Grasshoppers

Looks like it could be a bad year for grasshoppers. If you have been out any at all you already know that they are everywhere. There is a assortment of grasshopper species. The egg hatch typically ends by late June. A couple of weeks ago, the nymphs were no bigger than the 2nd instar, but will be molting 4 to 5 more times. They will become adults in about 40 to 60 days. Right now the pastures, crp grasses, ditches still have a lot of green plants for the grasshoppers to feed on, which keeps them out of the field crops in large numbers. We can hope that with our warm humid weather the grasshoppers will become infected and die from a naturally occurring entomopathogenic fungus, *Entomophthora gylli*. When they do become infected they move to the top of a plant or other object and die. The dead grasshopper has a characteristic pose with the front and middle legs grasping the object and the hind legs are extended out.

As the grasshopper continue to grow, they become more difficult to control. All of the Extension publications recommend control measures begin while grasshoppers are still young nymphs and to treat along the hatching sites (roadsides, fencerows, etc.). The advantages to treating now is that 1) fewer acres are treated and use less insecticide, 2) may prevent excessive damage to crops, 3) killing the nymphal stage the grasshoppers are not able to fly and move around, and 4) the young nymphs are more susceptible to insecticides than are the larger nymphs and adults. But, if you are the only one treating then your acreage may be re-infested and overrun when grasshoppers can fly and migrate. The ideal situation would be to coordinate an area-wide spray program among producers within and across counties.

Control Options

Insecticide sprays and baits are our primary options for controlling grasshopper infestations. Baits are effective, but limited to those grasshoppers that are attracted and feed on the bait. Insecticide sprays can be used for larger acreage and are more economical. Canola oil added to the insecticide spray has been shown to improve control by making the treated plants more attractive to the grasshoppers. Numerous organophosphate, pyrethroid, and other classes of insecticides are labeled for grasshopper control in field crops. Each product is labeled for specific crops or non-cropland usage and should be consulted before use. Another insecticide that is labeled for

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select crops and non-cropland areas is Dimilin 2L, a bio-insecticide. This product is an insect growth regulator that interfere with grasshopper nymphs ability to molt to the next life stage. Since adults do not molt, this product is only effective against the small to medium sized immature grasshoppers. It does have a long residual activity.

Two other products, that has a new chemistry insecticide, are Besiege and Prevathon. Each of these products contain the insecticide, chlorantraniliprole, which provides very good control of grasshoppers. Cody Hurdt, DuPont representative, says that when this insecticide is ingested it causes the grasshopper’s mandibles (=jaw and teeth) to lock down, preventing the grasshopper from eating. The grasshopper will then die from starvation.

Prevathon only has this insecticide as its active ingredient, but Besiege is a chemical mixture of chlorantraniliprole with lambda-cyhalothrin (pyrethroid insecticide). Both products are labeled for use in several crops and for range, pasture, and forage and silage production of grass. But, neither of these products are labeled for use in non-cropland areas. The labeled rate of Privation is 8.0 to 20 fl. oz./A with no more than 4 applications per crop year and a minimum interval between treatments at 7 days. Since Besiege also includes a pyrethroid there are more restrictions for spray applications. The labeled rate is 6.0 to 10 fl. oz./A with a minimum interval between applications at 7 days and a total amount per yet to exceed 18.0 fl. oz. of Besiege or 0.06 lb active ingredient (ai) of lambda-cyhalothrin products or 0.2 lb ai of chlorantraniliprole containing products per year. I have not included all of the restrictions for either of these two products. So, be sure to read the labels before using.

**Spider mites**

I have a corn seed treatment trial in Lubbock and the field never developed natural infections of spider mites. So, about 3 weeks ago I began contacting individuals looking for corn fields with mites, so I could infest the test plots. John Quillin found a field north of Dumas and Greg Cronholm also had a field east of Plainview. So, spider mites did survive the wet raining conditions in May and some corn fields are infested or could become infested as wheat fields are drying down. I am not aware of wide spread infestations of spider mites in corn at this time. But, there may be a field here and a field there with mites.

**Fall armyworms**

Pat Porter, Extension entomologist, at Lubbock is reporting that fall armyworm trap catches in Lubbock has declined this past week. Also, trap catches of fall armyworm moths have declined the last two weeks in Hale, Swisher, Randall, and Moore counties. Trap captures in Dallam, Deaf Smith, Hartley, Sherman, Hansford, Hutchinson, Ochiltree, and Lipscomb counties have been low.

However on June 18, when we were collecting mite infested leaves from the field east of Plainview, it was common to find a fall armyworm egg mass on a leaf. This egg laying could be occurring in area corn and grain sorghum fields, but subsequent larval infestations to early vegetative grow stages usually do not cause yield losses and probably should not warrant an insecticide application.

2015 fall armyworm pheromone trap captures (moths per week) at Lubbock.

![Fall Armyworm trap capture data, courtesy P. Porter](image-url)