



June 30, 2017

## GRASSHOPPERS ARE BACK

Significant populations of grasshoppers are being reported in the area and bordering crop fields in several parts of Nebraska. They have already prompted replanting in a few soybean after soybean fields in the county. For crop damage there are four major species that are likely to cause issues and control may or may not be warranted. These insects will continue to be a problem for the rest of the summer and the bigger they get, controlling them becomes harder.

It's best to try to control the grasshoppers while they are concentrated in the border areas before they spread into the crops and before they become adults and become harder to control. There are only a few insecticides labeled for non-cropland and our crops. You can find detailed information at: <http://cropwatch.unl.edu/2017/scout-field-borders-grasshoppers>

Only four of the more than 100 species of grasshoppers found in Nebraska normally damage field crops. These species are the two-striped, red-legged, differential, and migratory grasshoppers. (For a detailed guide on identifying these four species, see Grasshopper Identification Guide for Cropland Grasshoppers - Summer Feeding Species, EC1569). These species feed on a wide range of plants and are most often found in mixed habitats that include broadleaf weeds.

Because grasshoppers move into cropland generally from untilled areas or field edges surrounding crop fields, scout and, if necessary, treat these adjacent untilled areas first. If grasshoppers have already invaded the field, also sample field areas to determine if control is warranted. The hoppers are most likely to move from these areas to adjoining crops when their food supply in these borders dries up.

Scouting Tips: Estimating grasshopper densities is difficult and can only be done accurately with some practice. The best method for field borders or hatching areas is the square foot method.

Randomly select an area several feet away and visualize a one square foot area around that spot. Walk toward this spot while watching this square foot area and count the number of grasshoppers you see in or jumping out of this area. Repeat this procedure 18 times and divide the total number of grasshoppers by two. This will give you the number of grasshoppers per square yard (9 square feet). Counting sites should be chosen at random and include varied vegetation.

To sample for grasshopper densities within fields — where grasshopper density will be lower — use the same method except visualize and count the hoppers in a square yard area. Because of the difficulty of seeing hoppers in this larger area, counts will be somewhat less accurate. Average your estimates to get the number of grasshoppers per square yard.

Crop value makes a difference and at \$3.00 corn there is not a lot of enthusiasm to have to spend more money this year. A “light” population or 5-10 per square yard in field borders or zero to 2 per square yard in the field are non-economical threshold amounts. For more information on Grasshopper and Japanese Beetles go to [cropwatch.unl.edu](http://cropwatch.unl.edu)

## CONTROL MEASURES

Grasshoppers are easiest to control before they become adults and have fully developed wings. Numerous insecticides are labeled and effective for grasshopper control on various crops. They are summarized on the UNL Department of Entomology grasshopper web page.

After grasshoppers become adults control success will be much more variable. If a range of rates is listed for a given insecticide, generally it's best to use the higher rates once adults are present. Always follow the recommended label rates, application directions, and restrictions.

Because grasshoppers do not like to enter dense plant canopies, most damage will be limited to field edges. Border treatments often are used to protect cropland from grasshoppers. In years with extreme populations, border treatments may not provide season-long control. A border spray should be effective for at least 7-14 days, depending on re-infestation pressure. Also, the residual activity of the treatments will vary with chemical and environmental conditions. It is important to monitor the border areas and crop margins after treatment to make sure grasshoppers do not reenter the field. Be sure to read and follow harvest and grazing restrictions when spraying borders adjoining cropland.

When treating borders, it is often necessary to treat the edge of the crop to reduce hopper numbers that have already moved into the field margin. One of the biggest problems with these treatments is that only a few insecticides are labeled for both crops and the surrounding areas (rangeland/pasture or non-crop areas).

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