

# Ask a Specialist: Controlling Grasshoppers in the Yard and Garden

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Large numbers of immature grasshoppers have been spotted in Utah this spring. The best time to control grasshoppers is when they are young, before they have wings and can fly away from insecticide treatments. For best results, organize your neighborhood or local farming/ranching community to work together to treat larger tracts of land. Treating wide areas is a key to success.

In the late summer and fall, adult female grasshoppers lay their eggs in pods in undisturbed soil such as open fields, roadsides, weedy areas, rangelands and boundaries between open space and residential lots. The eggs hatch the following spring and immature grasshoppers, called nymphs, crawl and hop to find green plants to eat. As temperatures warm, soil moisture declines and unmanaged plants dry out. Grasshopper nymphs then move into home yards, gardens and agricultural fields to seek green forage. The best time to treat them is in the early summer as nymphs move from open to cultivated land and before they develop into winged adults. Consider this information for control:

## There are three types of insecticide formulations to treat grasshoppers: baits, dusts and sprays.

### 1. Baits:

Baits are a mixture of an attractive food source, such as wheat bran, with an insecticide. Common baits contain carbaryl, a carbamate insecticide, or spores of *Nosema locustae*, a natural grasshopper pathogen. Baits should be spread evenly throughout the habitat and must be reapplied weekly and immediately after rain or irrigation. Baits are selective in that they only kill grasshoppers and other foraging insects (*N. locustae* will only kill grasshoppers).

### 2. Dusts:

Dusts have short residuals and must be reapplied weekly and after rain or irrigation. Both baits and dusts are easy to apply, but moderately expensive. There are numerous insecticide

sprays that work against grasshoppers, including malathion, carbaryl, permethrin and bifenthrin. An insect growth regulator, diflubenzuron (Dimilin), is available for commercial-scale applications.

### 3. Sprays:

Sprays are less expensive than baits and dusts, but require a sprayer suitable to the scale of application. Sprays will kill on contact or when grasshoppers eat the treated foliage. Check all product labels for allowed application sites. For example, some insecticides can be applied to ornamental but not edible plants.

- For urban sites, apply insecticides along the borders of residential properties and into the open and irrigated lands on either side of the border. There isn't a threshold established for urban lands, but USDA recommends that treatments begin when nine or more grasshoppers are found per square yard on rangelands. A threshold for cultivated lands, including urban and agricultural, would likely be lower. If possible, apply a border treatment to all neighboring properties along their interface with open lands. For best results, work with neighbors to increase the size of the treated area.
- Another option for sensitive edible plants such as vegetables and herbs is to cover them with floating row cover, a lightweight plant fabric, to exclude grasshopper feeding. Covers on vegetables such as squash that require insect pollination, must be opened during the morning hours when pollinators are most active to ensure good fruit set.
- For grasshopper and Mormon cricket-infested agricultural lands and private rangelands, the Utah Department of Agriculture and Food and USDA Animal and Plant Health Inspection Service have sponsored a cost-share program. Contact your local USU county Extension agent to find out about cost-sharing in your area. For more information on community-wide grasshopper control, see the USU Extension fact sheet [here](#).

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