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Please Note: This will be the last weekly news letter for the 2010 growing season. The Orchard Outlook will be produced periodic from now to the beginning of the 2011 growing season. I would like to thank all those that attended the Orchard Outlook meetings and for those that contributed articles and information during the past four month.

2010 Degree Day Accumulations

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

Table 1.0 Degree day accumulations as of July 19, 2010 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, 2010.

Category	2006	2007	2008	2009	2010	5 year average
Plant development (Base 5°C)	1090.7	856.0	950.1	895.5	1039.8	931.7
Insect development (Base 10°)	617.9	462.0	520.0	472.0	569.4	504.3

Rain Fall

Kentville recorded 38.7 mm of rain and Greenwood 37.5 mm last Wednesday. The total rain fall for the month to date is 77.8 mm for Kentville and 84.9 for Greenwood. The average rain fall for the month of July is 69.5 mm. July is turning out to be a wet humid month and moisture stress in orchard should not be an issue this year.

Diseases

Apple Scab

Two secondary infection periods were recorded at Kentville during the past week. Rain beginning at approximately 10 am on Wednesday, July 14th resulted in a 26 hour wetting period with an average temperature of 20°C. The second infection period resulted from a wetting event which began at 1:00 am on Tuesday, July 20th which lasted for 12 hours with an average temperature of 20°C.

It has been a longer than normal spray season for apple scab control with many growers putting on the first fungicide application by April 10th. Some growers have been quite successful in controlling apple scab while others have not. It would appear that most of the problems occurred from infection periods the latter half of May. There have been heavy rain fall events during June and July which has help to contributed to the spread of apple scab. In a number of cases the disease is more commonly found on the leaves than the fruit and the objective for the remainder of the season is to prevent pin point scab from developing on the fruit. In fresh fruit orchard blocks, I would strongly encourage growers to continue with a fungicide program for apple scab until the end of the month. The need to apply fungicides in August would depend upon the severity of apple scab infection in the orchard and the amount of rain fall in this month. Once terminal growth has stopped the leaves and fruit are more resistant to infections. The other reason for applying fungicide, as mentioned in last week's Orchard Outlook, is to control the secondary fungal diseases. Sooty blotch and fly speck spread during wet warm humid weather much like we have experienced for the past couple of weeks.

Fire Blight

Fire blight strikes will continue to show up especially after driving rain storms. Once the terminal buds have been set the spread of this disease will slow down. When growers observe a dying shoot they should inspected it to determine the cause of the die back. It may be due to canker, broken limb or fire blight. Remove fire blight infection during periods of dry weather.

Powdery Mildew

This is another disease that should slow down once terminal shoot growth has stopped and the need for fungicide applications would be questionable accept in new planting were growth will continue into late summer.

Brown Rot

In my travels yesterday I noted that early golden plums are starting to ripen and thus brown rot treatment will need to go on early plum cultivars as well as sweet cherry cultivars. The warm wet weather is ideal for the spread of this fungus. During periods of heavy and frequent rain fall the interval between fungicide applications may need to be as short as 3-5days. Once brown rot has shown up on picked fruit it is too late to do anything about control.

Insect Activity

Apple Maggot

Treatment for apple maggot should be ongoing based upon trap captures. Once an apple maggot has been detected on a trap a treatment should be applied. Those growers that have already treated will need to clean off their maggot trap 7 days post treatment and begin to monitor for additional trap captures. The capture of a fly would mean that a second insecticide treatment is

required. Those growers that used Calypso should begin to monitor traps 10-14 post treatment date and the capture of additional maggot flies would indicate that a second spray with Calypso is required.

Eyespotted Bud Moth and Obliquebanded Leafroller

These are two Lepidoptera species that can cause fruit damage between now and harvest. New hatched larvae of these two pests should now begin to appear in orchards. The application of Guthion/Sniper, Imidan or Zolone for apple maggot would provide some control. Based upon past history and or monitoring reports, application of either Delegate or Altacor in early August should control these two caterpillar species.

