



Potato Insect Pests

No. 85

Extension Bulletin E-965, May 1976

By Donald Cress and Arthur Wells
Department of Entomology

(1) White grubs (1½-inch long, brown head, bluish-purple tip of abdomen) can cause severe damage to potatoes. White grubs are most abundant in fields where sod and other grasses have been growing for 2 or more years. The adult beetles (called June beetles) are attracted to grassy areas where they lay their eggs. The eggs hatch and the young grubs begin feeding on the grass roots. When potatoes are planted in such areas, the (2) tubers are attacked. Since these white grubs have 2- to 3-year life cycle, damage to the tubers can be expected and will continue even though the sod is plowed down when the land is fitted for planting.

(3) Wireworms (1- to 1½-inches long, brown to yellowish-brown color) have three pairs of short legs just behind the head. Wireworms are frequently found in fields where sod and other grasses have been growing for two or more years. The adult beetles (called click beetles) lay their eggs in grassy areas. Upon hatching from the eggs, the young larvae begin feeding on the grass roots. (4) Potatoes planted in such areas are often attacked by these larvae. Since wireworms have a 2- to 6-year life cycle (depending on the species present), damage to the tubers can be expected and will continue even though the sod is plowed down when the land is fitted for planting.

(5) Colorado potato beetles (½-inch long, yellow with black strips) overwinter as adult in field debris, fence rows and ditch banks. They emerge in early May when the young plants are coming up. They mate and lay the (6) orange eggs on the leaves. In a few days, the eggs hatch and the (7) larvae

begin to feed on the foliage. Damage, generally, is most severe at the growing tips of the vines but spreads as the larvae grow. Both adults and larvae defoliate the plants. There are 2 to 3 generations per year.

(8) Potato leafhoppers (⅛-inch long, light-green color) do not overwinter in Michigan. They migrate into Michigan on storm fronts beginning in the spring. There are 4 to 6 generations per year beginning usually in late-May. Generation time is around 20 days. (9) The adults and nymphs attack the underside of the leaves where they suck the sap which causes the leaves to curl and turn yellow and reddish brown. The plants are stunted and yields are reduced.

(10) Potato flea beetles (⅛-inch long, black color) overwinter as adults (10, inset). They emerge early in the spring and begin feeding on the young plants. Damage consists of many small holes in the leaves. The eggs are laid at the base of the plants. These first generation larvae feed only on the roots. The second generation adults usually emerge in late July to early August. Feeding damage is similar to the earlier first generation. Eggs are again laid and these second generation larvae feed on the tuber surfaces. This leads to loss in quality and possibly breakdown in storage.

(11) Green peach aphids are by far the most important aphid on potatoes in Michigan. They overwinter as eggs on peach, plum, and possibly choke cherry and other small stone fruits. In early spring, the eggs hatch into nymphs which all develop into females. Two to three generations are usually spent on the overwintering host plant. By the first week of June, the winged forms begin to migrate to

their over 250 host plants, which include potatoes. The succeeding generations are all females and have the capacity to give birth to 80 to 100 young. Damage is caused from sucking plant sap from the underside of lower leaves and spreading potato leafroll and other viruses. (12) Potato leafroll virus stunts the plants and reduces the yield. Furthermore, it makes potatoes unfit as seed and results in net necrosis in certain varieties of stored potatoes. There are 12 to 15 generations per year. Only the final generation has males. They mate with females, which in turn lay the overwintering eggs.

(13) Variegated cutworms overwinter as larvae and pupae in the soil. The adults emerge in mid- to late-May and begin laying eggs. The eggs hatch in early June and the larvae begin to feed on the foliage. Because of their small size and lush foliage, the larvae and damage are not evident until early-July. The second and third generation moths peak in late-July and throughout September, respectively. The larvae are variable in color but they have a buff-brownish stripe down the sides. Also there are a series of yellow or orangish spots along the back. Fields should be checked very carefully for the young larvae beginning about the first of June.

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For chemical control recommendations, homeowners should consult Extension Bulletin E-760(b), "Home Vegetable Garden Insect and Disease Control," Single Copies are Free to Michigan residents from your County Cooperative Extension Office or you may write to the Michigan State University Bulletin Office, P.O. Box 231, East Lansing, MI 48824

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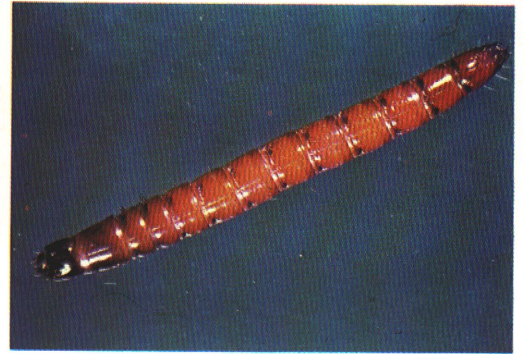
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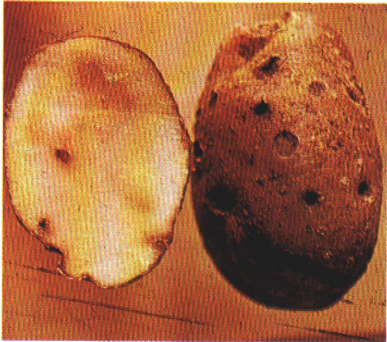
1) White grub—larva



2) White grub damage to potatoes



3) Wireworm—larva



4) Wireworm damage to potatoes



5) Colorado potato beetle—adult



6) Colorado potato beetle—eggs



7) Colorado potato beetle—larva



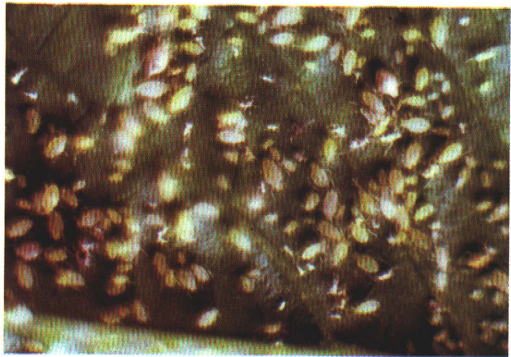
8) Potato leafhoppers—adult, left; immatures—right



9) Potato leafhopper damage (note yellowish color in 2 rows)



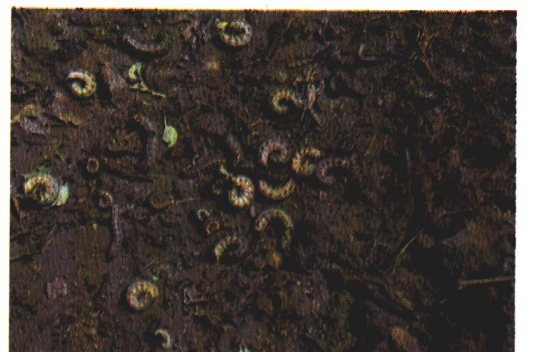
10) Potato flea beetle (inset) and damage



11) Green peach aphids



12) Potato leafroll disease



13) Variegated cutworm—larvae