

RESPONSE OF TWO LATHRUS SPECIES TO INFESTATION  
BY THE PEA WEEVIL, BRUCHUS PISORUM L. (COLEOPTERA: BRUCHIDAE)

Barry Annis and L. E. O'Keeffe  
Department of Plant, Soil, and Entomological Sciences  
University of Idaho, Moscow ID 83843

Oviposition behavior and larval mortality of the pea weevil, Bruchus pisorum L., on Lathyrus tiositanus and L. sativus was studied to determine the mechanisms by which these species resist pea weevil attack. Female weevils caged on pods of these species oviposited at a reduced rate compared to those caged on pods of pea, Pisum sativum L. Females kept in vials in the laboratory and given a choice between L. sativus pods and pea pods oviposited at a higher rate on pea and the glass vial than on L. sativus. Two to three days following oviposition, L. tiositanus pods developed callus tissue growth beneath the eggs. These growths later covered much of the pod. L. sativus pods exhibited a similar response to hatching larvae. Pea weevil larvae attempting to penetrate pods of both species died. Larvae placed inside L. sativus pods established in seeds and had no greater mortality after 72 hours than those placed inside pea pods. Identified defenses in Lathyrus against pea weevil attack may consist of an antibiotic and an antixenosis component. These resistance mechanisms are located in the pod.