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Several species of cutworms may be present early in the season in dry bean fields, but damaging levels are seldom experienced. In this region, the most likely problems will develop from the army cutworm or the pale western cutworm, but beans are usually planted late enough to miss serious problems from these insects. Perhaps the greatest risk from these cutworms is found in southwest Colorado.

# Identification (and life cycle/seasonal history)

Army cutworm, *Euxoa auxiliaris* (Grote), pale western cutworm, *Agrotis orthogonia* Morrison, and others: Adults of both the army and pale western cutworms are attracted to newly tilled soil to lay their eggs in the fall, and therefore, they are more likely to be a problem in fields planted to winter small-grain cover crops that are destroyed prior to bean planting.

Larvae of the army cutworm have a pale grayish body color that is splotched with variable white or light markings. The upper surface is lighter with a narrow pale stripe along the center of the back. There is a lighter band along the side of the larvae below the spiracles. Larvae can attain lengths of 1.5 - 2 inches when fully grown. Army cutworm eggs hatch in the fall or winter and the larvae feed during the winter and early spring. Army cutworms normally finish development in May, but may still be present when early-planted beans are emerging, especially if other food sources have been inadequate.

The pale western cutworm spends the winter in the egg stage and hatches in the early spring when temperatures at the soil surface reach 70°F (February - March). The pale western cutworm is pale with no distinct markings on its body and can be easily distinguished from other cutworms present at this time. When fully grown, the pale western cutworm is about 1.25 inch long. Pale western cutworms feed through the spring and mature in May and early June. Larvae can go without food for up to a month and later cause damage to emerging crops.

# Plant Response and Damage

Cutworm damage to dry beans will be made evident by plants that have been cut off at the soil surface or by the presence of leaf feeding on young seedlings. The army cutworm will climb on the bean plant and feed on leaves. The pale western cutworm is more damaging as it feeds at or below the soil surface and can cut off and kill entire plants.

# Management Approaches

Serious cutworm problems are unlikely in the region because in most years these two major cutworm species have mostly finished feeding by the time beans emerge. Plant beans when conditions insure rapid emergence of seedlings. In high risk fields, cutworms can be monitored while beans are beginning to emerge and establish, and insecticide treatments can still be applied if damaging levels are present. High risk areas include fields that had been planted to a winter cereal cover crop or around the grassy borders of other fields. Other species of

cutworms that develop later in the season may be found on occasion in the region. Risk of serious damage from these is relatively low; however, monitoring emerging beans for damage from various insects is an important management practice.

*Product List for Cutworms:*

| **Insecticide** | **Product per Acre (fl oz. or oz. product)** | **Preharvest Interval, remarks** |
|---|---|---|
| bifenthrin[R,1,2] | See labels | PHI 14 days; REI 12 hrs. No more than 0.3 lb a.i./season. |
| Swagger[R,1] | 11.2 | PHI 14 days; REI 12 hrs. See labels for additional restrictions for individual active ingredients. No more than 33.6 fl oz product/season. |
| Baythroid XL[R,1] | 0.8-1.6 | PHI 7 days; REI 12 hrs. |
| carbaryl[1] | See labels | PHI 21 days; REI 12 hrs. |
| cyfluthrin[R,1,2] | See labels | PHI 7 days; REI 12 hrs. |
| esfenvalerate[R,1,2] | See labels | PHI 21 days; REI 12 hrs. |
| Belt SC[1] | 2-3 | 14 days, 3 days forage, hay or vines. REI 12 hrs. No more than 6 fl oz product/acre/season. |
| Fastac EC (alpha-cypermethrin)[R,1,2] | 1.3-3.8 fl oz | PHI 21 days; REI 12 hrs. |
| gamma-cyhalothrin[R,1,2] | See labels | PHI 21 days; REI 24 hrs. |
| lambda-cyhalothrin[R,1,2] | See labels | PHI 21 days; REI 24 hrs. |
| methomyl[R,1,2] | See labels | PHI 14 days; REI 48 hrs. |
| Consero[R,1] | 2-3 | PHI 28 days; REI 24 hrs. Do no graze livestock in treated areas and do not harvest treated vines. See labels for additional restrictions for individual active ingredients. |
| zeta cypermethrin[R,1,2] | See labels | PHI 21 days; REI 12 hrs. |
| Steed[R,1] | 3.5-4.7 | PHI 21 days; REI 12 hrs. See labels for additional restrictions for individual active ingredients. No more than 28.1 fl oz product/season. |
| Triple Crown[R,1] | 3.5-4.5 | PHI 21 days; REI 12 hrs. See labels for additional restrictions for individual active ingredients. No more than 13.1 fl oz product/season. |
| [R]Restricted use pesticide, [1]Labeled for chemigation, [2]Generic active ingredient, several formulations. | | |

and rules of state and federal pesticide regulatory agencies. State rules and regulations and special pesticide use allowances may vary from state to state: contact your State Department of Agriculture for the rules, regulations and allowances applicable in your state and locality.