

## High numbers of grasshoppers likely

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Large areas of rangeland in the western half of Nebraska are at high risk for serious grasshopper infestations this year, University of Nebraska-Lincoln entomologists say.

Ranchers in these high-risk areas should be prepared to monitor the build-up of grasshopper densities during the hatching and early development periods from mid-May through June, said Bob Wright, entomologist in the university's Institute of Agriculture and Natural Resources.

The high risk category is based on 2009 surveys conducted by the U.S. Department of Agriculture's Animal and Plant Health Inspection Service. Numbers of adult grasshoppers last year are an index of the number of eggs laid, which is the overwintering stage of the most damaging species, Wright said.

Even though the potential is high in these areas, the actual impact of grasshoppers will be determined largely by two factors:

**Food availability**—Immediately after grasshoppers hatch from their eggs, they have few fat reserves and are vulnerable to cool, wet weather. If they can't feed readily during these early stages, high mortality will result. Since grasshoppers hatch over an extended period, only some of the hatch may be affected; however, this mortality can be significant enough to reduce heavy populations below threshold levels in many areas.

**Rainfall**—In areas with ample rainfall, fewer problems will materialize because of the increased grass growth, resulting in less pressure for grass. Dry conditions that limit grass growth result in a greater value for the available forage and a greater need to manage grasshopper populations. Healthier, more vigorous grass growth equals fewer grasshopper problems.

If grasshopper populations readily persist through the early hatching period and dry conditions limit grass growth, there likely will be widespread areas with serious grasshopper infestations, and control may need to be considered, said Jeff Bradshaw, entomologist at UNL's Panhandle Research and Extension Center at Scottsbluff.

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Bradshaw recommends control with the reduced agent/area treatments, or RAATs, program. The RAATs program has been widely used and ranchers have been very satisfied with the control levels they've seen.

RAATs consists of spraying a swath and leaving a swath untreated so that only half the treatment block is sprayed, reducing treatment costs. Any of the three insecticides registered for rangeland grasshopper control can be used, but Dimilin has been used almost exclusively with this program in Nebraska.

The longer residual of Dimilin (21-28 days) allows time for grasshoppers to move from the untreated areas into the treated area and contact the insecticide.

The overall effectiveness of control may be reduced slightly with this method, but the cost will be reduced by 50 percent or more. A major cost determinant for using RAATs is the size of the treatment block—larger blocks are much more efficient for applicators to treat. If treatments are warranted, ranchers are urged to work together to treat larger areas to increase the efficiency and reduce the cost of treatments.

For more information visit the [UNL Department of Entomology](#)'s Web site on Grasshoppers of Nebraska.