



# Never too early to protect against

By Scott Schell

If your pasture was devastated by grasshoppers last summer, it is never too early to work on a grasshopper management plan.

Grasshopper densities of only 14 per square yard can cause a 30-percent forage loss over the course of the growing season. Grasshoppers will probably re-infest areas this summer if unfavorable weather conditions, like prolonged rain and cold, don't occur just as they hatch this spring.

If your neighbors' properties were also infested, perhaps you can cooperate with them on a grasshopper treatment program this spring. Larger areas can often be treated for less cost per acre and prevent grasshopper re-infestation of treated areas.

## Mid-May to June is Hatch Period

The major grasshopper pest species in Wyoming hatch from mid-May to the end of June. Contact your local county weed and pest control districts (see [www.wyoweed.org/](http://www.wyoweed.org/) for contact information) for advice on survey timing. Investigate the insecticides that are registered for use on rangeland

(malathion, carbaryl, [Sevin and generic] and diflubenzuron [Dimilin 2L], and three pyrethroids are labeled for this use as of 2010) and determine their pros and cons. Learn what this means to your treatment options. For example, Dimilin 2L can be used over foraging honey bees but is a restricted use pesticide (applicator must have license to apply). Obtain cost estimates from pesticide applicators and make sure they are aware of the integrated pest management technique of rangeland grasshopper control called Reduced Area Agent Treatments (RAATs) developed at the University of Wyoming. Learn more about RAATs here: [www.uwyo.edu/grasshoppersupport/Html\\_pages/raats.htm](http://www.uwyo.edu/grasshoppersupport/Html_pages/raats.htm).

RAATs can be used to create barriers around smaller properties. RAATs can dramatically lower the cost of protecting forage from grasshoppers. Brochures explaining RAATs are available at your local University of Wyoming Cooperative Extension Service (contact information at <http://ces.uwyo.edu/Counties.asp>) or county weed and pest control district offices.

A computer program called CARMA (Case-based Range Management Adviser), developed at UW, is available that can help you perform an economic analysis of grasshopper control options for range and crop land based on actual values the landowner can input. It is available at <http://carma.johnhastings.org/>. For larger acreages, CARMA can be used to perform an economic analysis. The bottom line on grasshopper control is cost-versus-benefit, and CARMA can help determine the best course of action and is very user friendly. All of this information and more is

available at [www.uwyo.edu/grasshopper/](http://www.uwyo.edu/grasshopper/)

## Spraying More Effective if in Hatch Areas

Properly protecting crops from grasshoppers often requires costly, fast-acting, potent insecticides. In most cases, grasshoppers threatening crops originate from adjacent roadsides, fence rows, Conservation Reserve Program (CRP) fields, and, sometimes, rangeland. If treatments are carried out when these crop pest grasshoppers hatch in areas outside the fields, control will be much cheaper than applying blanket insecticide applications of labeled products on the valuable crops as the grasshoppers are eating them.

Protecting gardens, ornamentals, and young trees on rural properties is problematic. The best way is to treat the source of the grasshopper infestation before damage occurs. These source areas around farmsteads and suburban areas are often weedy place roadsides, machinery storage areas, alleys, and vacant lots.

Killing adult grasshoppers as they strip your



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# grasshoppers

garden usually doesn't work very well as the odors dying grasshoppers emit actually attract more grasshoppers. Unfortunately, none of the garlic- or pepper-based grasshopper repellents we have tested in the lab and field have proven effective.

Starving grasshoppers have been known to eat sagebrush, yucca, window screens, and evergreen trees, so they are hard to discourage. Products containing neem tree extract did provide short-term protection in experiments, and

insecticides with the active ingredients permethrin and cypermethrin have repellent properties if they are labeled for the plants you want to protect.

If you choose to use any insecticides, always follow the labels to protect yourself and not compound the damage.

Learn about grasshoppers and how to recognize where and when they hatch, and treat them early when they are little and vulnerable before they do perceptible damage.

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