



ORCHARD OUTLOOK

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Volume 7, No. 7

June 13, 2007

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Stage of Development

I think it is safe to say that apple trees are at calyx and beyond in terms of development. Looking at orchards on Tuesday June 12, I observed a bit of tip bloom on Spy, Cortland and Jonagold but hopefully this will be gone by the end of this week. Like most years, fruit development has been quite rapid with king fruit on Graves at or beyond the 12.5 mm stage in some locations. McIntosh was at the 8 to 9 mm stage as were other cultivars such as Gala, Jonagold, Cortland and Spartan. Although Spy still has bloom on the tip of limbs there are fruit that are at or near 8 mm. Pear set looks good and fruit are at the 12.5 mm stage and beyond.

2007 Degree Day Accumulations

(Temperature data provided by Jeff Franklin, AFHRC, Kentville)

Table 1.0 Degree day accumulations as of June 11, 2007 taken from Kentville weather data. Degree day accumulations are calculated using the single sine method and are based on a start date of January 1, 2007.

Category	2004	2005	2006	2007	5 year average
Plant development (Base 5°C)	344.9	367.7	486.3	391.6	385.7
Insect development (Base 10°C)	135.5	140.8	200.7	176.5	154.8

Apple Scab

During the past week two scab infection periods were recorded at Kentville. Shower activity starting around 11:00 pm on June 6th resulted in a wetting period lasting until 11:00 am on the 7th which was long enough for a secondary scab infection. A wetting period which began at 6 am on the 11th continuing on to noon of the 12th resulted in the second infection period. Growers should now be able to determine how effective their fungicide programs have been up until May 28th. Scab lesion from the May 28-29 infection period is just beginning to appear on the leaves. Scab lesions from earlier infections are well defined showing up as large lesions on the upper or lower side of fully expanded leaves. I am hearing reports of scab showing up in sprayed blocks of orchard, which means that in these situations growers will have to maintain good coverage and not reduce the spray intervals or rates during wet weather.

Spore Maturity

The prediction model is now indicating that 99.4% of the overwintering spores have now matured. Growers should wait at least another week before switching to cover rates. This should allow for enough time for early season infection to show up.

Fire Blight

The Maryblyt program predicted infection for Sunday May 10th and Monday May 11th for most areas of the Valley. Trees that were still in bloom on these two dates would be at risk. The warmer than predicted high for Saturday June 9, increased the risk factor to high for these dates and with the wetting event resulted in the infection prediction. Streptomycin applied Sunday prior to the wetting event would have provided the best protection against these two events. Streptomycin applied Monday would have provided upwards of 75% effectiveness against Sundays infection and full protection for Monday. Streptomycin applied Tuesday would have provided upwards of 75% protection against Mondays but no protection against the Sunday infection. Only those trees that were in bloom are at risk and the risk factor would increase with the increasing number of blossoms on the tree. Later next week infection symptoms should start to appear in the fruit clusters. The young fruitlets will have turned black and the vegetative shoot that comes from the base of the fruit spurn will also have wilted and bacterial ooze can be observed on these shoots. The sooner these infections are detected and removed, the more successful you will be in reducing the amount of shoot infection. The past two years these blossoms were not detected early enough and the infection had a chance to spread to vegetative shoot which made it very difficult or impossible to control.

The fire blight risk for the remainder of the week is low to moderate increasing to high for Saturday and infection for Sunday. There is only a risk if trees are still in bloom.

Powdery Mildew

Have yet to hear of or see any serious mildew problems, at this stage in the growing season. This may be a reflection on the wet weather but most likely on the increase use of Nova, Nustar, Flint and Sovran during the pink to calyx stage of development. Mildew will spread during periods of warm humid

weather and while new shoot and leaf development is taking place. Once leaf development is complete it becomes less susceptible to mildew infections. Do not forget to check young plantings for mildew. Mildew can come on the nursery trees that were planted this past spring. Mildew infection on young trees will reduce terminal and lateral shoot growth.

Collar Rot

Collar rot systems often appear around the bloom period when the trees run out of reserves. Collar rot systems that appear at this time of year result from wet weather in the fall when this fungus enters the root stock and slowly kills the cambium. The symptoms often appear as a total tree collapse. It was reported that collar rot was observed in a Honeycrisp/MM106 planting this past week.