Wholly Apple Aphid

This aphid presents a problem for a few growers each year. If they have not already done so this aphid will be moving from the trunks of the trees out onto terminal shoot growth. The sticky masses of wool can present a problem for the harvesting crew. Assail and Movento are two options for the control of this aphid. Movento needs to be applied along with a surfactant and is slow acting in knocking aphids down.

White Apple Leafhopper

The second generation of this pest will begin to appear in early August. Monitor blocks in early August to determine the need for control. An average of one nymph per leaf would indicate that control measures should take place.

Mites

All stages of two-spotted mite can now be found on apple leaves as well as that of European Red Mite. The warm weather is ideal for the rapid buildup of mites. The heavy rain fall may have had some impact on mite populations however growers should be monitored on a regular bases for mites. Waiting until late August to apply a miticide once leaves have become bronzed is not an option. If you are doing your own monitoring for mites, the presence of mites on 44 out of 50 leaves examined would indicate a treatment. An average of 10 mites per leaf at this time of year would also be an indicator that treatment is required.

Pear Psylla

Continue to monitor for this pest as it can still build up in the pear orchard and under dry weather conditions the pears can become quite sticky from the honey dew this sap feeder produces. Sooty mold will also grow on the honey dew, resulting in pears that are not marketable. Hornets can also become a problem when there is honey dew on the fruit and leaves At this point in the growing season, adults, eggs, newly hatched nymphs and old nymphs can be found. Select one of the products listed in the spray guide.

Horticultural Tips

Tissue and Soil Analysis

The collection of leaves for nutrient analysis can begin when the terminal buds have set on shoots. This generally occurs on mature trees during the later part of July and into early August. Sampling should be completed by mid-August. Nutrient levels in leaf tissues change with the growing season and the desired nutrient level range for apples was based on leaves being collected once the trees have stopped growing (late July to early August in Nova Scotia). Collecting samples prior to or after the specified period may give inaccurate nutrient level readings. Annual fertilizer applications should be based on tissue analysis reports and other factors such as pruning, vegetation control and anticipated crop load.

The following information is for growers who will be collecting their own samples or giving instruction to hired staff. A sample usually represents a block of orchard 1 to 2 hectares in size. The sample consists of 100 apple leaves collected from 10 trees of the sample cultivar. It is suggested that the trees be marked, and that they represent a typical tree within the block, so that the same trees can be sampled on a routine basis. This will help to eliminate some of the variability in yearly reports. If there are problem areas within the orchard, then sample trees in this area separately. Ten leaves per tree are collected from the mid-point of this year's terminal growth with terminals being sampled from all sides of the tree. Place the leaf samples in a paper bag (in the past 10 lb brown paper bags were used). The leaf sample needs to be dried as soon as possible after collection, preferably the day of collection, in order to obtain an accurate nutrient analysis.

Collecting a soil sample from the block will provide additional information when it comes to determining fertilizer requirements. Soil samples do not need to be collected on an annual basis but should be collected at least once every three years. Two to four soil cores should be taken at the drip line from each of the 10 trees. The soil cores should be mixed and a representative sample placed in a soil box for analysis.

The cost per sample including HST for registered farms is \$12.53 for tissue and \$12.65 for soil Boxes and bags need to be clearly identified with the following information: Grower or farm name; mailing address; phone number; farm registration number; orchard block name; cultivar and sample number. Soil boxes can be obtained from the NSDAF office in Kentville.

Calcium Sprays

Foliar application to control bitter should be applied on a two week interval until harvest. The more calcium you are able to apply onto the fruit the better the control.

Summer Pruning

Summer pruning can begin in early July. The more than adequate rain fall and warm temperatures have promoted vegetative shoot growth. In some cases lighter crop loads are also promoting growth. Pruning the strong up right growth will help with fruit colour and reduce the movement of calcium from the fruit to these vegetative growing points.

NSFGA Orchard Tour

The date of the annual tour is August 3rd and the program is attached. Looking forward to seeing you there.

