MANAGING CRICKETS ON YOUR PROPERTY

Hatching crickets

Newly hatched crickets cause minimal damage. It's usually best to wait for hatching to be complete before taking action. Hatching may occur over several weeks depending on the temperatures. Temperature changes and natural predators may also reduce the numbers before treatment is needed. If you do need to treat them, use a contact insecticide suitable for home use or for the specific plants they're infesting. Crickets are unlikely to eat bait at this stage.

Nymphs (first 60 to 90 days)

Report crickets

If you spot Mormon crickets on your property, report them to the NDA via the **Mormon Cricket and Grasshopper Reporting form**.

SCAN TO REPORT CRICKETS

Preventing crickets from entering your property

Crickets may be kept out of your property by using a cricket fence. This is a vertical barrier made of heavy plastic, 20 to 24 inches tall, sealed to the ground and supported by stakes every few feet. The fence may be placed on the outside of existing fences or structures (without sealing vents). Since Mormon crickets cannot fly and the plastic is too slippery for them to climb, they will be forced to go around.

**Note: Most broad-leafed plants and grass will recover from cricket damage, depending on the plant type and how much damage occurred.*

**Note: Do not wrap tree trunks or plants with plastic as this may harm the plant. If using plastic near plants, leave at least a foot of space for air circulation.*

Contact Us

Entomology
mc@agri.nv.gov
Phone: 775-353-3601
Nevada Department of Agriculture
405 South 21st Street, Sparks, NV 89431

MANAGING CRICKETS ON YOUR PROPERTY

Adult crickets (after 90 days)

Effective treatments

Baits are the most effective chemical treatment option. Granular products, sprays and dusts need to make contact with the crickets to be effective. Over-the-counter insecticidal soap may be effective only when direct contact with the crickets are made but does not have an effect on crickets that are not directly contacted by the spray. These treatments may need to be reapplied as the crickets move through the area. Remedies and mixtures of home products like dish soap and vinegar are shown to be effective, but will likely result in damage to your landscaping. Remedies and mixtures of home products may or may not be effective and may even be harmful to pets and landscaping. For large-scale infestations, such as on farms, aerial pesticide applications can be used.

Using bait

Baits are products that crickets eat and can be used for pest control. Baits can attract crickets, but only from a few hundred feet away, not from miles. To keep it safe, place bait away from homes or play areas for children and pets. Always follow the instructions on the label. Placing baits along property lines is generally the best strategy.

Dead crickets

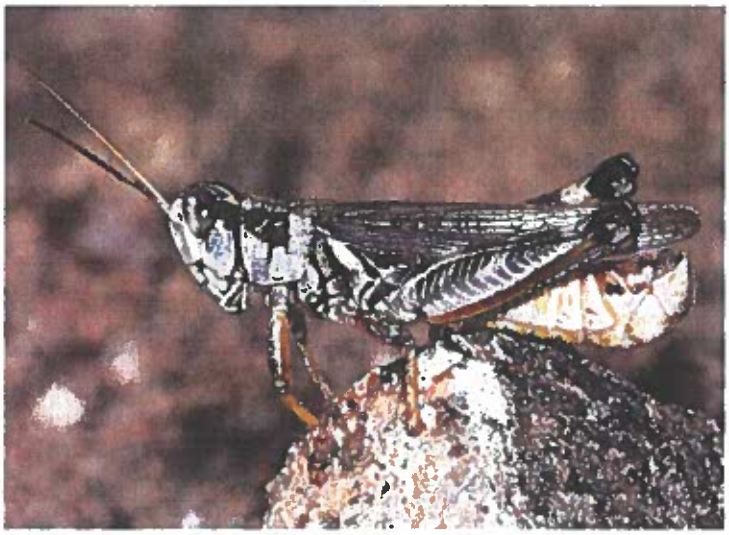
Handling dead crickets

Dead crickets are NOT harmful to humans or animals and do not carry diseases. However, they may attract other crickets. If you have a large number of dead crickets, it's best to collect and dispose of them by composting or burying them.

Pets and crickets

Dead crickets, including those which have been treated, are NOT harmful to humans or animals and do not carry diseases. Pets eating large amounts of live or dead crickets may experience gastrointestinal issues. If symptoms are severe, contact your veterinarian.

Protecting U.S. Rangeland From Grasshoppers and Mormon Crickets



Adult male grasshopper (Melanopus sanguinipes); this species is considered to be one of the most damaging rangeland grasshoppers.

Mormon cricket (Anabrus simplex)

Rangelands in the Western United States are valuable agricultural resources for livestock production and provide essential wildlife ecosystems. Grasshoppers and Mormon crickets are native insects found in rangelands; however, their populations periodically reach outbreak levels and cause economic and ecological losses to rangeland forage necessary for feeding livestock and wildlife, especially during periods of drought. Nearly 400 grasshopper species inhabit the Western United States, but only a small number of them (12 species, in particular) are considered pests, with varying numbers and combinations of species found in each rangeland ecosystem. The Mormon cricket *(Anabrus simplex)* is the only katydid species known to reach outbreak-level populations in the United States.

When outbreaks of these pests threaten rangeland forage, you can request help from the U.S. Department of Agriculture (USDA) to suppress their populations.

