

PLANNING FOR ALFALFA SEED PRODUCTION AND GRASSHOPPER CONTROL

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In last month's report I presented the importance of getting an early start on Alfalfa Seed Chalcid control if alfalfa seed production is planned. In addition to Alfalfa Seed Chalcid, grasshopper control should be a major focus of the pest management program in late spring (May and June). This is the time when most grasshoppers hatch from overwintering eggs that have been laid in soil during the previous fall in grassy or weedy areas along field borders. Weather can play a key role in control of this pest. This season, timely moisture throughout many areas of the state may help to limit numbers.

As a general rule, keeping field border areas mowed can help to reduce available habitat and thus, lower the potential for problems with grasshoppers. Although grasshoppers may defoliate alfalfa in areas near field borders, they pose a much more serious problem in seed production because they often feed primarily on fruiting structures once alfalfa is in bloom and may cause virtually 100% loss of the seed crop near field margins.

Life Cycle. Grasshopper species that damage field crops such as alfalfa typically complete one generation per year. In Oklahoma, three of the most common species are the differential, two-striped, and red-legged grasshoppers (Fig's 1, 2, and 3).



Figure 1. Differential Grasshopper



Figure 2. Two-striped Grasshopper

Sampling and Control. Grasshopper population densities are typically estimated while walking in areas near field margins. As grasshoppers fly out of foliage, numbers per square yard are estimated. The listed economic threshold of 15-20 hoppers/sq. yd. for

spraying to control grasshoppers in alfalfa forage production does not apply to seed production because; after alfalfa begins flowering an infestation level of 15-20/sq.yd, may result in seed losses greatly exceeding the cost of



Figure 3. Red-legged Grasshopper
multiple reasons for this timing.

control. In addition, insecticide choices and rates that could potentially reduce population levels of grasshoppers during this timeframe may be quite damaging to pollinators.

Therefore, it is crucial that field border areas around seed production fields be scouted in early June to detect populations of small nymphs. There are

First, if insecticide applications are needed to control grasshoppers, they can be made before alfalfa blooms and pollinators have begun to work. Secondly, grasshoppers may be controlled in border areas without need of spraying entire fields. Finally, if large numbers of small grasshoppers are found and spraying is necessary, efficacy of insecticides will be much greater than if sprays are applied later in an attempt to kill large nymphs and adults. Conditions may vary across the state, so scouting is crucial to identifying grasshopper numbers.

Additional information on insecticides registered for control of grasshoppers can be found in OSU Extension Facts EPP CR-7150.