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## Armyworm Damage to Field Corn, Small Grains, Grass Hay and Pasture - 2001

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So far this year, there have been several reports of True Armyworm, *Pseudaletia unipuncta*, damage in Addison, Chittenden, Caledonia, Franklin and Orange and Washington Counties. Crops affected have included field corn, grass hay and pasture crops. Several of these reports have indicated severe damage with "hundreds to thousands" of larvae feeding in a field. True armyworm larvae primarily feed on grasses. An alfalfa/grass field in Shelburne, Vermont had all the Timothy almost entirely stripped. The alfalfa was untouched (see Figure).



**Description and Life Cycle:** According to UVM Factsheet EL 56 by MacCollom and Nielsen, the larvae are "nearly hairless, smooth, striped caterpillar, varying in color from green to brown. The stripes, one along each side and a broad one down the back, are dark, often nearly black. The stripe along the back usually has a fine light-colored broken line running down its center. The head is pale brown with a green tinge and mottled with dark brown." Larvae will range in size from 1/2 to 2 inches in length. They typically feed at night and during the day, they'll drop to the soil surface and burrow under the debris.

In Vermont, true armyworms overwinter as partly grown caterpillars and complete development in May. Two to three weeks later, adults emerge and lay eggs two to three weeks later. There are usually three generations in a season. Often, but not always, it is the last generation that does the most damage.

Natural predators and disease normally keep armyworm populations in a controllable state. However, cool, wet weather during the spring favors development of armyworms and retards development of the disease or the parasites. Although May was warm and dry this year, the intermittent cool, wet conditions in late May/ early June, as well as the delay in first cut, may have favored the armyworm over its natural predators.

**Damage:** True armyworm larvae prefer grasses including corn, small grains and grass hay and pasture crops. They first strip the leaves and then consume midribs, seedheads and finally stems. A large population can strip a field in a couple of days. When the field is eaten, they "march" to adjacent fields, thus, their name, armyworm.

In corn, armyworms usually confine their feeding to the leaf margins except when populations are very large, then they consume all the leaves except for the tougher midrib. Feeding starts on the lower leaves and as these leaves are eaten, the armyworms move to the upper leaves. Look for ragged holes and pellet-like droppings in the whorls and scattered on the ground. Larvae do not tunnel into the stalk and they do not feed on the growing point, at least on larger plants.

Cornfields that are most susceptible include fields that are either minimum or no-tilled into grass sod or fields infested with grass weeds. Cornfields that have grassy weeds sprayed

postemergence with a herbicide should be closely scouted as the weeds begin to die. Armyworms, if present, will move immediately to the corn. This happened to one field in Franklin County.

**Control:** Insecticide applications to control armyworm should be judiciously applied and a decision to control armyworm with an insecticide should be based on crop size or stage, armyworm size, crop damage and anticipated movement of larvae from one field to another. Besides the expense of application, insecticides could also kill natural insect predators that normally control armyworm.

*Corn Already Infested* - According to Cornell recommendations, an insecticide should only be applied to corn in the whorl stage if most plants are showing damage and about three larvae per plant are found. Penn State recommendations are to treat only when 25% of plants are damaged or killed. Larvae size is also important. If armyworms are less than 3/4 inch in length they still have another week or so to feed. *If larvae are mostly 1 1/2 inches in length, then they are nearly done feeding and very little additional leaf injury will occur so the field should not be sprayed; it is too late for the insecticide to be of any economic benefit.*

*Corn Adjacent to Infested Fields* - A border 20 to 40 feet wide treated with insecticide will prevent armyworms from invading from an adjacent field. Again, if a large majority of the larvae are longer than 1 1/2 inch in length, they are nearly done feeding and will soon pupate, so there would be little benefit to spray.

*Grass Hay and Pasture Fields* - There is little to no information on threshold levels for grass hay fields. Based on small grain recommendations, I suggest using 4 to 5 larvae (less than 3/4 inch in length) per square foot. Be sure to check under debris as well as on the plants for larvae. If the field is cut as a control strategy, be sure to continue monitoring surrounding fields and regrowth. If there are near by corn or small grain fields, it may be prudent to spray a 20 to 40 foot border to kill invading larvae.

*Alfalfa/grass mixtures* - Armyworm will only start eating alfalfa when all other resources are consumed. In a mixed stand, the grasses will be preferentially eaten.

*Available Insecticides* - According to Jon Turmel, State Entomologist with the Vermont Department of Agriculture, Food and Markets, the following products available and labeled include the following crops:

- **Corn** - carbaryl (Sevin), lambda-cyhalothrin (Warrior) or permethrin (Ambush, Pounce)
- **Small grains** - carbaryl (Sevin) or lambda-cyhalothrin (Warrior)
- **Grass hay or pasture** - carbaryl (Sevin)
- It is too late for Bt products
- It is best to spray late in the day since larvae are active at night
- *Be sure and read the label for proper rates and harvest/grazing restrictions*

Again, if possible, avoid and insecticide application unless absolutely necessary.