

Armyworm – Here We Go Again in 2007!

There have been several reports of True Armyworm, *Pseudaletia unipuncta*, damage in Addison, Caledonia, Franklin and Orange Counties this year. 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 although, from our experiences from 2001 the last severe year for this insect, we learned that other non-grass crops will be eaten when no grasses are available.

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.

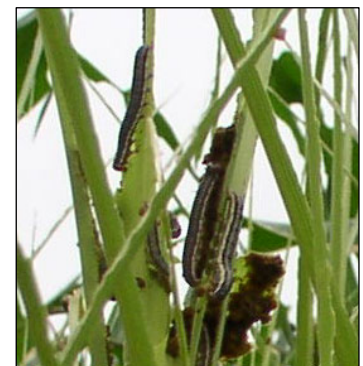


In most years, true armyworms overwinter as partly grown caterpillars and complete development in May. Two to three weeks later, adults emerge and lay eggs two to three weeks later. There are usually three generations in a season. Often, but not always, it is the last generation that does the most damage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

From our experience in 2001, we know that adults can fly in via storms and lay eggs to initiate the larval march. This is most likely what happened in 2001 and perhaps has happened again this year. Natural predators and disease normally keep armyworm populations in a controllable state. However, a large population of larva introduced via immigrating adults could overwhelm our natural predator system.

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.

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 nearby 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 Cary L Cary Giguere, Agrichemical Management Section Chief, Vermont Agency of Agriculture, there are many products available for use on Field Corn but there are not as many options for Hay and or Alfalfa. Products labeled for use on mixed stands of alfalfa and grasses in Vermont include the following:

	<u>EPA #</u>
Agrisolutions Malathion ULV [Agriliance LLC]	67760-34-1381
Fyfanon ULV [Cheminova Inc]	67760-34
AllPro Carbaryl 4L Flowable [Value Garden Supply LLC]	45735-25-769
Malathion 57 EC [Loveland Products Inc]	34704-108
Mustang Insecticide [FMC Corp Agricultural Products Group]	279-3126
Mustang Max Insecticide [FMC Corp Agricultural Products Group]	279-3249
Tombstone Helios Insecticide [Loveland Products Inc]	34704-978
Tombstone Insecticide [Loveland Products Inc]	34704-912
Respect Insecticide [BASF Corporation]	279-3249-7969

An organic product, **Entrust**, has just received special approval for application to grasses and legumes. Be sure and have the supplemental label when applying these products.

Three points to keep in mind if using an insecticide:

- 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
- Use insecticides that are least toxic to beneficial insects such as honeybees

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