Grasshopper Control In Gardens and Landscapes

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This summer I have seen and received reports of grasshoppers hatching out and the numbers at least in areas around are quite high. Wyoming has over 100 species of grasshoppers. Fortunately, only 4 or 5 of them ever become pest problems. The redlegged, migratory, differential, and two-striped grasshoppers are major pest species, with the differential and two-striped being the main culprits causing damage to ornamental and vegetable plants. Grasshoppers are more of a problem in rural communities, especially if pastures or rangeland, or urban fringe areas that contain large amounts of ground overgrown with weeds and vegetation surround them. Grasshoppers are difficult to control in the urban landscape, but homeowners can reduce their impact using barriers and insecticides, and by selecting plants less prone to damage. All grasshoppers undergo gradual metamorphosis and have three life stages: the egg, nymph, and adult. Grasshopper eggs are laid in the soil in the fall. Most grasshoppers overwinter as eggs and produce only one generation each year.

Grasshoppers eat plants, but most specialize on grasses or broadleaf plants. Hungry grasshoppers like gardens because they have optimal moisture and excellent plant growing conditions that provide an abundant food supply. People become alarmed when grasshoppers suddenly appear and begin feeding on prized flowers, vegetables, and ornamental plants. The distress can turn to frustration when grasshoppers are still seen after plants have been sprayed. In most situations, the spray worked and killed the grasshoppers that were there, but there is simply more grasshoppers moving in to take their place.

The contact insecticides available for grasshopper control have a limited residual activity and will not kill new arrivals after several days. Grasshopper management in the garden and landscape requires patience, and when possible, cooperation with your neighbors. Insecticides work better on small grasshoppers because it takes less active ingredient to kill them. Irrigated yards and gardens are an “oasis” for grasshoppers during the heat of the dry summer months. If preventative control is not possible, the best alternative is to make a border treatment around the yard and garden. Generally, grasshoppers move across areas in ‘jumps’ as they search for suitable food. A homeowner can slow or block their movement by treating all vegetation in a band or border perimeter around the yard and/or garden with an insecticide. Border treatments that are wider provide more effective control. The line of last defense is to directly spray the plants that need to be protected. However, none of the insecticides will totally prevent damage from large grasshoppers because they have to do some feeding to pick up enough insecticide to die. Alternately, baits containing carbaryl (Sevin) can be broadcast around the area. The use of systemic insecticides can give longer control and do not bother beneficial insects. Several botanical and biological products are sold to manage grasshoppers. Nosema locustae is a protozoan microbe that causes disease in grasshoppers. Its resting spores are mixed

into a bait which is then spread in areas with grasshoppers. The grasshoppers eat the bait and microbe spores, which then infect and kill the grasshoppers. Under the best conditions, these products can provide 30-40% mortality of grasshopper populations and under the wrong conditions (low dose, large grasshoppers and high temperatures) will provide little effective control. Beauveria bassiana is another microbe (fungus) disease that can kill grasshoppers if sprayed on plants and they eat the spores.

One other insect, which is showing up in some areas in large numbers, are tent caterpillars. These caterpillars build a web in the canopy and can defoliate a tree in several days is causing some major problems in some areas. If this is the case, the same systemic or contact sprays for grasshoppers will work on these caterpillars.