Labops, a Plant Bug, on Oregon Rangeland


Dense populations of a plant bug, Labops hesperius (referred to as Labops since the bug has no common name) are presenting problems on native rangeland seeded with introduced wheatgrasses. In Oregon, Labops range from native sagebrush-grass situations of the high desert to mountain parks near the timberline. The bugs are relatively sparse on native vegetation but have been observed feeding on the following grasses: Crested, intermediate, bluebunch, and pubescent wheatgrasses; bulbous, Sandberg, and Kentucky bluegrasses; and quackgrass, California brome, orchardgrass, Idaho fescue, barley, rye, Junegrass, cheatgrass, and Lemmon’s needlegrass. This list probably is incomplete, but it indicates that many grasses can satisfy the nutritional requirements of Labops in at least the early season. Late maturing grasses are essential, however, for meeting food requirements of adult bugs.

The impact of feeding injury varies with pasture utilization and annual rainfall. In years of scant rainfall little or no growth occurs after the bugs die. In most situations, forage losses caused by Labops do not justify chemical treatments. Tests indicate that grazing as a cultural or management practice can reduce the abundance of preferred straws for egg laying.

Life History

Labops pass the winter as eggs in straws, and the hatching time in spring depends on temperature. In 1972, at an elevation of 3,200 feet, eggs started hatching March 22. The nymphs started turning into adults April 26. At 4,200 feet, hatching and presence of adults were delayed one week. Young nymphs remain on the ground beneath straw and litter during the day, then crawl up on
Nymphs and adults suck plant juices from leaves and thereby produce irregular white spots on the foliage. Leaves gradually turn yellow, and then white as a result of abnormal translocation of plant sap.

Damage

The combined effects of feeding injury on yield, crude protein, cell wall constituents, and detergent fiber and ash content can represent a substantial loss of forage value midway in the growing season. However, after the bugs have laid eggs and died, summer rainfall can produce a lush growth of grass and the earlier forage loss can be offset. In 1972 tests, 120 bugs per square foot reduced the nutritive value of intermediate wheatgrass 18 percent midway in the growing season. But by the time the grass matured and dried, the loss decreased to 2 percent when reserved for fall pasture. If rains do not come, though, the damage caused by *Labops* feeding can be substantial, assuming utilization as spring pasture. The impact of *Labops* feeding injury on rangeland productivity depends on the time of pasturing and the amount of rainfall. Greatest losses occur during severe summer drought.

Control

Cultural or management practices may be utilized to reduce straws used for egg laying in the following years. As mentioned earlier, *Labops* prefer to lay eggs in the upper portions of stems and very few are laid in stubble or broken straws of wheatgrass. Either grazing or making hay in the spring can be effective in removing preferred stems before maturation of adults.

Range land with bulbous or Sandberg bluegrass may hamper an effective management program since they mature during the bug season and are available for egg laying. Fortunately, those grasses are not present in all wheatgrass seedings.

Evidence of deposited eggs can be seen on the outside of the straws as plugs covering the holes where eggs were deposited. Inside the straws are the eggs, white when laid and later turning to light orange-brown.

The practice of rotation grazing, in which a pasture is grazed one year and then rested the next, may increase the bug population since straws suitable for egg laying would be present. Spring grazing not only reduces the supply of food for bugs but is an excellent way to remove straws used later for egg laying.

Chemical

At this time there are no legally registered chemicals for use on *Labops*.