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Fruit Bud Development

Orchard visits on Tuesday May 24, revealed that some apple bloom was present in all areas of the Valley. The range of apple bloom varied from early bloom on Idared and Gravenstein to early petal fall on Gravenstein. In general McIntosh were just coming into bloom, king bloom on Jonagold Gala and Red Delicious. I did see the odd Honeycrisp and Northern Spy bloom open. Pears were in full bloom while sweet cherry and plums were at late bloom to petal fall. Peach were also in bloom. Depending upon temperatures peak bloom of apples will occur this weekend or early next week.

2011 Degree Day Accumulations

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

Table 1.0 Degree day accumulations as of May 23, 2011. All data taken from the Kentville weather station except for observations from April 11th to 28th inclusive which were taken from the Greenwood Airport. Degree day accumulations are calculated using the single sine method and are based on a start date of January 1, 2011.

Category	2008	2009	2010	2011	5 year average	10 year average
Plant development (Base 5°C)	234.7	265.2	312.0	231.0	261.3	229.5
Insect development (Base 10°)	75.9	106.6	118.0	71.9	96.0	83.2

DISEASES

Apple Scab

One infection period was recorded in the Kentville area this past week. This was the result of a wetting period that began 2:00 pm on Friday May 20th and ending around noon on Saturday. The average temperature during this 11-12 hour wetting period was

13°C and the infection was classed as being light. There was a wetting period that was ongoing at the time of writing the Orchard Outlook. If the foliage does not dry off by mid to late afternoon than a light infection will have occurred.

I did find a couple of emerging scab lesion on Tuesday May 23rd in two blocks of unsprayed apple trees. It took a bit of looking to find these lesion and they had yet to fully develop. Early next week you should be able to determine how well you controlled apple scab for the first half of May. Now that scab has been found, secondary infections will now be taken into consideration.

The prediction model has spore maturity at 75-80%.

Fire Blight

Now that apple trees have begun there bloom period, growers have to be concerned about the risk of fire blight infection. It is the blossom infections that give the growers the greatest problem. Controlling blossom infection reduces the risk of shoot infection which can lead to tree losses. Infections take place when bacteria builds up on the flower pistils during warm temperature and then get washed down to the base of the flower during a wetting event. A wetting event could be rain, fog, mist, heavy dew over the row irrigation or the application of a spray with 1000 L/ha of water or more.

The timing of a streptomycin spray to prevent an infection is always a bit of a guessing game particularly when wet weather is not being forecasted. Streptomycin is UV sensitive and is only effective for 2-3 days post application, thus if the risk remains high and a wetting event is forecasted on day four, a second application is required for control. Should an infection take place when the trees were not protected by streptomycin growers can apply streptomycin within 24 hours of the infection and have some control. The extent of the control will depend upon how close the spray application can be time to infection.

The Maryblyt model is running for Kentville, Medford, Morristown and Greenwood. The long range forecast is for a bit warmer temperatures and if they do occur the risk of an infection will become high by this Saturday. If a wetting event is to occur on Saturday then an infection will occur. An update will be provided at weeks end.

Powdery Mildew

Blossom cluster and shoot infection are now visible however the weather is still less than ideal for the spread of this disease. The Si and Stobilurin fungicide applications that have been applied to control scab during the wet weather should prevent the spread of mildew from the early infections.

Calyx End Rot

Calyx end rot infections can take place during the bloom period and post bloom. This disease is caused by the fungus *Sclerotinia sclerotiorum*. Dry-eye rot which has a similar appearance to calyx end rot is caused by the fungus *Botrytis cinerea*. The application of Maestro or Captan 80 prior to an infection period should provide help to prevent the spread of these two diseases.

Brown Rot

Fungicide applications to control brown rot should be on going as stone fruit are in full bloom to late petal fall.

INSECT ACTIVITY

Now that apple trees have begun to bloom, insecticide applications have to be postponed until the calyx period. Applications of an insecticide during bloom will kill off honey bees, native bees and other pollinating insects.

Tarnished Plant Bug

This insect was reported as being observed this past week. If you were not able to treat for this insect it is too late in most areas of the valley now that bloom has begun.