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

*Editor: Bill Craig
AgraPoint*

***Nova Scotia Fruit Growers'
Association
Orchard Tour***

AGENDA

Tuesday, August 3, 2010

8:30 AM - COFFEE AND DONUTS at the picnic grounds of *the Atlantic Food and Horticulture Research Centre, Kentville*

9:00 AM – Board buses for start of tour. You are encouraged to ride the buses – an environmentally friendly thing to do and to reduce traffic congestion at each stop. They are provided by our sponsors so please enjoy the ride.

9:30 AM – ANDY AND GAIL PARKER, Grafton

The tour will stop at Kay's block, which is located on Coleman Road. We will look at a three-year-old planting of Honeycrisp on M-26 rootstock. The crop load and tree growth will be compared to three year-old grafted Honeycrisp. Andy and Gail were the winners of the 2008 Golden Apple Award for the best block of orchard grafted over to Honeycrisp.

10:15 AM - BRAMBLE CORNER PRODUCE, Rob and Faith Smith, Victoria Rd., Aylesford

Dr. Rob Smith is in the second year of an organophosphate replacement trial where he is comparing trap captures of codling moth and apple maggot to judge the effectiveness of the newer pesticides. Dr. Gordon Braun, AAFC, also has an apple replant trial located on this farm, where he is evaluating the effectiveness of compost in reducing the effects of Specific Apple Replant Disease. Dr. Braun will speak about this trial work.

10:45 AM - NAZINGA FARMS, Kelly Penner, Brooklyn St., Aylesford

Kelly has set out a significant number of apple trees under the HCORP assistance program. He has paid close attention to site preparation, including land forming, fumigation and drainage and has transformed what was once considered a very marginal piece of land for orchard production. The tour will look at the orchards planted at the corner of Brooklyn Street and New Rd.

11:30 AM - SPURR BROTHERS FARMS LTD., Lisa Jenereaux, Melvern Square

The tour will stop at their Smith block to look at several new plantings of Honeycrisp, Ambrosia, Gala and Sonya. Lisa will speak about the performance to date of

these newer plantings. Doug Nichols, NSFGA, will comment on his trial work with crop load management of Honeycrisp and Dr. John DeLong will speak on a new growth regulator trial.

12:00 LUNCH – Melvern Square Community Centre

Our sincere thanks to the **Silver Orchard Tour Sponsors** for providing the buses and lunch:

1:20 PM - CRAIG NICHOLS FARMS LTD., *Craig Nichols, Morristown*

The tour will be stopping at a fruit thinning trial being conducted by Dr. Charlie Embree, AAFC, and Doug Nichols, NSFGA, and what is known as the West Block. The thinning treatments are located in this block of Honeycrisp, which was established in 1998.

2:10 PM – LUTZ FAMILY FARM - *Larry Lutz, Rockland*

Dr. Charlie Embree, AAFC, is conducting an Apogee application timing trial in a block of Jonagold on M-4. The study is to determine the effectiveness of Apogee when applied after the optimum window of 2.5-7.5 cm of new shoot growth.

3:00 PM – VAN MEEKEREN FARMS LTD. –*Stephen and Michael Van Meekeren, Lakeville* Pear plantings have been on the decline in recent years, and many plantings are reaching the age when they should be replaced. The poor precocity of pear trees has been one of the major reasons for not planting. The tour will stop at a 2008, 2009 and 2010 plantings of Bosc, Bartlett and Clapp's Favourite on Old Home Farmingdale 97 rootstock. Of special note will be the unique training and trellising methods used to induce early production.

3:45 PM -ATLANTIC FOOD AND HORTICULTURE RESEARCH CENTRE, *Kentville*

An NC-140 cherry rootstock trial was set out this past spring. This is a collaborative trial between AAFC, NSFGA and NSAC. Various rootstock and training systems are being evaluated including several of the Gisela series that are gaining popularity worldwide as a truly, dwarfing cherry rootstock.

5:00 PM - Chicken and Hip of Beef Barbecue at the Atlantic Food and Horticulture Research Centre