts and the damage they cause is to remove plant sap and weaken the entire plant. The symptoms of attack include wilting (in hot and dry weather) and browning of the leaves and vine. Plants can be killed when there are large populations of these insects. Adults overwinter in protected areas--so, keep the area around the garden clear in the winter and these insects will be less of a problem.



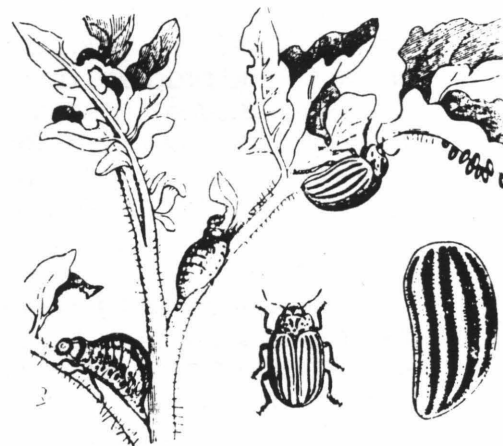
Squash Vine Borer--This caterpillar attacks primarily squash, cucumbers and pumpkins. A sudden wilting of the plant in one area, and some yellowish grass near the base of the stem are indications of this pest. They usually appear in mid to late season. The insect overwinters in the soil in a cocoon. Plow the garden in late fall to help reduce these pests.

Aphids--These insects are probably the most common of all the garden pests, certainly they are about the smallest and the most numerous. They have sucking mouthparts and keep them inserted in the plant stem--constantly sucking plant sap. The excess sap is quickly excreted as honeydew (which is eaten by ants). A few



aphids on plants will not cause serious damage, but populations can increase rapidly and then damage is done. Wilting and yellowing of leaves is a good sign of aphid damage. When chemicals are applied be certain to treat the entire plant, including the underside of the leaves.

Colorado Potato Beetle --This beetle is an extremely important pest of potato and eggplant, but will also attack peppers and tomato. Both the adult and larval stages will eat the plant--the leaves and stems. The adult beetle is about 3/8 inch long, yellow, and with black lines on the wings. The larva grows to about 1/2 inch long, is pinkish-red with black spots on its side. This insect overwinters as an adult in the soil. Plowing gardens in the late fall can help reduce the numbers. This insect is resistant to many of the conventional insecticides!



Spotted Cucumber Beetle--The 12 spotted cucumber beetle or Southern corn rootworm adult is a slender, greenish-yellow beetle with 12 spots scattered on its back. It is a major pest of cucumber and other vine crops in Virginia. The adult beetles chew holes in the leaves and also can attack new shoots. The larvae are in the soil and tunnel through the roots and cause wilting and yellowing of the plant. Late planting and mulching have been effective in reducing damage by this beetle. If wilting occurs, be certain to check for feeding by this pest.

