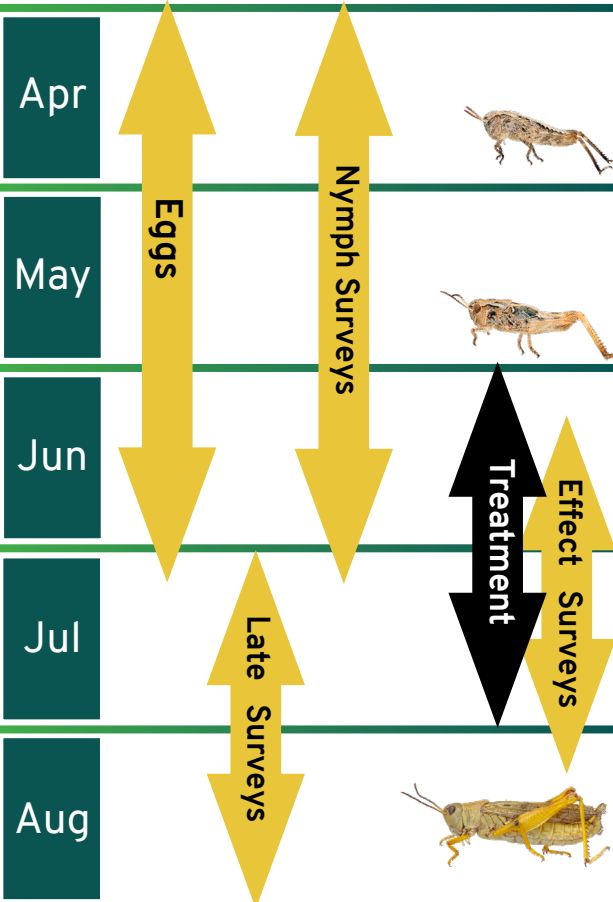


Grasshopper Timeline

Oregon grasshopper season begins in April, when eggs laid the previous fall emerge from the soil. Hatches can last until July depending on elevation, temperature, soil moisture and the specific grasshopper species. ODA nymph (immature grasshopper) surveys last from April to early July to determine local treatment needs. Diflubenzuron treatments, which target only nymphs, should occur late May to late July. Two weeks after treatment efficacy surveys follow to assess treatment success. Late emergence surveys and treatments will be conducted as needed.



How to Report Outbreaks

For Oregon residents, businesses and other parties concerned by grasshopper outbreaks the ODA has set up a system for tracking rangeland grasshoppers- by reporting sightings and submitting observations of potential outbreaks and outbreak species. Once submitted, reports are available to ODA entomologists for data analysis and outbreak tracking.

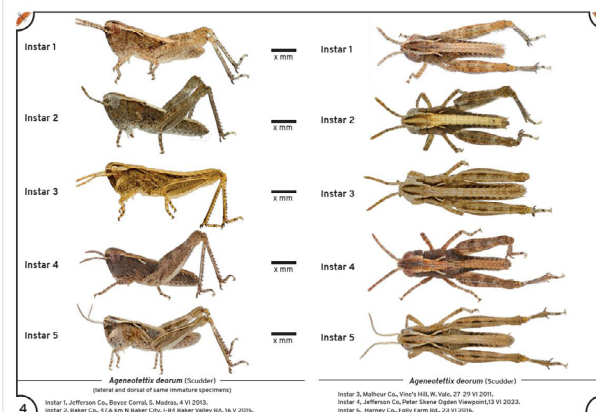
Reports can be made at:

<https://oda.fyi/GHMC>



ODA Grasshopper Guide

To continue support for management of Oregon's rangeland the ODA IPPM entomology lab is nearing completion of a comprehensive identification guide to Oregon's major pest grasshoppers. The booklet, designed as a field guide, will be the first to provide in-depth id guidance for the hard to identify immature (nymphal) life stages of major outbreak species. The printed field guides will be available from July 2024, and will also be available online.