Codling Moth

Codling moth traps if not already placed in the orchard should be up as soon as possible. Dr. Rob Smith reported the first sustained flight of codling moth in the Aylesford area has occurred and June 12th has been set as the biofix date for determining treatment period based upon heat unit accumulation.

Rosy Apple Aphid

Rosy apple aphid colonies are starting to build in trees and should be assessed as soon as possible. When observing curled leaves make sure that the curled leaf is a result of rosy apple aphid and not grain aphid. Mature winged grain aphids are now present and they are leaving apple trees to go to grain fields and will not be causing a problem. If you are however finding rosy apple aphid at a level of one colony or more per meter height, a treatment for this pest is warranted. Please refer to last week's OO for treatment options.

Stinging Bugs

Now is the time to be assessing orchards for brown and mullein bug by checking susceptible cultivars such as Red Delicious and Northern Spy. Mullein bugs are still quite small and growers may have missed them if taps were down over the past few days. It would be wise to re-tap later this week or early next week just to make sure that there is not a treatable level.

European Red Mite

Dr. Mike Hardman and Dick Rogers both reported that red mite adults are now laying eggs. Growers that were planning to use Agri-Mek + oil for mite control should apply this product as soon as possible while leaf tissue is still soft. Remember that Captan or Maestro should not be applied within 14 days of the treatment because of the incompatibility with oil. Growers that are planning to use Apollo will need to wait at least a week or more before this product should be applied. Acramite and Envidor are other options however you may wish to save these for summer mite control.

White Apple Leafhopper

Growers that use Sevin for thinning should take care of this pest. Remember to check young tree for this pest because heavy feeding by leafhopper can reduce growth. Studies indicate that when other insecticides are added with Sevin mite flare up can occur. Growers are therefore cautioned not to add another insecticide to the tank when Sevin is being applied as a thinner.

Fruit Thinning

The general consensus at this morning's Orchard Outlook meeting is that most cultivars have an over set of fruit and this is a year that all growers should be making use of thinners to regulate crop load. Thinning programs used will depend upon the cultivar and how aggressive growers want to be in managing crop load. I would encourage growers to at least make use of Sevin as it has a tendency not to over thin. The window for applying thinners will quickly close therefore growers should be trying to apply most of the thinning treatment by this weekend. Early developing cultivars such as Idared and Gravenstein should be treated ASP as they are already at the 12.5 mm stage. Once the fruit have reached the 14mm size Sevin will no longer be effective. In the case of difficult to thin cultivars, growers should be using the combinations of Sevin plus NAA or Maxcell. Please refer to the May 30th OO for product choices and rate per ha. Just a reminder that thinners are more effective when warm weather follows application thus the encouragement for treatment to be applied ASP with warmer temperature forecasted for later this week. If you think you have over thinned a crop in all likelihood you have done a good job of thinning.

Mowing

With a good supply of moisture to date some orchard are looking more like hayfields than orchards. I did note one good thing about the last two days of rain and wind that mowing grass was one of few tasks that could be accomplished.

Tree Training

Tree training should be ongoing during the active part of the growing season. Now is the time to be selecting a strong leader and removing the 2 to 3 complete shoots which have narrow crotch from below the leader. Cloth pins can be used to spread lateral that have narrow crotch angles and the growing point can be pinched off laterals that are too vigorous, allowing weaker laterals to catch up in growth.

Foliar Application of Urea

Tree foliage following fruit set often looks light green because of the demand on nutrients by the young fruit and active growing points on a tree. Foliar application of urea will give the tree a boost of nitrogen and can help to alleviate this stress symptom. Refer to your foliar nutrient analysis before applying Urea because it is not required in blocks that had high nitrogen levels last year. Applying Urea to blocks high in nitrogen may compound excessive tree vigour and poor fruit colour. Urea should be applied during

good drying period. Fruit russetting has been observed when it was applied under slow during conditions. The dilute rate is of urea is 18kg per hectare. This rate should be reduced by at least half when applied as concentrated spray.

Machinery Day

The NSFGA Production Committee has organized an orchard machinery demo day for Saturday June 23rd to be held at the farm of Lloyd Dyck's in Waterville from 9:00 am to 12:00 pm. The demo is open to all apple, grape and high bush blueberry growers. Mark this date on your calendar additional information will be provided in the next edition of Orchard Outlook.

Written and published by AgraPoint in partnership with Agriculture and Agri-Food Canada and Industry representation.