

PLANT DISEASE AND INSECT ADVISORY



Entomology and Plant Pathology
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Vol. 5, No.15

Website: <http://entopl.okstate.edu/Pddl/advisory.htm>

June 30, 2006

Soybean Early-Season Defoliator Problems Phil Mulder, Extension Entomologist



Like many pests in 2006, blister beetles and other defoliators have started creating early damage on soybeans and other crops. Many growers and consultants have noticed the general lack of grasshopper populations this year. Of course it is still early, but much of that decrease in populations could be caused by a couple things. First, increased use of Dimilin® in many pasture situations has likely reduced grasshopper populations. In addition, many blister beetle species utilize grasshopper egg pods as a food source for their maturing larvae. The consequences of this benefit derived from blister beetles may now be

surfacing in the form of increased populations of adult beetles in soybean, alfalfa and other crops. Recently, one grower in Nowata County reported an entire field of soybean was totally defoliated by blister beetles. Somewhat fortunately for him the soybeans were not very far along and replanting was a viable option. Some of those soybeans may actually recover and begin to grow new leaf material; however, they will be dramatically behind and likely not make a strong plant for pod production.

Generally damage from blister beetles on soybeans is localized, with swarms of beetles causing economic problems. Very rarely is more than spot treatment required. If damage is approaching 30-40% defoliation up to one week before bloom then treatment may be necessary to salvage the crop. Once the bloom stage has begun and until pod fill is complete, less defoliation (15-20%) can be tolerated.

Scouting for blister beetles is extremely unreliable since they are very mobile, transient in nature and somewhat stealthy to count. Finding the actual swarm that did the damage would be rare. The most obvious signs of damage include complete defoliation of one or more rows, with small, dark droppings on the ground where the plants occurred. If seedlings are cut at the soil surface, then it is likely due to cutworms, 3-cornered alfalfa hoppers or lesser cornstalk borers. If silken threads are present on the plant and used to tie leaves together, then webworms are likely the causative pest. Additional external signs of extensive defoliation within leaf margins are likely

due to a number of different caterpillar pests, including green cloverworms, velvetbean caterpillar, or loopers. Generally, these pests also do not occur in populations significant enough to justify treatment; however, the same guidelines for defoliation mentioned earlier should be followed.

Many insecticide options are available for insect control in soybeans; however, careful consideration should be given to the primary and secondary causes of the problem. If caterpillars are the only concern, then applications of Dimilin®, Tracer® or some formulation of *Bacillus thuringiensis* should provide adequate control while preserving beneficial organisms. If the problem is caused by a combination of caterpillar pests, beetle pests and grasshoppers, then a broad spectrum treatment (Warrior®, Proaxis®, Sevin®, etc.) would be more appropriate. Please, give careful consideration to defoliation guidelines and do not treat unnecessarily, since this can destroy beneficial populations. It will become more critical to protect the plant later in the season, when pod formation and filling are occurring and many of the beneficial organisms can help growers begin that task.

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Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Robert E. Whitson, VP, Dean, and Director for Agricultural Programs, Oklahoma State University, Stillwater, Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Dean of Agricultural Sciences and Natural Resources.