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SPECIAL EVENTS

Field Day

The 1999 University of Illinois Turfgrass and Landscape Horticulture Field Day will be held on August 5 at the Landscape Horticulture Research Center and Harley Selections Garden on South Lincoln Avenue in Urbana. On-site registration, which costs \$30 and includes a barbecue lunch, will be from 8:30 to 9:30 a.m., with the program starting at 9:30 a.m. In the morning, there will be short research presentations with in-depth seminars and equipment demonstrations in the afternoon. A trade show will be held in the morning and afternoon. Call (217) 333-7847 for more information. (*Phil Nixon and Tom Voigt*)

INSECTS

Fall Webworm

Fall webworm is appearing again in Illinois as very young, small webs. This is the start of the second generation in the southern half of Illinois and the only generation in the northern half of the state. These insects become quite noticeable in August and September with silk webbing up to 3 feet long enclosing the ends of branches and associated leaves. These leaves are eaten off by the larvae, leaving bare branches with dirty webbing attached. Although it is aesthetically unpleasing, this feeding is not very harmful to the health of the tree. Many species of trees are attacked, although walnut, hickory, pecan, crab apple, birch, and maple are the most common.

At this time, the most effective control entails pruning out the small webs that enclose the larvae. If insecticide sprays are used, use enough pressure to penetrate the water-resistant web. A succession of new colonies is normally produced from now through August and sometimes into early September. Scout weekly to identify and treat new colonies with their web nests. (*Phil Nixon and Raymond Cloyd*)

White Grubs

Masked chafer adults are becoming very uncommon. Because these annual white grub adults do not feed, they die after about two weeks of mating and egg laying. We are also seeing fewer Japanese beetle adults, although they will be found easily until about the middle of August. As stated in previous issues, conditions are right for large numbers of white grubs to cause heavy damage to irrigated turf starting in mid-August. Golf-course workers should realize that Japanese beetle grubs attack bentgrass as well as Kentucky bluegrass, perennial ryegrass, and tall fescue. Thus, damage is very possible on bentgrass greens and fairways. Application of imidacloprid (Merit) or halofenozide (Mach 2) is warranted in irrigated turf at this time to prevent severe damage later.

Black turfgrass Ataenius is pupating in northern Illinois. This white grub feeds on bentgrass as well as many other turfgrasses, and it is found only on highly maintained turf such as golf courses and some lawns. Only 1/4 inch long when fully grown, these black beetles will be showing up in the baskets of greens mowers in the next few days. This insect has two generations per year. The second generation coincides with Japanese beetle grubs and annual white grubs, so an application for those insects also controls this generation of Ataenius. (*Phil Nixon*)

Japanese Beetle Adult Feeding and Host Preference

Japanese beetle adults are a major problem in landscapes because they feed on a wide variety of annuals, perennials, trees, shrubs, and vines. However, certain plants are more susceptible to their attack. These plants are listed in Table 1. In contrast, many plants are less susceptible to attack by Japanese beetle adults. These plants are listed in Table 2.

Research has demonstrated that natural sugar content and presence of odoriferous substances are important factors in determining the susceptibility of plants to attack by Japanese beetle adults. A study showed that plants with higher amounts of the reduc-

ing sugar dextrose suffered greater damage from beetle adults than plants with lower amounts of dextrose.

Table 1. Ornamental plants highly susceptible to feeding by Japanese beetle adults.

Japanese maple	Norway maple
Gray birch	Horsechestnut
Black walnut	Sassafras
American elm	Althea
London planetree	Rose
Black cherry	Crab apple
American mountain ash	Lombardy poplar
Pussy willow	American linden

Table 2. Ornamental plants less susceptible to feeding by Japanese beetle adults.

Red maple	Silver maple
American holly	Boxwood
Snowberry	Winged euonymus
Flowering dogwood	White cedar
Yellow poplar	Saucer magnolia
White ash	Green ash
Lilac	Norway spruce
Scotch pine	Douglas fir
Canadian hemlock	Mock orange
Hydrangea	Yew
Forsythia	

Odoriferous chemicals have also been shown to play a role in the attractiveness of certain plants to Japanese beetles. *Ginkgo biloba*, which is not usually attacked by Japanese beetle adults, may lack certain odoriferous chemicals that are attractive to them. However, many susceptible plants such as rose and apple contain the substance geraniol, which is highly attractive to Japanese beetle adults. It should be noted that when Japanese beetle adult populations are heavy and food is a limiting factor, plants that are less susceptible to Japanese beetle adult feeding might be fed upon. (Raymond Cloyd)

PLANT DISEASES

Rose Rosette

Rose rosette is believed to be caused by a double-stranded RNA, which means that it is a viruslike disease. It cannot be cultured in a lab, and confirmation of the disease by the Plant Clinic is based purely on symptomology. Fortunately, symptoms are very distinct. The new growth appears deep red, both on leaves and stems. Leaves may show crinkling, distortion, or a mosaic of green, yellow, and red. An infected plant produces numerous lateral shoots that grow in different directions, giving the plant a witches'-broom appearance. These shoots are typically deep red and much larger in diameter than the canes from which they grow. Thorns on these stems are more numerous than normal, giving the stem an almost hairy appearance. Plants usually die within 22 months of infection.

The vector of this disease is an eriophyid mite, so small that 20 could fit on a pinhead. Eriophyid mites are much smaller than the red spider mites that are commonly seen on plants. The disease can also be spread by grafting.

