



Healthy Fruit

Volume 13, 2005

Prepared by the University of Massachusetts Fruit Team

Issue 13, July 6, 2005

Upcoming Meetings/Events

Date	Meeting/Event	Location	Time	Information
July 11	UNH Tree Fruit Twilight Meeting for Commercial Growers	Apple Hill Farm, 580 Mountain Rd., Concord, NH	5:30 PM	George Hamilton 603-641-6060
July 18	Massachusetts Fruit Growers' Association Summer Meeting	Nicewicz Farm 116 Sawyer Road Bolton, MA	10 AM – 3 PM	Jon Clements 413-478-7219 or Wes Autio 413-545-2963

A pair of meetings

Two meetings coming up you should have on your calendar. First, next week, Massachusetts growers are invited to attend the UNH Twilight Meeting for Commercial Fruit Growers in at Apple Hill Farm in Concord, NH. New research for monitoring and control of plum curculio and apple maggot will be the topics. The following week, on July 18, Massachusetts Fruit Growers' Association holds its Summer Meeting at Nicewicz Farm in Bolton, MA. An orchard tour will be followed by lunch and a brief speaking program. Be sure to register for lunch if you plan on attending. More information about both meetings is attached to this week's Healthy Fruit.

Japanese beetles on the way

More than likely you will see **Japanese beetles** feeding on fruit and foliage soon. They particularly like cherries, and anecdotally, Honeycrisp apple. Following is an article by Peter Shearer on Japanese beetles that appeared in *Rutgers Plant & Pest Advisory, Fruit Edition, July 5, 2005*:

“The Japanese beetle has started to emerge in the southern part of New Jersey. They are out in very high numbers this year. This pest was introduced into New Jersey on nursery stock from Japan in 1913. Since its introduction, it has spread to most states east of the Mississippi River. It is now a seasonal pest and can cause extensive damage to many crops. The larvae feed on roots of plants and are especially damaging to turf and pasture. The adults feed on over 275 species of plants such as fruit trees, flowers, and vegetables.

“Adults are about 3/8-1/2 inch long and metallic green to greenish bronze in color. They have white tufts of hair along the bronze forewing. Larvae are C-shaped white to cream-colored grubs with brown heads and are about 3/4-1 inch when full grown.

“The Japanese beetle overwinters as a grub in the soil. In the spring, they move up towards the soil surface and feed on roots. Adults begin to emerge in late June and are active until late

September. Females can lay about 50 eggs apiece 2-6 inches deep in the soil. It takes about 2 weeks for the eggs to hatch and newly emerging larvae feed on decaying matter then plant roots.

“Adult feeding damages both leaves and fruit. Leaf damage usually takes the form of skeletonizing. Fruit feeding results in large holes in the fruit. Ripening fruit is often attacked making control necessary yet difficult because of pre-harvest interval (PHI) limitations of effective materials. Early peach and apple varieties are most susceptible to adult attack because their time of ripening occurs during Japanese beetle emergence.

“Occasional scouting is required to determine if this pest is causing damage. Carbaryl (Sevin) can be used on stone and pome fruits when adult populations are high and damage can be seen. This product has a 3 day PHI for apples, peaches and nectarines, and a 7 day PHI for small fruits and berries. On apple, Imidan is effective and not considered disruptive to IPM programs. Imidan has a 7 day PHI for apple; 14 days for peaches, nectarine, apricots, and grapes. The fact that these materials do not provide quick knockdown and that new beetles invade from outside the orchard often gives the appearance that control measures are ineffective. Newer products such as Provado and Assail are also efficacious when used at higher rates. Provado has a 0 day PHI for peaches, nectarines, and apricots and a 7 day PHI for cherries. Assail has a 7 day PHI for pome fruit. Under high pressure, control measures should be applied more frequently. Always read and follow the label.”

Another few to keep an eye out for

In addition to Japanese beetle, **potato leafhopper** may soon make an appearance in your orchard, arriving with warm southwest winds. Potato leafhopper characteristically moves sideways on foliage when disturbed, and are light-green in color. They are significant pests of young apple trees, causing stunted shoot growth. Treatment is necessary in this case, and Actara, Asana, Assail, Avaunt, Danitol, Dimethoate, Lannate, Provado, Thionex, Vydate and Warrior are all effective.

Early sap feeding mines of 2nd-generation **leafminer** should be showing up anytime soon. Be sure to check 20 leaves per tree (underside of leaves, picked randomly) on at least 5 trees spread throughout the block. If mine numbers reach 50 per 100 leaves (0.5 per leaf) on McIntosh, and 100 per 100 leaves (1 per leaf) on non-McIntosh some treatment is appropriate. Material choices include: Assail, Intrepid, Lannate, Provado, Spintor, and Vydate. Vydate and Lannate are harsh on predatory mites. Sprays should be applied before mines begin to show up on the upper leaf surface.

In general, pre-bloom **mite** treatments continue to hold mites in check. However, as the summer progresses, growers are advised to monitor normally problematic cultivars and blocks carefully. Some sort of miticide rescue treatment is called for if 5 or more mites are found per leaf. If numerous eggs are found, but treatment threshold has not been reached, wait a few days and check the block again. Remember that all miticides (other than oil) should be rotated to delay development of mite resistance.

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