HORTICULTURE

Thinning

Given the weather to date, it has been less than ideal for bee activity and cross pollination. There were short periods over the weekends that were somewhat suitable for pollinating activity. I did see a bumble bee working on Gravenstein bloom at 10:30 on Tuesday and I was able to get some pollen on my finger tip when checking for the availability of pollen. The long range forecast is for sunny weather so growers should keep a close watch on bloom development and pollinating insect activity to determine if a blossom thinner may be of benefit. I would refer you to the following article for the use of ATS as a blossom thinner.

This information has appeared in the previous couple of years in Orchard Outlook. The bloom period does provide an opportunity to thin fruit. The foliar fertilizer Ammonium Thiosulfate (ATS) will reduce fruit set through disruptive action on the flower stigma. Complete wetting of tree foliage is essential for effective response with ATS. The current rate used is 12.5 milliliters ATS per litre of Water or up to 42 litres per Hectare in an orchard with 100% tree row volume. The optimum timing for application of blossom thinners is 12-48 hours after king blossoms have set and before lateral flowers have set.

In 2009 the effective window of opportunity will soon be over. The flower must be fully open for the blossom thinners to be effective therefore growers should target 90% full bloom as the time to apply blossom thinners. It is difficult to begin thinning before the fruit set is known, however if the blossom density is high (snowball bloom) only 5% of these blossoms are required as fruit for a full crop at harvest. A quick evaluation of the effectiveness following blossom thinning treatment allows growers to determine soon after fruit set if additional petal-fall or fruitlet thinner treatment is needed to further adjust crop-load. (Information provided by Doug Nichols in 2009).

Fertilizer Application

Growers that have yet to apply their spring fertilizer application should get them on as soon as possible. A post bloom spray of urea would be of benefit in those blocks that have yet to be fertilized.

Herbicide Application

Controlling weed and grass growth will have more of an impact on tree growth and yield then later in the summer. The grass and weeds are getting knee high and need to be controlled.

Pruning

I still encourage growers to get there young trees pruned ASAP. The longer you delay, the less impact you will have on this year's growth. If you have planted trees this spring they should be pruned before bud brake for the same reason.

Nova Scotia Fruit Growers IFP Committee 'Calyx Workshop'

2011 June 1--The backup date for this meeting in case of rain will be June 2.

1:00PM: Rob Smith's Orchard, 1584 Victoria Harbour Rd., RR#3 Aylesford NS (The orchard is located one mile north of Aylesford at the juncture of Brooklyn Street and Victoria Harbour Rd. The duration of this workshop is 1.5 hours.

We estimate 'calyx' to be the week of May 30th.

Overview: The calyx period during tree fruit development is a crucial time interval when many key pests (aphids, winter moth, budmoth, stinging bugs,) can be assessed and appropriate control measures can be applied to avoid crop loss. Also setup of monitoring traps for codling moth is timely. The workshop will focus on 'hands on' sampling of pests as well as identification of pests and beneficial species found in the orchard. The proper placement of pheromone baited traps for codling moth will be demonstrated.

Details: Limb tap sampling (tap tray) and fruit spur cluster inspections will be demonstrated to growers and practiced by participants as they gain 'hands on' familiarization with orchard insects, both pest and beneficials. The life history of key

insects will be discussed and handouts supplied. Pest control options including products and timing shall be discussed. Ample opportunity will be given to address questions from participants.

Dr. Rob Smith is a retired AAFC research scientist who has 29 years of pest management experience as well as a decade of knowledge from operating their 15 acres of orchard. He currently carries out pest monitoring for the grower community and conducts applied research for industry partners.

Trap Orders

Codling moth traps have arrived and are ready for pick-up at the NSFGA office. Office hours are 9:00 AM - 4:30 PM Monday to Friday.

IFTA STUDY TOUR

This year's Study Tour heads to England, the Netherlands and Belgium July 24-30, offering opportunities for education and networking, as well as stops at some of Europe's most beautiful cities. Highlights of the tour are set to include technical presentations at East Malling Research, Verbeek Nursery and Carolus Trees, along with visits to Leeds Castle, the city of Canterbury and Whitstable Oyster Festival.

Registration is initially capped at 48 participants so don't delay! Each tour registration includes six nights of hotel accommodations, ground transportation to all tour locations/attractions, five breakfasts, four lunches, two dinners and admission/tour of Leeds Castle.

You can register for the tour at the following website <http://ifruittree.site-ym.com/?page=StudyTour11Register>

Contributions and consultations were made in the preparation of this newsletter with the Orchard Outlook Committee

Editor: Bill Craig, AgraPoint