Grasshoppers and Mormon Crickets

Grasshoppers and Mormon crickets belong to the insect order Orthoptera. Rangeland grasshoppers are ground-dwelling insects with powerful hind legs that enable them to escape from threats by leaping vigorously. Most species also have wings that allow them to fly relatively long distances. They are sometimes referred to as "short-horned" grasshoppers to distinguish them from katydids with much longer antennae (such as Mormon crickets, which are flightless, shield-backed katydids). Although they do not fly, Mormon crickets walk or jump in large groups made up of millions or billions of individual insects and can migrate great distances.

Both grasshoppers and Mormon crickets damage grasses and other vegetation by consuming plant stems and leaves, harming plant growth and seed production. This reduces valuable livestock forage and can lead to other environmental effects, including soil erosion and degradation, disruption of rangeland nutrient cycles, interference with rangeland water filtration, and potentially irreversible changes in the rangeland ecosystem. In addition, some populations that develop on rangelands can invade adjacent cropland where the value of traditional crop plants is often much higher than that of rangeland grasses.

USDA Rangeland Grasshopper and Mormon Cricket Suppression Program

Through the Rangeland Grasshopper and Mormon Cricket Suppression Program, USDA's Animal and Plant Health Inspection Service (APHIS) surveys rangeland grasshopper and Mormon cricket populations in 17 Western States: Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming. We also provide technical assistance to landowners and managers, deliver public outreach programs, and may work with landowners and managers to suppress grasshopper populations when direct intervention is needed.

APHIS only treats grasshoppers or Mormon crickets upon written request of the landowner and after assessing several factors to determine if treatment will be effective. These factors include, but are not limited to, grasshopper and Mormon cricket densities per square yard, the pest species and its life stage, treatment timing and options, and other ecological considerations. Landowners may also start cooperative local programs and request our assistance when surveys show the potential for large grasshopper or Mormon cricket populations.

Cost Sharing for Suppression Treatments

Federal agencies own or manage approximately 43 percent of U.S. rangeland. The principal managers of these rangelands include the U.S. Department of the Interior's Bureau of Land Management, the Bureau of Indian Affairs or individual Tribes, and USDA's Forest Service. Federal rangelands eligible for cooperative grasshopper or Mormon cricket suppression treatments from APHIS include areas with: widespread outbreaks in progress; developing or incipient populations of grasshoppers or Mormon crickets, that, if treated, would prevent wider outbreaks; and Federal or Trust land borders that, if treated, would prevent economically threatening populations of grasshoppers and Mormon crickets from moving to adjacent private agricultural lands.

When funding is available, APHIS shares the costs of providing suppression treatments on rangelands, per Section 7717 of the Plant Protection Act. On Federal and Tribal Trust rangelands, we pay 100 percent of treatment costs. On State lands, we provide 50 percent of the treatments costs and the State provides the remaining funds. On private lands, we cover 33 percent of the treatment costs, with the State and/or private landowner responsible for the remainder. Cost shares are only available if APHIS conducts the treatments.

APHIS does not have the authority to conduct grasshopper suppression treatments on private croplands. However, we conduct rangeland suppression treatments in areas where federally managed rangeland is immediately adjacent to private croplands. This protects rangeland forage and prevents grasshoppers and Mormon crickets from moving into adjacent crops. In these circumstances, APHIS only treats the adjacent rangeland, and the crop owner is responsible for treating their croplands, if desired. If small amounts of croplands (typically less than 10 percent of the treatment area) are interspersed in a rangeland treatment area, we might treat the entire area to maintain the continuity of the treatments. The insecticide, however, must be labeled for use on that crop. In such cases, the private landowner would pay 100 percent of the cost for treatments conducted on their cropland.

Treatment Options

In 2019, APHIS updated the Rangeland Grasshopper and Mormon Cricket Suppression Program Final Environmental Impact Statement (EIS). The EIS evaluates three options for suppressing grasshopper and Mormon cricket populations in Western States. This document is available on the APHIS website at www.aphis.usda.gov (search for "grasshopper EIS").

APHIS' preferred suppression option is using reduced agent area treatments (RAATs). This option treats less land area overall and uses insecticides at lower rates and volumes. RAATs alternate between treating and skipping (untreated) swaths of rangeland. Skipped swaths often total 50 percent or more of a given area. In this scenario, the insecticide suppresses grasshopper or Mormon cricket populations in the treated swaths while conserving their predators and parasites, as well as other nontarget arthropods, in the skipped swaths.

We have the option to use four insecticides in our grasshopper program: carbaryl, diflubenzuron, malathion, and chlorantraniliprole. A suppression treatment consists of a single application in a given year of one of these insecticides. Each insecticide is registered for use and labeled by the U.S. Environmental Protection Agency (EPA) for sufficient management of rangeland grasshoppers. The insecticide APHIS chooses depends on several factors, including outbreak density, species, population age, climate, weather, forage conditions, economics, and environmental risks.

Each insecticide is very effective and safe for people, animals, and the environment when properly applied. We conduct and post public environmental assessments in each State before taking any actions. We follow all insecticide label directions, along with conditions outlined in the EIS, the environmental assessments, program guidelines, and the treatment request letter.

More Information

Learn more about APHIS' Rangeland Grasshopper and Mormon Cricket Suppression Program on our website or contact your State Plant Health Director (www.aphis.usda.gov/planthealth/sphd).

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