

Landscape Pests - Grasshoppers

I University of Idaho
Extension
Kootenai County
1250 W Ironwood, Ste 107
Coeur d'Alene, ID 83814

Phone: (208) 292-2525
Plant Clinic: (208)292-1377
E-mail: kootenaimg@uidaho.edu
Web: uidaho.edu/kootenai



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Landscape pests-Grasshopper

Includes many species in the family Acrididae

Pest description and damage Grasshoppers, or short-horned grasshoppers, are related to crickets and katydids. They feed on plants with their chewing mouthparts. They are most abundant in hot dry climates east of the Cascade Range, but do occur on the west side as well. The immature grasshoppers look like small adults, but without wings. Older immature grasshoppers may have rudimentary wing buds that become fully functioning wings in the final molt to adult. The forewings are leathery and meet in a straight line down the back. The hind wings may be clear or have red, yellow or black bands. Body markings and colors may be brown or green, or have ornate patterns of bright colors that vary with the species. Many species make a clicking sound with their wings as they fly. In some areas, especially east of the Cascades, grasshopper numbers can increase to epidemic proportions and when preferred foods are exhausted, grasshoppers move to landscapes to feed. Some species can change to a migratory phase and fly long distances to new feeding areas.

Biology and life history Grasshopper life cycles vary with the species involved. Eggs are deposited when the female pushes her ovipositor into the sand or soil in the autumn. The eggs overwinter in the soil and begin hatching in the spring. There is one generation per year. Spring temperature, excessive moisture, natural enemies and other factors naturally reduce grasshopper numbers.

Pest monitoring Scouting for grasshoppers is based on the number of grasshoppers present in the previous fall, the number that successfully hatch, weather, temperature and presence of natural enemies. In dryland areas, range managers and government agencies conduct surveys to assess grasshopper population levels (i.e., BLM, State Departments of Agriculture, USDA-APHIS and PPQ). Landscape professionals can consult with these agencies or land grant university Extension offices for forecasts in areas of traditionally high grasshopper infestations.

Management-cultural control

Often the sources of grasshopper infestation occur in ditches, surrounding grasslands, pastures and rangeland. Soil cultivation prior to grasshopper egg hatch can greatly reduce population outbreaks. Physical barriers (netting, floating row covers and other crop protective covers) can provide some protection from grasshoppers. In home landscapes, adults can be captured, trapped, then squashed when encountered. Placing trap crops in the home landscape can serve as a barrier to trap and intercept localized grasshopper infestations.

Management-biological control

Natural biological controls of grasshoppers include sage grouse and other wild birds, insectivorous mammals, and protozoans such as *Nosema locustae*. The larvae of several blister beetles prey on grasshopper eggs. Some studies have shown that guinea hens, geese, duck, and turkeys have reduced grasshopper populations in home landscapes, but they can also damage desirable plants.

Management-chemical control See Table 2 in: [Chemical Control of Landscape Pests](#)

Target pest examples	Monitoring & scouting strategies	Home landscape chemical products	Restricted-use chemical products
<p>Grasshopper (Orthoptera: Acrididae) includes: Grasshopper (Orthoptera: Gryllidae) includes: True cricket (Orthoptera: Tettigoniidae) includes: Mormon cricket Katydid</p>	<p>Scout for fresh damage caused by grasshopper and cricket adults and nymphs that appears as general chewing damage to plant leaves, stems and fruit.</p> <p>Scout for the presence of grasshoppers or crickets; since some species have wings and jumping legs, they may take flight as you approach plant.</p> <p>In some regions of the state, these insects periodically become pests when their populations explode, and they deplete preferred hosts in rangelands.</p> <p>Most of these products are contact insecticides that intercept invading pests.</p>	<p>azadirachtin^o carbaryl imidacloprid esfenvalerate fluvalinate pyrethrins^o pyrethroids^p</p>	<p>acephate chlorpyrifos diflubenzuron dimethoate indoxacarb malathion phosmet</p>

For more information

Bush M., C. Wohleb, S. Rondon, T. Waters, D. Llewellyn & L. du Toit. 2013. Blister Beetle: Pest or Beneficial Predator? (<http://cru.cahe.wsu.edu/CEPublications/FS113E/FS113E.pdf>)

Hoyt, S.C. and D.F. Mayer. 1993. Grasshoppers. WSU Tree Fruit Research and Extension Center, Orchard Pest Management Online. (<http://jenny.tfrec.wsu.edu/opm/displaySpecies.php?pn=660>)

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Use pesticides safely!

- Wear protective clothing and safety devices as recommended on the label. Bathe or shower after each use.
- Read the pesticide label—even if you’ve used the pesticide before. Follow closely the instructions on the label (and any other directions you have).
- Be cautious when you apply pesticides. Know your legal responsibility as a pesticide applicator. You may be liable for injury or damage resulting from pesticide use.

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