Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants and Extension Personnel

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Euonymus Scale

We are receiving inquiries regarding the presence of euonymus scale (*Unaspis euonymi*) crawlers on landscape plants such as evergreen euonymus (*Euonymus japonica*) and Japanese pachysandra (*Pachysandra terminalis*). Euonymus scale overwinters as a mated female on plant stems. Eggs develop and mature underneath the scale, and then hatch over a two- to three-week period. The newly hatched crawlers, which may be noticeable migrating along the stem, start feeding near the base of host plants. Crawlers can also infect adjacent plants by being blown around on air currents, resulting in infestations often not being detected until populations are extensive and damage is noticeable later on in the season. Leaves eventually become spotted with yellow or white areas. Plants located near structures such as foundations, walls or in parking areas are more susceptible to euonymus scale than plants growing in open areas that receive sunlight and air movement. Furthermore, the variegated forms of euonymus are more susceptible to euonymus scale than the green forms.

Heavy infestations of euonymus scale can ruin the aesthetic appearance of plants (Figure 1), causing complete defoliation or even plant death. Females are dark brown, flattened, and resemble an oystershell. Males, however, are elongated, ridged, and white in color (Figures 2 and 3). Males tend to be located on leaves along leaf veins whereas females reside on the stems. There may be up to three generations per year.

Figure 1 – Euonymus Scales

Figure 2 – Male and Female Euonymus Scale on Leaf

Figure 3 – Male and Female Euonymus Scale on Leaf

Cultural practices such as pruning out heavily infested branches—without ruining the aesthetic quality of the plant—is extremely effective in quickly reducing euonymus scale populations. Be sure to immediately discard pruned branches away from the area. If feasible, avoid planting *Euonymus japonica* in landscapes since this species is highly susceptible to euonymus scale. Winged euonymus (*Euonymus alata*) is less susceptible to euonymus scale, even when adjacent plants are infested. Applications of insecticides in May through June, when the crawlers are most active, will help to alleviate problems with euonymus scale later in the season. Insecticides recommended for suppression of euonymus scale populations that target the crawlers, include: acephate (Orthene); pyrethroid-based insecticides such as bifenthrin (Talstar), cyfluthrin (Tempo), and lambda-cyhalothrin (Scimitar); potassium salts of fatty acids (insecticidal soap); and horticultural (petroleum or mineral-based) and neem (clarified hydrophobic extract of neem oil) oils. Check plants on a regular basis for the presence of crawlers, which will help time insecticide applications. In general, three to four applications performed at seven to 10-day intervals may be required although this depends on the level of the infestation. Euonymus scale is a hard or armored scale, so, in most cases, soil or drench applications of systemic insecticides such as imidacloprid (Merit) are not effective in suppressing euonymus scale populations; however,

the systemic insecticide dinotefuran (Safari), due to its high-water solubility (39,000 ppm), may provide suppression of euonymus scale populations when applied as a drench to the soil.

Euonymus scale is susceptible to a variety of natural enemies (e.g. parasitoids and predators). These include braconid and ichneumonid wasps, ladybird beetles, green lacewings, and minute pirate bugs. However, natural enemies may not provide enough mortality ('killing power') to significantly impact "high" populations of euonymus scale. Furthermore, insecticides such as acephate (Orthene), and many of the pyrethroid-based insecticides, including; bifenthrin (Talstar), cyfluthrin (Tempo), and lambda-cyhalothrin (Scimitar) are directly harmful to natural enemies, so applications of these materials may disrupt any natural regulation.

Raymond Cloyd

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ALFALFA

Alfalfa weevils continue to be very active throughout NC KS. This past week the weevil populations were still plentiful and in all stages, including very small 1st instar larvae. This is really unusual, as we started finding 1st instar larvae back in the 1st part of March. This is really a testament to the fluctuating temperatures that we have seen over the last 2 months, with a relatively warm winter/early spring then a major cool down with several nights of freezing temperatures which have slowed down weevil development significantly. Please remember, if an insecticide application is still warranted, check the Pre Harvest Interval (PHI) for the product of choice.

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WHEAT

Still finding aphids in wheat throughout NC and SC KS. But in all fields sampled last week there were many lady beetles and mummies, indicating the beneficials are also very active. Spraying aphids will kill most of the aphids at the top of the plants-- but won't kill all the aphids down in the canopy just because the leaves in the canopy intercept the spray. But it will, typically anyway, kill all the beneficials as they move around searching for aphids to consume. Therefore, it is rarely a good idea to add an insecticide to a fungicide application to save application costs UNLESS the insecticide is warranted-not "just in case"

Jeff Whitworth Holly Schwarting

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Insect Diagnostic Laboratory Report

http://entomology.k-state.edu/extension/diagnostician/recent-samples.html

Eva Zurek

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Sincerely,

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