

GRASSHOPPERS, GRASSHOPPERS, — they're everywhere

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Grasshoppers are native insects that provide valuable food for songbirds and upland game birds such as sage-grouse and pheasants. Unfortunately, grasshoppers also can become troublesome pests, eating large, ragged holes in the leaves of garden vegetables and ornamental plants and damaging lawns, pastures, and crops. Rural homeowners and landowners must remain vigilant because grasshoppers can invade from surrounding rangeland and cropland. How many grasshoppers are too many? What are the best ways to control grasshoppers if they become too abundant?

Grasshoppers are always numerous during summer, especially in the eastern prairie counties of Montana where grasshoppers often damage rangeland and cropland. Grasshoppers especially thrive during years when springtime weather is warm and relatively dry. Warm temperatures accelerate grasshopper growth and limited rainfall diminishes the spread of fungal diseases that harm grasshoppers.

Some experts predict that the western U.S. is currently poised for a grasshopper outbreak on a scale last seen in 1985. That year, for reasons that remain unclear, grasshoppers were freakishly numerous. They invaded huge expanses of Montana's cropland and rangeland, destroying crops and leaving little forage for livestock and wildlife. In some places, there were an astonishing 400 adult grasshoppers per square yard of ground. In late summer of 1985, multitudes of starving grasshoppers migrated into shelterbelts (i.e., trees planted to provide a windbreak for rural homes) and residential areas, devouring the foliage and even the bark of many valuable landscape plantings. There were reports of ravenous grasshoppers eating holes in clothing drying outside on clotheslines, gnawing the insulation off wires, and nipping people hard enough to draw blood.



How Many Are Too Many?

In pastures, it is easy to determine whether you have enough grasshoppers to warrant control. Simply count the number of grasshoppers per square yard. If the grasshoppers are nymphs (i.e., immature grasshoppers), control should be applied when density reaches 15 to 20 nymphs per square yard. If the grasshoppers are adults, treatment should be applied when density reaches eight to 10 grasshoppers per square yard. Keep in mind, however, that healthy pastures with adequate soil moisture can sometimes compensate for the feeding damage inflicted by grasshoppers and, therefore, tolerate greater numbers of grasshoppers.

Thresholds for treating grasshoppers in gardens and landscaping plantings are not well-established. This means that to some extent you must determine for yourself how much your garden produce is being impacted and how much aesthetic damage you can accept. We recommend you adopt a tolerant attitude when grasshopper feeding damage is moderate or low.

What Are the Best Ways to Control Grasshoppers?

Prevention and exclusion are the safest ways to manage grasshoppers because these methods do not use pesticides. However, the adults of most grasshopper species have wings that enable grasshoppers to be highly mobile, thus grasshoppers can continually reinvade from surrounding areas. Properties surrounded by natural grassland are at highest risk of invasion.

Prevention: Grasshoppers lay their egg pods in fine gravel, sand, or silt. Disturbing these areas in late summer and fall by deep-raking or hoeing can reduce the numbers of grasshoppers that hatch the next year. For lawns, keep your grass cut short so that it does not attract grasshoppers from neighboring areas. In pastures, proper grazing management that limits the amount of bare ground will inhibit grasshoppers. Soil temperatures will be lower and less suitable to grasshoppers where ground

is covered by live vegetation or a thin layer of mulch (i.e., dead vegetation from previous years that has not yet decomposed).

Exclusion: Agricultural-grade pest netting (for example, Protek50 Insect / Pest Netting) can be draped over valuable shrubs. This netting is sold in large and rather expensive rolls, but the material can be reused for several years. Garden beds can be covered with “row cover” fabric, which allows sunlight and water to penetrate but keeps insects out. Row cover fabric is relatively inexpensive and available at most gardening centers. Row cover fabric can either be laid directly over the garden bed, or draped over some kind of structural support (this is called the “floating row cover method”). Structural supports are commonly metal hoops or raised frames of wood.

Control: Insecticides should not be used to control grasshoppers unless significant damage is occurring. Landowners should also be aware that when grasshopper populations are high, even repeated insecticide applications may be ineffective and exclusion may be a better option. Be sure to read all product labels thoroughly.

For edible crops, insecticides should be selected carefully. Foliage of edible crops can be treated with products containing neem oil and insecticidal soap, a mild and food-safe choice used on many organic crops to deter insects from feeding. Several formulations of Sevin insecticide also can be used to control grasshoppers on food plants. Turf and ornamentals can be treated with some pyrethroid products, such as Tempo SC Ultra.

For rangelands and pastures, insecticide treatments do not need to cover an entire area; insecticides applied in alternating bands that cover 50 percent of the area are usually very effective. Another option is to apply permethrin to a buffer strip around the edges of an area to reduce the number of grasshoppers that migrate in. Be advised, however, that buffers around small areas will be much less effective wherever surrounding pastures and rangelands remain untreated. Dimilin, an insect growth regulator, is effective against immature grasshoppers (not adults!) in pastures and rangeland. Dimilin is a “restricted use” pesticide and can only be applied by a licensed pesticide applicator.

Finally, think about getting some chickens to help control your grasshoppers. Chickens eat tremendous numbers of grasshoppers and convert them into genuinely useful products—fresh eggs and meat. ■

