

Orchard Outlook



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Fruit Development	Degree Day Accumulations	Diseases
Insects	Horticulture	

Fruitlet size on average was approaching 10-12 mm on Tuesday. Fruitlets of earlier blooming varieties such as Gravenstein and Idared would be beyond this. The window for chemical thinning will be coming to an end by next week in most blocks.

Fruit Development

Most apples are now in the 10-12 mm range with earlier blooming apples (e.g. Gravenstein and Idared) around 14-16 mm (Figure 1). Later areas are approaching 8-10 mm. Pears are 12-16 mm fruitlets; peach – ½-inch length; plum – ½-inch length; sweet cherry – marble sized.



Figure 1: King fruitlet of Honeycrisp at 12 mm.

2015 Degree Day Accumulations

Heat unit accumulation last week has the 2015 season to now almost identical to 2014 in terms of plant development.

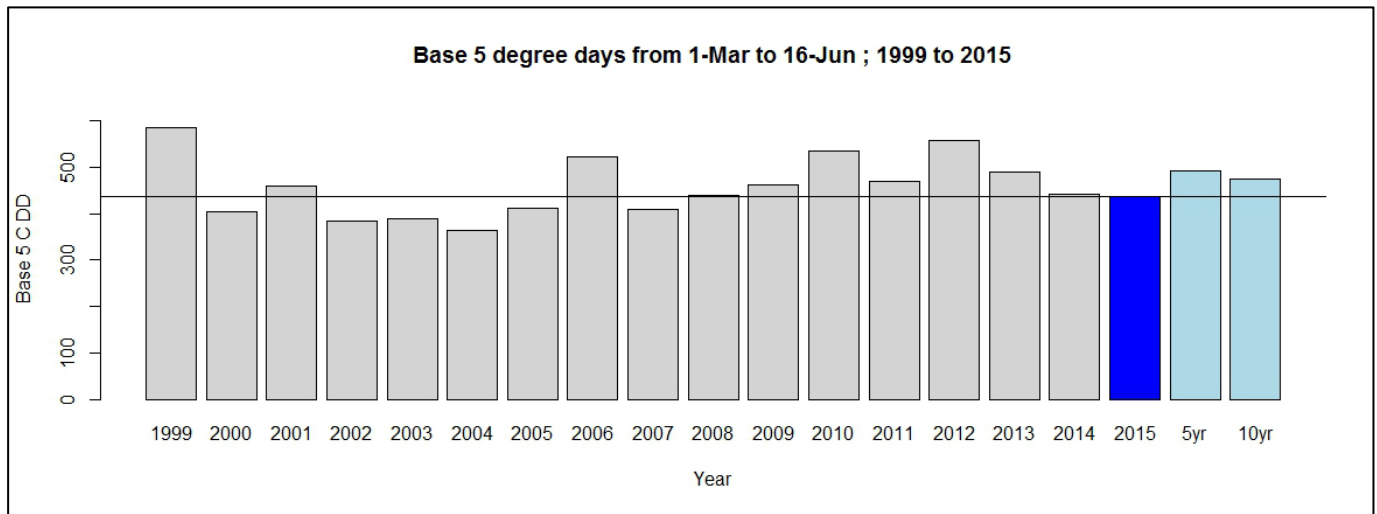


Figure 2: Degree day accumulations from March 1st for the past 17 seasons. Provided by Jeff Franklin (AAFC).

To date heat accumulation since March 1st is (Figure 2):

- About 11% fewer plant development heat units compared to the 5-year average.
- About 1% fewer plant development heat units compared to 2014.
- About 1% fewer insect development heat units compared to the 5-year average.

Diseases

Apple Scab

There was a light to moderate infection period recorded from 5:00 pm yesterday into this morning.

The ascospore maturity model has reached 100% as of June 15th. In most areas, the last of the ascospores will have matured in the next couple of days. Future infection periods will be secondary and will be made up of conidia produced from primary lesions.

