

INSECTS

Brian Kunkel **Ornamental IPM Specialist**

JAPANESE BEETLES are flying and feeding on various host plants. This is about the same time last year we saw adult emergence. Host plants include over 300 different types of broad-leaved plants. Some of the prefered plants include roses, cannas, flowering crabapple, lindens, Norway and Japanese maples, and elms. Last year had sufficient rainfall for decent populations of Japanese beetles. This year; however, they are only beginning to emerge in New Castle County. Populations started to emerge about a week ago in Maryland at some nurseries. Historically, adult activity typically occurs between 1094 - 2410 GDD₅₀. The copper and green beetle skeletonizes plant foliage by feeding in between the leaf veins.

Many natural enemies attack the various life stages of Japanese beetles such as: assassin bugs, parasitoids, ants, ground beetles, rove beetles, birds, skunks, and raccoons. Cultural options for management include hand removal, removing previously beetledamaged leaves, or shaking beetles into buckets of soapy water. This summer the Universities of Delaware and Maryland are continuing a project to evaluate efficacy of Acelepryn and other insecticides against adults. Chemicals available for controlling adult beetles include. Orthene. Sevin. Aceleprvn (landscape uses) or one of the pyrethroids (e.g., cyfluthrin, deltamethrin, etc.). Insecticide applications may need to be made every 1 - 2 weeks when adult activity is high. Stanton Gill and I conducted two years of trials and found foliar applications of Acelepryn and Mainspring provided excellent control of Japanese beetle adults in nursery situations. Neem-based products typically deter feeding for 3 – 4 days; applications should be made before damage occurs. Imidacloprid can be applied for adult Japanese beetle control, but tolerance of some feeding is necessary. Wettable powder formulations of some pyrethroids (pyrethrins) may be more repellent than the EC formulations. Thorough treatment of target plants is needed for any of the listed products to effectively protect the plants. Insecticidal soaps, plant extracts, and companion plantings are generally ineffective.

DISEASES

Nancy Gregory **Plant Diagnostician**

DOWNY MILDEW was spotted on garden balsam impatiens on June 12th in Newark. Check plantings of *Impatiens walleriana* for symptoms of downy mildew (yellowing and leaf curl) and signs (white sporulation on the underside of leaves). Garden plantings that have been out of impatiens for several years should be manageable for downy mildew, but planting a variety of annuals is always a good idea. (Continued)

UNIVERSITY OF DELAWARE

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What's Hot!

Herbicide injury sometime shows mysteriously in vegetable and flower gardens. Take care in use of grass clippings as mulch, which can add residual lawn herbicides to garden sites.



Japanese beetle adult. Photo credit: B. Kunkel



Downy mildew on impatiens. Photo credit: N. Gregory

more

on pests & practices covered in this newsletter, call your County Extension Office

Helpful numbers to know:	
Garden Line	831-8862
(for home gardeners only)	
New Castle County Extension	831-2506
Kent County Extension	730-4000
Sussex County Extension	856-7303
View more pictures at <u>http://ex</u>	<u>tension.udel.</u>
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COOPERATIVE EXTENSION

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Diseases (Continued)

BLACK KNOT is a fungal disease that causes black, corky, swollen growths on woody parts of plum trees, including flowering plum as well as fruit trees. The fungus, *Apiosporina morbosa*, produces spores in the spring, which are released during periods of rain. This fungus is able to overwinter in the galls, allowing the disease to spread and the galls to remain on the tree from year to year. The black galls cut off nutrients and moisture supply to the branches and twigs causing them to bend. Pruning off the affected branches when the tree is dormant is the best way to manage the disease. Fungicides can be used in extreme cases, but effectiveness varies.



Black knot on plum. Photo credit: N. Gregory

Editor: Susan Barton Extension Horticulturist Swarthmore College (Delaware County, PA) = 1043 ('16 =1034) Fischer Greenhouse (New Castle County) = 1066 ('16 = 1009) Fischer Greenhouse Research & Educ. Center, Georgetown (Sussex County) = 1251 ('16 = 1091) AS OF June 20, 2017