

THE FORAGER

Agronomics with livestock in mind!

Insects & Winter ~

Many northern areas have experienced outbreaks of the insect *Noctua pronuba* or the greater yellow underwing moth. *Noctua pronuba* caterpillars (often referred to as “winter cutworms”) remain active well into the fall, feeding on alfalfa, winter wheat, and lawns. They can be seen moving en-masse across roads and into homes, and even making pets sick. These caterpillars can make it through the winter and feed again next spring. *N. pronuba* is one of the most common Noctuid moths in Europe, where it is a frequent garden and crop pest. It is related to the cutworms we find in field crops. The first *N. pronuba* moths in North America were found in Nova Scotia in 1979. How it got into North America is not known. Adults of this species are strong night fliers and their larval (caterpillar) host range is broad, including vegetable crops alfalfa, grasses, etc. This insect spread rapidly across Canada, into the eastern United States over time. It is common to see adult moths around lights in the evening between June and October. Research indicates that there is [typically] one generation/year, although based on the extended adult flight, the single generation is not well-synchronized or perhaps there are two generations.

Of interest (and concern) is *N. pronuba*'s unusual ability to remain active even under very cold conditions. They have been known to crawl on the snow in winter (hence the name “winter cutworm”). In recent years, reports have been submitted to various extension and research offices (in northern climates) about the large number of caterpillars found in fields of alfalfa, winter wheat and rye cover crop. These sightings occurred in October and November, and evidence of heavy damage was noted in some locations. It was also reported that caterpillars moved like a wave between fields, leaving a path of destruction as they crawled. Reports of this pest have, in some areas, continued into December, January and even February, with caterpillars emerging from the snow on warmer days!

Some alfalfa and small grain fields have been treated, using normal armyworm thresholds as a guide. It is recommended that any spraying application take place in the mid-afternoon on warm(er) fall days, when the caterpillars appear to be most likely to crawl across freshly-treated foliage. Use of various pyrethroids, as well as Sevin, has shown improved control and results. Based on what is known about the life cycle of this pest, caterpillars will pupate in early May, so that corn and soybean planted in northern areas will not be at risk of damage.

Keep an eye out this fall and winter for these cold-hardy pests, and report any findings to your local extension office! They may not be seen until the weather warms in the spring, at which time a producer should consider some form of treatment.

Another pest to be aware of is the Asiatic Garden Beetle (AGB), known to overwinter in Michigan and other northern states. AGB, as the name implies, is native to Asia, first appearing in the USA in 1921. Michigan and Indiana appear to be at the westernmost edge of its current distribution. A grub species, AGB feeds on flowers, vegetables and field crops. Adult beetles defoliate crops, while larvae feed underground on emerging

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seedlings and roots, reducing stand and stunting plants. In its behavior, AGB is more like Japanese beetle than June beetle, since both the grubs and adults feed on plants. They reproduce a single generation/year with eggs laid in clusters from July into early fall. Grubs are present from July through winter and into the following spring, reducing field crop yields as grubs feed in the spring.

AGB has been reported as a corn pest in Virginia, as well as other areas of the country, and identified as the cause of significant stand loss in corn fields throughout the northeast, mid-Atlantic and Midwest states of Indiana and Michigan.

Grubs move down in the soil and overwinter, then begin to pupate in May, with the first adults emerging in June. Some things we do know about AGB: (1) AGB grubs are more common in fields with sandier soil; (2) early-planted fields will be exposed to grub-feeding longer; (3) there are no economic thresholds for AGB in corn, but the threshold for another grub, European chafer, in corn is estimated at 4/sq foot; (4) seed treatments may suppress AGB, but are not 100% effective.

AGB is one more species to add to the list of damaging early-season grubs, which have the ability to overwinter even in cold climates! The apparent increase in this type of pest can be attributed to: (1) the use of reduced and no tillage, so grubs are not injured or brought to the surface during plowing; (2) mild winters that increase grub survival into spring; (3) fall and spring annual weeds growth, which may provide a “green bridge” (food source) for grubs when the crop isn't present; (4) earlier planting dates that expose emerging seedlings to grub feeding; (5) new grub species – including European chafer and AGB - moving into the region.

Being informed and proactive in dealing with these pests is important in helping to maintain the overall integrity and yield – potential of our forages.

(Edited from an article by DiFonzo and Howard, Michigan State University)



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