Both Erika Bent (APM) and I have now observed primary scab lesions. If scab protection was not adequate for an infection period this spring, lesions would now begin appearing.

Before you switch to cover rates, have a thorough check for primary scab lesions in your orchard. Even if you do not have scab at this time, full rate fungicide protection should be maintained for the next week to provide incubation time for the last release of ascospores.

The application of a fungicide to reduce apple scab spread

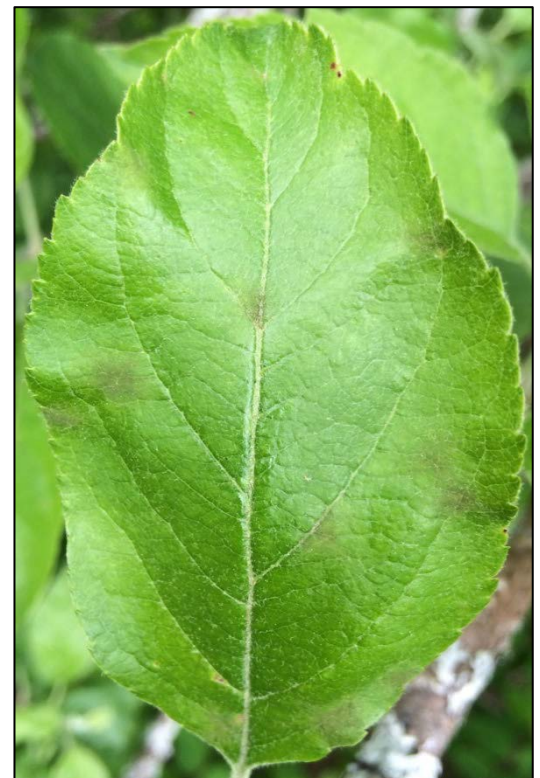


Figure 3: Primary scab lesions on unsprayed trees.

after an infection event acts as a means of selection for resistance and should be avoided as much as possible. Where an infection period has resulted in primary infections, growers may wish to consider applications for the purpose of burning out scab (reducing secondary spore production). Two fungicides are effective as post-symptom products to arrest scab infections – Senator (thiophanate-methyl) and Equal/Syllit (dodine). These products should be mixed with a full rate of protectant, and preferably Captan, for best efficacy as well as resistance management.

Senator 70 WP – 2.25 kg/ha

Syllit 400 FL – 5.3 L/ha, Equal 50 WP – 3.25 kg/ha

Fireblight

The risk of blossom blight for mature orchards has ended as petal fall is complete. Newly planted trees in bloom will remain at risk when the weather is conducive for infection. The risk for the next few days is currently low and no antibiotic sprays are needed.

Sporadic blossom blight has been reported in three locations now (one unsprayed, and one marginally sprayed) and should be appearing this week if infections occurred. Ooze from blossom blight infections is considered to be the secondary inoculum source for subsequent shoot blight infection. Degree day accumulations are now occurring in Maryblyt for shoot blight but likely another two weeks will be required before symptoms are developed.

Canker blight is also being reported where shoots near overwintering cankers have become infected from internal movement of bacteria. These shoots should be removed from the tree to minimize potential ooze production.

Powdery Mildew

Watch for new mildew infections showing up on terminal growth on non-bearing orchards, newly planted trees, and nurseries.

Insects

Stinging Bugs

Jeff Franklin has observed increasing numbers of apple brown bug and mullein bug hatch. If treatments are required for stinging bugs, they should be made as soon as possible.

Aphids

Both Rosy Apple Aphid and Green Apple Aphid colonies are expanding quickly where present. The list of aphid products is long: Actara, Admire, Assail, Beleaf, Calypso, Closer, Clutch, Movento, Twinguard, and Exirel.

One of the neonicotinoids, with the exception of Clutch, would be product choices where stinging bugs and aphids need to be controlled.

