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## EC69-1523 Common Small Grain Insects

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# COMMON SMALL GRAIN INSECTS

By Lloyd W. Andersen, Robert E. Roselle, David L. Keith  
Agricultural Extension Entomologists

**1. CEREAL LEAF BEETLE:** This beetle does not occur in the state of Nebraska, but is a potential threat to small grains. It is primarily a pest of oats but also feeds on wheat, barley and various other plants of the grass family. Most damage is done by slug-like larvae which skeletonize the leaves giving a silver appearance to the field. The larvae pupate in the soil and emerge as beetles in June and July. The adults soon become inactive and go through a period of summer and winter hibernation until the following spring.

**2. GREENBUG:** This grain aphid feeds primarily on winter wheat, sorghum, barley and oats and can be found on corn. The most serious damage from this pest is usually in the spring and summer, but occasionally damage will occur in the fall on winter wheat. The greenbug can be found in colonies on the leaf blade, on the stems or in the boot or whorl of the plant. The aphid is green with a narrow darker-green stripe down its back. The tips of the leg, cornicles, and all of the antennae are black. The first evidence of injury will be a small feeding puncture ringed in red or brown. Eventually, with progressive feeding, leaf turns yellow resembling nitrogen deficiency. This aphid can be readily confused with the corn leaf aphid, apple grain aphid, crown aphid and the English grain aphid. These aphids can be distinguished from the greenbug by the areas in which they feed on the plant and color patterns of the aphid. There is no evident injury to the plant caused by these other aphids.

**3. THRIPS:** Several species of thrips feed on small grains, but they seldom damage them. Discoloration and wilting can occur under high populations, especially if the plants are under moisture stress. Thrips are very small insects and do not like to expose themselves. Thus they are difficult to find. During the harvest season they can, however, be found quite easily in the wheat heads.

**4. HESSIAN FLY:** With the advent of resistant varieties of wheat, damage has been minimized by this pest in recent years. The Hessian fly has two generations each year. One attacks wheat in the fall making plants stunted, abnormal in growth and subject to winter kill. This generation is avoided by following the fly-free-date planting suggestions. Another generation attacks in the spring resulting in broken straws, poorly-filled heads and reduced yields. Damage is the result of larval feeding. Both larvae and the flaxseed (brown puparia) are found by stripping away the lower leaf sheaths of wheat.

**5. ARMYWORM:** Infestations of this pest in grain fields are most likely to develop if the plants are lodged. Infestation in corn fields will usually develop if foxtail grasses are abundant. Damage in Nebraska occurs in June and July. The worms in small grain fields will first strip the leaves from the plant but will also feed on the stem causing the head to drop. The worms are ravenous feeders and will move from field to field en masse, hence the name armyworm.

**6. GRASSHOPPER:** Grasshoppers are a problem mainly in the fall along borders of winter wheat fields, taking out several drill widths of wheat. They seldom cause trouble in the spring because the winter wheat begins growth before the hoppers hatch, thus gaining a head start on the pest.

**7. CHINCH BUG:** In Nebraska, chinch bugs are restricted to the southeastern portion of the state. In this area they can be destructive to wheat. In the spring the chinch bug will move from overwintering habitats (bunch grasses) to small grain fields. Wheat fields infested with chinch bugs will show a droughty condition. As the wheat begins to mature, the chinch bugs will again migrate, but this time to corn. Damage to corn is usually along the margins of the fields.

**8. WHEAT STEM MAGGOT:** This is a minor pest of small grains in Nebraska. Eggs are deposited on the leaves and stems of small grasses in early June. Upon hatching a small pale green maggot crawls down behind the leaf sheath to the tender parts of the stem and begins to feed. The injured stem is partly severed and the head turns white and dies. A second generation occurs about midsummer and deposits its eggs on volunteer grain. The larvae of this summer generation become full grown by the last of August and the adults once again emerge and lay eggs on the developing winter wheat.

**9. WHEAT STEM SAWFLY:** This is also a minor pest in Nebraska. The winter is passed as mature larvae in the base of wheat straw near the surface of the soil. In the spring the larvae transform into pupae and the adults emerge in June. The females deposit their eggs by embedding them into the plant tissue in the upper portion of the wheat stem. The larvae bore down the stem to the base and cut "V" shaped grooves which cause the stems to break. Most wheat varieties grown in Nebraska are resistant to wheat stem sawfly.

**10. COMMON STALK BORER:** The common stalk borer is a general feeder and will attack almost any plant with a soft stem large enough to accommodate its body. The young larvae are found in small grain fields, especially around the margins. They cause the heads to dry up and turn white and the stems to break much like wheat stem maggot and Hessian fly damage.

**11. WIREWORMS:** Wireworm damage to small grains can occur over the entire state. The insects require from three to six years to complete their growth. Adults of wireworms are the common "click beetles." Since most small grain seed is treated prior to planting, damage as a result of this pest is minor.

**CURRENT CONTROL INFORMATION:** These color illustrations are designed to help identify some of the more important pests of small grains. University of Nebraska Entomologists prepare control leaflets that are revised each year. For the latest control leaflets, visit your local county agent, or write to the Department of Entomology, University of Nebraska, Lincoln, Nebraska 68503.

Extension Service

University of Nebraska College of Agriculture and Home Economics  
and U.S. Department of Agriculture Cooperating  
E. F. Frolik, Dean J. L. Adams, Director

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For safe and effective use of insecticides, always identify the problem correctly.



1. Cereal leaf beetle adult, eggs, larva, and damage



2. Greenbug and damage



3. Thrips (greatly enlarged)



4. Hessian fly larva, and puparium showing location behind lower leaf sheaths



5. Armyworm



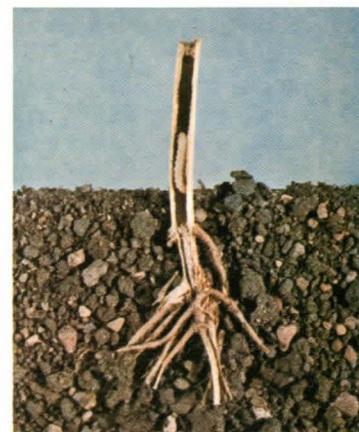
6. Grasshopper



7. Chinch bug nymphs and adult, and adult greatly enlarged



8. Wheat stem maggot



9. Wheat stem sawfly



10. Common stalk borer



11. Wireworm and damage to seed