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Current Status of European Pine Sawfly

It has been approximately 5 weeks since European pine sawfly began their 2003 activities especially on landscape mugo pine. Whereas their initial presence might have escaped detection due to their inability to cause major feeding damage sufficient to draw attention, larvae currently are three-fourths grown, and, as such, are rapidly consuming entire needles (Figure 1). Within the next two weeks, larvae will attain their full growth, having caused even more extensive feeding damage (Figure 2).

Figure 1

Figure 2

Mature larvae next form cocoons in which they will survive the heat of summer in an inactive state. While some larvae may form cocoons on the host plant (Figure 3), most will drop to the ground and form cocoons on the soil surface or under the surface debris. Cocoons may be camouflaged by soil or (often) fecal pellets (Figure 4).

Figure 3

Figure 4

Treatments to eliminate sawfly larvae at this point in time are advised especially if individual plants are heavily infested. Any number of traditional insecticides are registered against sawflies. In addition, horticultural oils will effectively eliminate the soft-bodied larvae. For minor infestations, pruning out an individual branch or several branches with sawfly congregations is another treatment option. A forceful stream of water will dislodge sawfly larvae.

Because sawfly larvae feed on previous year's needle growth, they do not kill their pine hosts. At a time coinciding with the completion of larval feeding, current-year needle production begins (Figure 5) and continues unimpeded (Figure 6). Thus, by season's end, plantings will have somewhat recovered (compare Figure 7 and Figure 8) although they will still look a bit sparse. However, full recovery will occur if (in 2004) needles are protected against the next generation of European pine sawfly, and the new current-year needle production is added (Figure 9).

| Figure 5 | Figure 6 | Figure 7 |

| Figure 8 | Figure 9 |

Cutworms in the Garden

Nothing can be as disheartening as going out in the morning to tend a garden only to find one to young plants laying on the ground, having been freshly cut off near ground level (Figure 10). Often times by disturbing the ground debris or digging in the dirt around the cut plant, a plump "worm" will be found coiled up. The "worm" in this case will likely be a cutworm larvae, so named for their habit of indiscriminately cutting plants. Cutworm larvae are rarely seen because they are active at night. With the approach of dawn, they hide to avoid the light of day.

| Figure 10 | Figure 11 | Figure 12 |

Several cutworm species are associated with vegetable crops. Two species, dusky cutworms (Figure 11) and clayback cutworms (Figure 12) overwinter in Kansas as partially grown larvae, and therefore are of sufficient size (early in the spring) to shear off newly transplanted as well as seedling plants.

Black cutworm do not overwinter in Kansas. However, usually by mid- to late March, black cutworm moths (Figure 13) migrate into Kansas (from southern overwintering sites along the Gulf coast) and deposit eggs for first generation larvae. Small larvae (Figure 14,

upper) are incapable of cutting small plants. However, by mid- to late May, larvae will have grown to sufficient size (Figure 14, lower) that they are capable of chewing through larger plants (Figure 15).
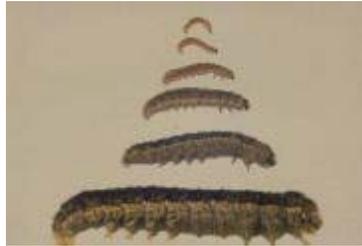

| Figure 13 | Figure 14 | Figure 15 |

Cutworm damage does not occur with any regularity. While most people grow garden crops and never encounter cutworms, others may experience cutworm damage on a yearly basis. To eliminate possible infestation sources, weeds in and around gardens should be eliminated. At sites with a history of frequent cutworm problems, a preplant granular insecticide treatment can be incorporated into the soil.

Claybacked, dusky and black cutworms are tunneling species, and as such, are reluctant to climb plants. Rather, they prefer cutting plants off at ground level, and then dragging their food into their tunnels (Figure 10, to right of cut stem). Thus for gardeners wishing to protect just a few plants, wrapping aluminum foil around stems (from the ground level to several inches up) will serve as a deterrent to cutworm activities.

Lastly, tunneling cutworms are solitary feeders. Rather than massive invasions such as is common for surface feeding and climbing species, usually just a few appear in gardens. Therefore, daily inspections of gardens for cut plants will often reveal the presence of cutworms. As mentioned above, the individual cutworm responsible for cutting a plant is often found in the debris or soil next to the cut plant, and once exposed, can be eliminated by simply handpicking. Even after the offending cutworm is eliminated, it is wise to continually inspect plantings for additional damage caused by other cutworms which may subsequently enter gardens.

Robert J. Bauernfeind

The following samples were submitted to the Insect Diagnostic Laboratory for the week of April 21-25, 2003:

4-21-2003, Anderson County: Red Mound Ants from pasture.
4-22-2003, Sherman County: Possible weather damage to pines.
4-23-2003, Ottawa County: House Centipede from home.
4-24-2003, Wabaunsee County: Sawfly damage to pines.
4-24-2003, Sherman County: Cutworms in yard.
4-25-2003, Leavenworth County: Odorous House ants in mailbox.

4-25-2003, Lyon County: Horsehair Worm in stream.
4-25-2003, Anderson County: Clover Mites in home.

If there are any questions regarding these samples or about the identification of any arthropod please contact the Insect Diagnostician at 785-532-4739 or at bbrown@oznet.ksu.edu

We welcome your questions, suggestions and comments concerning topics addressed in this Newsletter. For information on how to contact us check out our Personnel Page: http://www.oznet.ksu.edu/entomology/extension/Staff.htm

Sincerely,

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