Codling Moth

Jeff Franklin and Erika Bent have recorded sustained flights of codling moth in the latter part of last week. Based upon this information, June 11th is being used as the date of biofix for establishing treatment windows for codling moth products. The treatment timing for egg hatch products (Assail, Calypso, Twinguard, Delegate, Confirm, Intrepid, Altacor, and Exirel) is 100 degree days from biofix. This will likely be later next week. The ovicide product Rimon should be applied a bit earlier, early to mid-week next week. Those using Imidan can likely wait another two weeks before application. Timing information by Jeff Franklin will be updated in next week's Orchard Outlook.

Those growers that will be doing their own monitoring for codling moth should install traps in orchard blocks:

- Hang the traps on high or rising ground on the windward side of an orchard.
- Use 1-2 traps for every 4 hectares of orchard.
- Check traps weekly and record the number of captures since the previous count. The easiest way to keep track of what to count is to remove all counted moths at the end of each visit.
- Record the count of moths and add the number to the previous counts.

Traditionally, the threshold for codling moth has been 40 moth catches per trap. With high value cultivars, growers have been using a lower threshold in recent years.

Mites

Erika Bent notes that it is generally early for miticides yet. Check your scouting reports to see if there is a treatable population. There are a number of miticides that can be used for mite control including Acramite, Kanemite, Envidor, and Nealta. Note Nealta or Acramite do not control apple rust mite.

Plum Curculio

A second application from plum curculio in stone fruits should be made if has not yet been applied.

Horticulture

Apple Thinning

Most growers would have applied at least one application of a fruitlet thinner by now with touchup thinning being done in some areas at this point. I have not yet observed much yellowing but imagine it will begin to show up this week. There is still an opportunity to do some thinning on

most varieties with the exception of early blooming Gravenstein etc. I feel the fruitset in general looks to be average, with some poorer set in Ambrosia and Golden Delicious.

Pear Thinning

As pear size is past 14 mm in almost all areas, the window for reliable chemical fruitlet thinning has closed. Any excess fruit will have to be hand thinned at this point.

Mowing

Regular orchard mowing will help conserve soil moisture as well as discourage the buildup of rodent populations.

Apogee

A second Apogee application should be made approximately 14 days after the first application. A third application may be required in very vigorous blocks for growth control or to maximize suppression of shoot blight.

Young Trees

Make an effort to get young trees properly trained (single leaders, removing forking of branches, exceedingly large diameter branches) to ensure the best and most uniform growth for your future orchard. Leaders should be securely tied to encourage growth and fruit on the top 60 cm leaders should be removed if the planting still needs to reach the top of the trellis.

Herbicide

It is especially important to maintain good weed control during June and July on young plantings which need to develop vegetative growth. Studies have shown that weed competition during this time can have a significant negative impact on early cropping of young blocks.

Foliar Nutrients

Application of foliar urea and magnesium can continue this week to supplement tissue levels where they are low. If you are applying thinners, it is probably best to save the foliar nutrients for another spray. Reducing the effectiveness of a thinning spray will have a much greater impact on returns compared to a small gain from improving tree nutrient status.

Deer Browsing

Deer browsing can have a significant impact on tree growth, especially on young trees which are just establishing their photosynthetic capacity and/or beginning to bear fruit. Thiram fungicide is a proven repellent of deer because of its bad taste. It is now sold in the Granuflo-T formulation. It can be applied at 1.5 to 2.25 kg (1.0 to 1.5 kg after second cover) per 1000 L of water and will count as a scab spray as well as pick up some secondary diseases. Apply in good drying conditions.

Other commercial deer repellants (e.g. Bobbex) consisting of various meat proteins, herbs, and/or hot peppers have been highly effective in some orchards. Good old bars of soap can also be effective, depending on the brand. Soap should be hung at the nose height of the deer about 3-4' off the ground.

Apple Maggot Eradication Technician

The apple maggot eradication technician is again available this year to control wild host trees of the apple maggot. Please contact the NSFGA office to report wild trees and schedule their elimination.

This Orchard Outlook has been published with the input of the Orchard Outlook Committee and Erika Bent (APM).

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