
Do Grasshoppers Prefer One Species of Lentil Over Another?

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Abstract

Severe outbreaks of grasshoppers cause yield losses in many economically important crops. Lentil (*Lens culinaris*) is particularly susceptible to grasshopper damage. The weather patterns of 2001-2002 in most of the lentil production regions of Saskatchewan contributed to the outbreak in grasshopper populations resulting in major damage to the lentil crop. Grasshoppers preferentially target the flowers and young pods of lentil plants. Lentil plants, due to their indeterminate growth habit, will re-grow if moisture is available, leading to development of new pods, resulting in delayed maturity and further grasshopper damage. Pods that are damaged or not consumed entirely may shatter or not fill properly. Grasshoppers are known to have very specific feeding habits and may show a range of preference from one plant species to another based on taste or texture. One of the seven known species of lentil has hairy pods. Grasshopper feeding preferences were examined on five lentil species, including the cultivated lentil. The purpose was to determine if grasshoppers prefer to feed on the cultivated lentil compared to four wild species. If they do, it may be possible in future to breed lentil varieties that are less damaged by grasshoppers by using the wild lentil species in the breeding program.