

# Injurious Arthropods

Most, but not all, arthropod pests of forage and rangeland crops injure the crop directly by feeding on leaves, stems, roots, or reproductive structures, such as grasshoppers, weevils, and plant bugs (see box for common groups). Their degree of damage to the crop depends on the amount of injury to the plants. However, other pests (e.g., fire ants, blister beetles, and range caterpillars) are significant because of their effect on livestock. Their degree of damage depends on how the crop is managed and

used as food for livestock. Specific information on species of injurious arthropods has been separated into three parts based on what part of the crop is damaged: the foliar pests, root feeders, and flower and seed feeders.

Within each part, the injurious species are grouped by taxa, either at the family (e.g., ants, Formicidae) or at the order (e.g., caterpillars, Lepidoptera) level. This hierarchy is less than perfect for several reasons. First, assignment of pest groups among these parts was based on where a producer is likely to have a pest problem. Thus, grasshoppers, leafhoppers, and leafminers are foliar pests because they all feed and injure foliage of forage plants. In addition, the foliage is the part of the plant that is the focus of management activities. However, ants, which primarily inhabit soil, are foliar pests because of their activities aboveground. Similarly, some pests could easily be grouped in more than one subsection on the basis of damage. For example, lygus bugs are significant pests during seed production, but they can cause injury to the foliage as well. So, in addition to the lygus bug description under the flower and seed feeders, lygus bugs are discussed within the plant bug description under the foliar pests. Also, many of the foliar species are significant pests in seed production fields, as discussed in the introduction to the flower and seed feeder part. Yet, the

## Common Groups of Arthropods that Feed on Forage and Rangeland Crops in North America

Order	Family	Common name	Notes
<b>Arachnida</b>			
Acari	Tetranychidae	Spider mites	Adults and immatures puncture cells and feed on cell contents; See Mites (p. 81)
	Eriophyidae	Rust mites, gall mites	Adults and immatures puncture cells and feed on cell contents; See Mites (p. 81)
<b>Insecta</b>			
Orthoptera	Acrididae	Short-horned grasshoppers	Adults and nymphs feed on foliage with chewing mouthparts; See Grasshoppers and Crickets (p. 67)
	Tettigoniidae	Long-horned grasshoppers	Adults and nymphs feed on foliage with chewing mouthparts; Most on trees but a few on grasses and legumes; See Grasshoppers and Crickets (p. 67)
	Gryllidae	Crickets	Adults and nymphs feed on seedlings with chewing mouthparts; See Grasshoppers and Crickets (p. 67)
	Gryllotalpidae	Mole crickets	Adults and nymphs feed on roots with chewing mouthparts and cause injury by digging; See Grasshoppers and Crickets (p. 67)
Hemiptera	Miridae	Plant bugs	Adults and nymphs feed on sap with sucking mouthparts; See Plant Bugs (p. 83) and Lygus Bugs (p. 126)
	Lygaeidae	Seed bugs	Although most feed on seeds, some adults and nymphs feed on sap with sucking mouthparts; See Chinch Bugs (p. 63)
	Cydnidae	Burrower bugs	Adults and nymphs feed on roots with sucking mouthparts
	Thyreocoridae	Negro bugs	Adults and nymphs feed on sap with sucking mouthparts
	Pentatomidae	Stink bugs	Adults and nymphs feed on sap with sucking mouthparts; See Stink Bugs (p. 99)

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