UNIVERSITY of NEW HAMPSHIRE
COOPERATIVE EXTENSION

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Bud Stages This Week

Fruit bud stages at the UNH Woodman Horticulture Farm were as follows on Tuesday June 3: Pioneer McIntosh Apple: fruit set; Red Haven Peach: early shuck split; Sam Sweet Cherry: 1/4- inch fruit; Methly (Japanese) Plum: fruit set; Bartlett Pear: fruit set.; and Blueberries: bloom.

Apple Scab

As of May 30th , we had accumulated 886 scab Degree Days at the UNH Horticulture Farm. That corresponds with about 99% of the season's ascospores having matured. I haven't got the exact weather figures since then, but it doesn't matter; I estimated total DD as of June 3 at 975. The New England Apple Pest Management Guide says the final ascospore release in commercial orchards is done when at least 900DD have accumulated and then there is a daytime rain. We met those conditions in Durham on Saturday or Sunday. If your fruit development has been with ours (or ahead), then primary scab season should be over for you, too. If your fruit development has been behind ours in Durham, then you may need an additional fungicide application to protect from primary apple scab season.

If you have no lesions resulting from primary season, then you can relax in your fungicide schedule. If lesions are out there, then they will continue to crank out conidia, which are spread by splashing and start new lesions. Peak conidia production is during the first week or two after the lesion becomes visible. This is one of the reasons that experienced apple growers check for lesions through primary season, not just at the end. If primary season ended in Durham on Saturday or Sunday, then all lesions resulting from primary spores (the ones shot out from last year's dead leaves) should be visible (in Durham anyway) by about June 11 or 12. Details on how to count lesions (to consider if burnout fungicide treatments are necessary) are in the New England Apple Pest Management Guide.

Plum Curculio

For those of you saddened by the end of primary ascospore season, take heart! Plum curculios are active. I write this on June 3rd, a perfect day for lots of curculio activity: warm weather, moist conditions, and fruit enlarged enough to attack. I found several attacked fruit in my yard. No, I didn't check during the rainy weekend.

Curculio is a serious pest. Without insecticide treatment, you can suffer injury (or total loss) of the vast majority of your apples. That is, of course if you grow fruit in southern or central New Hampshire. North of the White Mountains, plum curculio injury is less severe.

San Jose Scale

San Jose scale is a pest that many of us don't have to worry about. For those of you who have a hotspot with some scale problems, it is worthwhile to review a couple of things. First is the injury. It is easiest to see SJS on the fruit, especially in September or October, on light skinned varieties. The tiny scales (which themselves are like very tiny gray volcanos) are each surrounded by a reddish ring. Scales are also on twigs and branches, but they are much harder to spot there. Red rings are easy to see on light colored fruit.

If you had a tree or two with infested fruit last fall, I hope you marked it. That will facilitate spot spraying. In managing the problem, consider several things: 1) Anything that blocks penetration of insecticides to the twigs, trunk and branches will make it easier for SJS to survive. Good pruning, proper sprayer adjustment (don't miss tree tops), and calibration are important. If you use tree wrap or similar "mouse guards" that prevent insecticides from reaching the trunk, then SJS has a nice hiding place there. 2) SJS is most vulnerable to insecticides when it is in the crawler stage, just hatched from the egg. 3) We can fairly accurately tell when the crawlers appear, with a combination of watching for crawlers and measuring degree days. Here are the details:

Adult males of SJS typically fly during bloom. They find the females by scent, and mate with them. Then the females produce eggs, which usually hatch at about 400 DD (Base = 50F) after petal fall. The eggs don't hatch synchronously, but instead spread out over three weeks or so. By applying an insecticide just when the first crawlers appear, we can get nearly complete control with only two applications. If you have to guess about emergence time, it takes more spraying. I usually suggest placing sticky tape **on limbs that you know are well infested**, just before crawlers are expected. Then you check the tape daily for the oval, yellow crawlers, about 1mm long. When the first crawlers appear, it is time to treat.

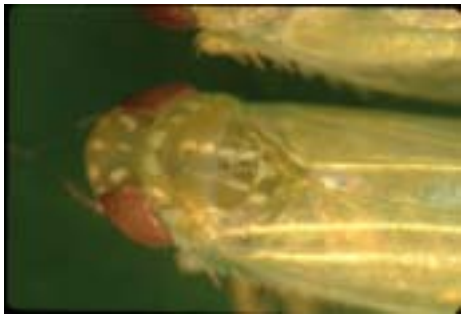
The tape I use is electrician's tape, snugly wrapped around an infested branch, and thinly covered with Vaseline in a band in the middle. I like blue, but the crawlers also stand out on black tape. When the crawlers appear, the tape can come down, since it has done its job.

The disadvantage to this method of timing SJS treatments is that you absolutely MUST place the tape on well infested limbs. If you use limbs with no scales, you will catch no crawlers, and will erroneously delay application.

Potato Leafhopper??

Potato leafhopper cannot overwinter in New England. It survives the winter in the Gulf states, and builds up there in the spring. When the population builds well and weather conditions are favorable, thousands of the adults are lofted high up into the sky and carried many miles to the north. They literally drop out of the sky into NH. One day they aren't here, and the next day they are. We are not very good at monitoring the buildup in the South, or understanding and monitoring the weather conditions that bring them here. As a result, it is a good idea to be watching for PLH in June. Typically it arrives in mid-June to early or mid-July.

Adults look quite similar to white apple leafhopper, except that they are greenish yellow. If you



have a hand lens, you can look for the white lines on and just behind the head that confirm their identity.

Potato leafhoppers create much different injury from white apple leafhopper. PLH is on shoots and suckers, not cluster leaves. The saliva it injects as it feeds is toxic, and causes leaves to become cupped, crinkled, and eventually have burned edges. It also stunts the shoot growth. Because of this, PLH is a concern in very young trees, but is of little or no concern in mature trees. PLH hits potato, beans, herbs, cantaloupe, watermelon, alfalfa, and other plants. I'll include a photo of the injury on apple. We'd prefer to find the insects before they do this!

Orchard Meeting June 10 at UNH

Bill Lord and I invite you to come see the UNH Horticulture Farm on June 10. The meeting begins at 5 PM and is free (as usual). Bill MacHardy will be here to discuss the apple scab sanitation project. Bill Lord and John McLean have a lot for you to see, including a swing arm trellis system for thornless blackberries, annual hill culture of strawberries, our apple IPM block, and our stone fruit block (complete with peach leaf curl this year). I'll be there to talk about the predator mite project, and the European apple sawfly parasite work. I hope you'll come by and see what we are doing.

Bambi's Birthday

June 1 is the average birth date for NH deer. Tall grass is a favorite birth site. Perhaps a doe is contemplating your orchard right now...

Time to Mow the Orchard Floor !

Apple growers often prefer to delay mowing until primary apple scab season is over. The idea is that tall grass might serve as a impediment to the apple scab spores that are shot up from last year's dead leaves. Once primary ascospore season is over, mowing can proceed in earnest. Tall grass greatly encourages meadow voles and woodchucks. Voles aren't a problem now, but if they build up in numbers they can be a serious threat to your trees in fall and winter.

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