Multiflora rose is the most common host of this disease, but it has been reported on cultivated flowering varieties as well. Climbers, hybrid teas, floribundas, miniatures, and a number of "old fashioned" roses have been infected. Hybrid teas typically show a color that is more yellow than red. So far, no other host besides rose has been found. We have seen a few cases of this disease on hybrid roses.

Currently, infected plants cannot be salvaged. Plants with symptoms should be dug up and destroyed (including their roots) when the disease is first noticed. We strongly suggest keeping multiflora and garden roses as far as possible from each other. The efficacy of mite control has been questioned in control of this disease. If miticides are used, research suggests that the critical mite transmission time is May and June, so concentrate your efforts in those months. Sprays now are of little benefit. For details of this disease, consult *Report on Plant Disease* No. 666. (Nancy Pataky)

Virus Diseases of Brambles

At this time of year, we tend to see more virus problems on woody plants. Viruses can cause a wide range of symptoms, but if you learn to recognize viruses on one host, you will know what to look for on others. Virus diseases of brambles also cause a range of symptoms. Low vigor is a major symptom, as would be the case with most viruses. The leaves may be yellowish, mottled light and dark green on the same leaf, blistered or puckered, dwarfed, curled, wrinkled, and cupped downward with the mosaic types. The leaf curl viruses generally cause slight stunting and “bushy” growth with small, dark green, bunched, stiff, tightly curled leaves. These symptoms are also very similar to those caused by some of the growth regulator herbicides. Look closely at the pattern in the patch. Herbicide injury is more intense near the source of the herbicide and progressively less intense as you move away from the source. Other broadleaf plants will likely show symptoms as well, and all at about the same time. Viruses are more likely to occur on scattered plants and to spread slowly during the season. They also tend to be fairly specific to one type of plant species.

Virus diseases reduce the yield and fruit quality of bramble fruits more than they do for most other fruit crops. Once infected, plants remain so for life. The virus particle needs a live plant cell in which to multiply and spread. It cannot be cultured, extracted, or induced to sporulate in a lab. The bramble viruses are spread by aphid feeding, but not by pruning or other mechanical injuries.

You cannot kill or inhibit virus particles with sprays. Control involves destroying all infected cultivated and wild brambles within 1,000 feet, if possible. Start new plantings with certified, virus-free plants. If you are growing both black and red raspberries, separate them by at least 150 feet to reduce virus cross-infection. Maintain strict aphid control at all times. For more information read *Report on Plant Disease* No. 710, “Virus Diseases of Brambles.” This publication is also available on VISTA, the University of Illinois Extension publications site, under horticulture publications. Access the site at <http://www.ag.uiuc.edu/~vista/horticul.htm>. (Nancy Pataky)

Peony Leaf Spots

This disease may have been developing on your peonies for a month or more, but you may have only noticed it now. Small, circular, red or purple spots appear on the upper surface of young leaves just

before the peony blooms. Later, the spots appear on the underside of leaves. The lower sides of infected leaves soon turn a dull chestnut brown, while the upper surfaces appear a glossy dark purple. As the host tissues mature, the lesions enlarge rapidly and may form large, irregular blotches that make affected plants unsightly. Stem and petiole lesions are short, reddish brown streaks at first. The lesions on stems near the soil line become somewhat sunken or pitted and tend to merge and darken. Spots on all plant parts remain purplish or brownish red throughout the season.

Because of the diverse symptomology, red spot, leaf blotch, or measles are all names for the same fungal disease that affects all aboveground parts of the peony. The disease occurs to some extent every year and is caused by *Cladosporium paeoniae*. It is most serious in large plantings, where plants are dense and grown closely together, and where the old tops are not destroyed in late autumn or early spring.

Fungicides will not help this year’s plants. To control the problem for next year, remove all old tops to ground level and destroy, bury, or remove them from the garden. Do this in the fall or next spring before new growth starts. Mark your calendar now or you will likely forget to do this task.

Fungicide options are listed in either the *Illinois Homeowners’ Guide to Pest Management* or the *1998-1999 Illinois Commercial Landscape and Turfgrass Pest Management Handbook*. Spray the plants weekly during cool, damp, overcast weather, starting when the new shoots are 2 to 4 inches tall, and continue until the flowers begin to open. Adding a spreader-sticker helps coverage. For more information on this disease, consult *Report on Plant Disease* No. 631. (Nancy Pataky)

Oak Wilt Testing Note

Oak wilt was discussed in issue No. 7 of this newsletter. Many readers have submitted wood to the Plant Clinic to have it cultured for the pathogen that causes oak wilt. In many cases, we have confirmed the presence of that disease. In many others, however, symptoms are typical, but we do not isolate the fungus. I believe that this has to do with the shipping conditions.

We highly recommend that you send oak wilt samples packed in ice. The oak wilt fungus is very sensitive to heat and often dies in transit at this time of year. If the fungus is dead, it will not grow in our cultures, and we will report that the fungus was not

present in the sample. If the sampled tree does have oak wilt, this will result in a false negative. All southern state clinics require that samples of oak arrive on ice. For best results, this is my suggestion for Illinois clients as well. (Nancy Pataky)

Home, Yard & Garden Pest Newsletter is prepared by Extension specialists from the University of Illinois at Urbana-Champaign and the Illinois Natural History Survey. Information for this newsletter is gathered with the help of staff members, Extension field staff, and others. Karel Jacobs and Donna Danielson of The Morton Arboretum also provide information and articles.

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