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Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants, and Extension Personnel

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Army Cutworms:

In Kansas, the army cutworm is a perennial pest which may damage wheat and/or new alfalfa fields in late winter/early spring. Since it is a perennial pest it never occurs in one area in population densities sufficient to cause economic damage on a regular basis. However, under ideal environmental conditions, this insect has the capacity to produce huge numbers with resultant crop damage and large numbers somewhere throughout its range. Thus, growers usually do not have to worry about this pest often, but when it does occur in your fields it can be dramatic. Thus, a brief discussion of its life cycle is provided.

Army Cutworm Life Cycle

Army cutworms have one generation each year. Eggs are laid in the fall. Eggs hatch and young early instar larvae (small) overwinter. Depending upon winter temperatures, the larvae resume feeding, usually in late February or early March, to grow and complete their development. This is the same time of year when wheat or alfalfa also starts growing, and thus most economic damage occurs. Army cutworms have a wide host range, feeding on basically any type of vegetation they come into contact with, i.e. native grasses, corn, sorghum, clovers, but usually are pests in wheat and alfalfa fields in Kansas. Larvae feed exclusively above the soil surface but spend non-feeding time below the surface. As larvae complete development in the spring, they construct cells a few inches under this surface and pupate. The adult moths usually emerge in May and/or June over a very short period of time. During "outbreak" years this moth emergence may occur in unbelievable numbers. These moths may become a nuisance because they often seek shelter in buildings, especially adjacent to night lights or around window sills when the lights are visible at night. Eventually, usually within a week or two of emerging, these moths migrate to the higher elevations of the Rocky Mountains where they remain throughout the hotter summer months. In late summer or early fall they migrate back to the plains of Kansas, mating and developing their eggs just prior to or during this flight. As

these female moths return to Kansas, they start laying eggs and each has the capacity to produce 1,000 - 3,000 eggs. These hatch in late fall/early winter thus starting the cycle over again.

Feeding Habits

Army cutworms feed almost exclusively above ground. This is somewhat unusual because the larvae spend most nonfeeding time below the surface. Larvae seem to prefer leaves but will eat other plant parts if no leaf tissue is available, and may consume stems even following them into the soil. Most feeding occurs in late afternoon until dark in late winter/early spring as the weather warms. Infestations may not be readily apparent under sunny conditions as larvae seem to be sensitive to sunlight, often hiding in the soil between and around plants. Larger larvae may be readily apparent on cloudy days or they can be found by digging down an inch or two in the soil on clear days.

Damage

Indications of small larval feeding damage may go unnoticed, but when large populations occur plants may show small or semicircular holes in leaves. The extent of the damage depends upon the number and size of larvae, size of the plants, and growing conditions. Wheat is probably not as susceptible to damage as first year alfalfa, because it can withstand considerable defoliation and still survive. However, growth and maturity may be delayed if plants are small and/or these are large populations of worms. More defoliation occurs as the larvae grow. If the growing point of the seedling is damaged the plant may die. This usually is rare; however, if food is limited, i.e. under less than ideal growing conditions, larvae may follow the plant upon which they are feeding down into the soil destroying the whole plant. As the plants are destroyed the larvae move to another plant, etc, until bare spots are evident. Outer edges of these areas are where most larvae are feeding, thus continuing to expand the bare spots. Feeding will continue in this manner, even moving to adjacent fields, until larvae mature and pupation occurs. After all the food in a field is consumed the larvae move to a new area enmass, "marching" in army formation - thus, their name. These mass migrations may occur at any time during cloudy days but usually start in late afternoon on sunny days. They will consume any vegetation in their path.

Control (Alfalfa)

Army cutworm larvae may totally destroy seedling plants in early spring or affect foliage sufficiently to reduce the amount harvested in the first cutting of established stands. Early detection is critical to successful control. Seedling fields are most vulnerable and should be treated if two or more larvae per ft² are present. Established stands should be treated if 4-5 larvae per ft² are detected. Insecticides labeled for army cutworm control in alfalfa are available in the Alfalfa Insect Management Guides (2004) at your county extension office or on the world wide web at: <http://www.oznet.ksu.edu> .

Control (Wheat)

Fields with poor stands, either late planted or drought-affected, are most susceptible to losses due to army

cutworms. Only one-two larvae per ft² may justify treatment in these situations. However, fields with good stands probably won't need to be treated until larvae average 4-5 per ft². Even higher population densities may be tolerated in fields with well-tillered wheat and good growing conditions. Insecticides labeled for army cutworm control in wheat are available in the Wheat Insect Management Guides (2004) at your local county extension office or on the world wide web at: <http://www.oznet.ksu.edu> .

Successful army cutworm control is dependant upon proper timing i.e. treating the larvae before they cause economic losses, and making sure the insecticides are applied in sufficient gallonage to contact the worms. Results from Dr. Wilde's latest insecticide trials indicate all insecticides tested seem to work equally well. Thus, from a practical standpoint, price and availability should be your guideline for product selection of labeled insecticides.

One tip on scouting fields for army cutworms. Flocks of birds in wheat or alfalfa fields are often an indicator of the presence of these worms and often do a remarkable job of controlling them. But, don't count on them; you need to look for yourself as there is no substitution for scouting.

Note: Stu Duncan reported finding 7-8 larvae/ft² in wheat in Kingman County varying in size from 3/8" to 2". He also reported some migration across a county road moving from a seedling alfalfa field on 27 February.



Army cutworm feeding on wheat



Typical army cutworm infested wheat plots in South Central Kansas

Photos courtesy of Dr. Robert Bauernfeind

Sincerely,

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