

TOBACCO INSECTS

An Aid to Identification and Control



1. TOBACCO WIREWORM



2. CUTWORM



3. HORNWORM



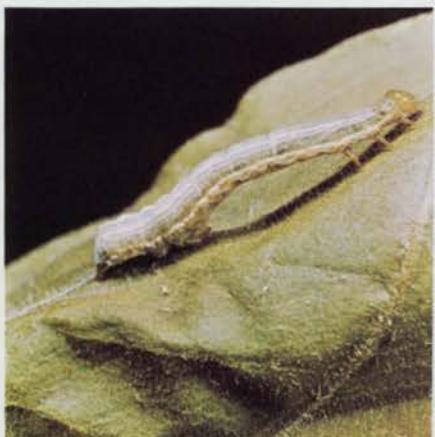
4. VEGETABLE WEEVIL
Upper - Larva
Lower - Adult



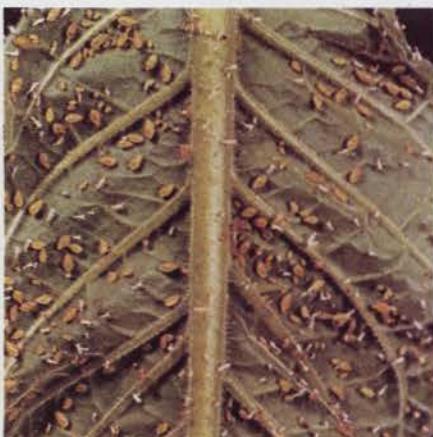
5. BUDWORM
Left - Damage to Leaf
Right - Damage to Bud



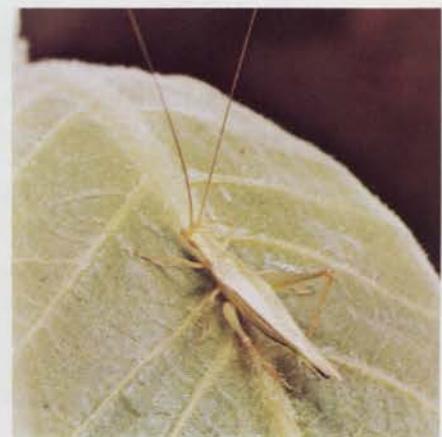
6. FLEA BEETLE
Upper - Damage and Adult
Lower - Adult



7. LOOPER



8. APHIDS



9. SNOWY TREE CRICKET

Tobacco Insects

An Aid To Identification And Damage

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1. **Wireworms**, the larvae of several different species of click beetles, cause injury to newly set tobacco plants by feeding upon the roots and boring into the underground stem. Stem injury frequently results in stunting or plant death. Wireworms are slender, round, or slightly flattened, yellowish-brown to deep reddish-brown in color, from $\frac{1}{4}$ to an inch or more in length when full grown, and are slick and tough to the touch. Depending upon the species, it requires from one to three or more years to complete a single generation. Tobacco following established grasses, corn, or tobacco is most apt to be injured by wireworms.
2. **Cutworms**, the larval stage of several species of moths, feed by chewing or cutting off leaves or entire plants near or slightly below the soil surface. Such injury can occur within the plant beds, but more often occurs within a few days following transplanting. Most feeding occurs at night. During the day, the worm can be found rolled or coiled in the soil near the damaged plant. Depending upon the species, the larvae may be reddish-gray to grayish-black in color and are about two inches in length when full grown. Cutworms may overwinter as partially grown larvae or hatch from eggs laid by emerging or migrating moths in the early spring. There may be one or two generations each year.
3. **Hornworms**, the larval stage of either of two species of *Sphinx* moths, may consume large areas of leaf tissue during the summer months. Both the tomato and tobacco hornworms will readily feed upon tobacco, but it is the latter species which most commonly attacks Missouri tobacco. Female moths deposit their greenish-pearl colored eggs singly on the underside of leaves. The eggs hatch in a few days into the tiny hornworm larvae which begin their feeding upon leaf tissue. About four weeks are required for the hornworm larva to complete its growth, at which time it is about three inches in length. The mature larva pupates within the soil, and two to three weeks later the adult moth emerges. There are two generations each year.
4. **Vegetable weevils** are not found within the central and northwest Missouri tobacco producing areas, but the pest is known to occur in the southern tier of counties bordering Arkansas. Both the adults and the greenish-gray larvae may cause foliage damage in plant beds and on transplants.
5. **Budworm and corn earworm**, the larva of two closely related species of moths, cause injury by chewing upon the leaves and within the buds. Color varies from green to tan to red-brown with longitudinal stripes on the top and on both sides. Both species may be present from mid to late season growing stages. The feeding of small larvae within the folded bud leaves results in holes and distorted leaves. The larger larvae feed upon maturing leaves, often consuming large areas of leaf surface. There are usually two generations each year damaging tobacco.
6. **Flea beetles** cause injury by chewing small holes in the leaves on the lower portion of the plants. The adults overwinter around field margins and move into plant beds or newly transplanted fields. The adult is a very small, brownish-black, jumping beetle. Eggs are deposited in the soil around the plants, the larvae feed upon the smaller roots, and the pupal stage is in the soil. There are two or more generations each year.
7. **Cabbage looper**, and possibly other species of loopers, cause damage by chewing ragged or irregular shaped holes in the leaves. The larvae are light green in color with numerous white lines running the length of the body. The body gradually tapers toward the head. They crawl with a looping or measuring worm movement. Larvae are usually found on the underside of the leaves. There are several generations each year, but most of the problems occur during the early summer.
8. **Aphids**, particularly the green peach aphid, cause damage by sucking sap from the leaves. Injury may appear as a shortage of nutrients accompanied by a downward rolling or puckering, and eventually a chaffy leaf. These small, light greenish-yellow insects are found in colonies on the underside of the leaves. Both winged and wingless forms are asexual and bear their young alive. There are many generations each year. For some unknown reason, this pest has not, as yet, become a serious problem on Missouri tobacco.
9. **Tree crickets**, other species of *long-horned grasshoppers*, and *true grasshoppers* cause damage by chewing holes in the leaves. The adult tree cricket is pale greenish-white in color with a body about one-half inch in length. Besides their chewing damage, the adult female deposits eggs in the midrib, often resulting in leaf breakage from winds. This group of insects moves into tobacco from the surrounding vegetation.