A plate from the upcoming ODA Grasshopper guide

Survey Contact Information

If you have questions regarding grasshoppers or Mormon crickets in Oregon, their control, and their impact on Oregon agriculture or would like more information about the ODA Grasshopper Survey and Suppression programs, including details about eligibility, requirements and scheduling please visit us at:

<https://oda.direct/IP-PMGrasshoppersCrickets>



or call our Hermiston field office at 541-567-2251

General ODA Information

For other questions or to learn more about the Insect Pest Prevention and Management program contact us:

Insect Pest Prevention & Management Program

635 Capitol St. NE Suite 100
Salem, OR 97301

503-986-4636

Or visit us at our website:

<https://ODA.direct/IPPM>



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Updated May 2024

Oregon Department of Agriculture Guides and Pest Alerts



Grasshoppers and Mormon Cricket

Control and Suppression of Rangeland Pests



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What's the Problem?

In the summer of 2023 Oregon suffered a grasshopper outbreak affecting no less than 2.25 million acres, with 15 counties reaching damaging levels of infestation. Grasshoppers reached an average density of 63 animals per square yard (with densities of 8 or more per yard considered economically significant). This followed the already historic outbreak of 2021, when 60% percent of all ODA survey sites recorded commercially significant grasshopper numbers. Such outbreaks often follow or coincide with drought years when high temperatures and low rainfall create ideal conditions for egg hatches by reducing survival of egg predators and parasites that normally control grasshopper numbers. Grasshopper outbreaks are damaging to rangelands where excessive insect numbers result in lost forage and vegetation cover essential for livestock and wildlife. The loss of vegetation leads to environmental damage, erosion, and may result in starving grasshoppers invading surrounding agricultural areas resulting in costly crop loss.



Melanoplus bivittatus and *M. sanguinipes* at outbreak levels in the Jordan Valley, Malheur Co., July 2021

Treatment

To combat the expected outbreak Diflubenzuron (trade name Dimilin®) is approved for application to affected acreage. Diflubenzuron is a narrow spectrum insecticide approved by the USDA for treatment of rangeland pest grasshoppers



Treatment c.1986 during major Oregon outbreak

and Mormon cricket. It works by disrupting the growth of the grasshoppers chitinous exoskeleton, and so must be applied early in the season while the insects are still growing. Adult insects are unaffected. This treatment was selected because when applied according to label requirements the treatment is safe for people, plants, pets, honey bees and other livestock. Unlike many alternatives Diflubenzuron requires only a single application per season. Costs are further decreased by using Reduced Agent and Area Treatment (RAAT), a technique that reduces pesticide use by more than 50% by applying Diflubenzuron only in alternating treated and untreated strips. This alternating treatment also reduces danger to non-target organisms and the wider environment while still achieving up to 85% control of grasshopper pests.

The Major Pests

The state of Oregon is home to over 100 species of grasshoppers, with most native to the state. Of these 100 plus species only 10 are important pests of rangeland and agriculture. The most important grasshopper pests in Oregon are the Spur-throated grasshopper (*Melanoplus*) species-migratory grasshopper (*M. sanguinipes*), striped sand grasshopper (*M. foedus*), red-legged grasshopper (*M. femurrubrum*), Packard's grasshopper (*M. packardii*), and two-striped grasshopper (*M. bivittatus*). Other important pests include: clear-winged grasshopper (*Camnula pellucida*) big-headed grasshopper (*Aulocara ellioti*) and valley grasshopper (*Oedaleonotus enigma*). The Mormon cricket (*Anabrus simplex*) is not a grasshopper, nor a true cricket but is a wingless Katydid. These grasshopper cousins, which cause similar damage and respond to similar treatments, have been at outbreak levels in Gilliam County since 2017. Mormon cricket outbreaks historically last for 5 to 21 years.

Outbreak Species



Mormon Cricket (*Anabrus simplex*)

Outbreak Species



Two-striped Grasshopper (*Melanoplus bivittatus*)



Clear-winged Grasshopper (*Camnula pellucida*)



Big-headed Grasshopper (*Aulocara ellioti*)



Migratory Grasshopper (*Melanoplus sanguinipes*)



Valley Grasshopper (*Oedaleonotus enigma*)