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Orchard Outlook Newsletter

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The technical information contained in this Orchard Outlook publication is the result of the combined professional opinions of employees of AFHRC and AgraPoint.
Orchard Management Schedules

The *Orchard Outlook* meeting and writing of the *Orchard Outlook* took place on May 2nd due to a previous commitment for May 3rd.

Fruit Bud Development

Bud development has been very gradual during the past week resulting from cool night and daytime temperatures. On the days when the temperature did get above 10°C, it was not until after lunch. Apple buds are at the half-inch green to early tight cluster stage in most areas of the Valley. In general McIntosh buds were still at half-inch green while Gravenstein were at early tight cluster.

Frost

Frosts were recorded at Kentville and Greenwood on the mornings of April 28th, 29th and 30th. A low of -2.4°C was reported at Kentville and -3.7°C for Greenwood on Saturday, April 29th. A temperature data logger located in Aylesford reported a low of -4.6°C on the 29th. Temperatures dropped below the freezing mark just after midnight and remained below freezing until about 8:00 AM on the 29th. As reported last week, at the tight cluster stage of development a low of -2.7°C can result in 5% bud kill. On Monday afternoon I checked some Gravenstein buds which were at early tight cluster for signs of frost injury. I checked blocks that have had a history of frost injury. I did detect some bud damage in the Gravenstein and a trace in McIntosh buds. Buds closest to the ground showed the greatest amount of damage as would be expected given that temperatures would have been colder at ground level. I did find a few damaged buds 2 meters off the ground but it was only trace. In terms of the overall crop I would have to say the damage is very, very minor. Let's hope we see no more frosty mornings.

Apple Scab

At the time of writing the *Orchard Outlook* on Tuesday morning, May 2nd, a wetting period was ongoing which will result in an infection period. The wetting period in Kentville began at 5:00 PM on Monday with an average temperature of 5.5°C through the night. The infection period will, in all likelihood, become established by early afternoon of May 2nd. Fungicides applied within the past week should provide protection against this infection period. Growers who have yet to apply a fungicide would be advised to do so as soon as possible. There is plenty of green tissue present for infection to become established. Those that do not like to spray before May have no excuse now for not spraying. The weather forecast is for wet weather for most of the week so fungicides that have long kickback periods, such as the SI and Strobilin class of fungicide or the new fungicide Scala®, may be required in blocks that were not protected for this infection period.

Lime Sulphur for Scab Control in Organic Orchards

Lime sulphur is the only fungicide option for organic apple growers when after- infection apple scab control is required. A trial in Norway indicated that lime sulphur provided 35-40 hours of after-infection control when applied as .75-2% solutions. The label rate for lime sulphur is 12.5 L/1000 L of water which translates into a per hectare rate of 37.5 L/ha. Lime sulphur can be phototoxic to the foliage so season long control with lime sulphur may impact fruit quality.

Brown Rot Control

Stone fruit growers often don't realize that they have a brown rot problem in the fruit until harvest time or after the fruit has been harvested and placed in storage when the rot is observed. Brown rot not only attacks the fruit but can also attack blossoms, spurs and shoots. The disease overwinters on infected fruit from the previous season, which are called mummies because of their dried, shriveled appearance. Spores are discharged during periods of wet weather. A fungicide program to control brown rot should begin when the fruit buds begin to show colour. When speaking with a producer in the Annapolis Royal area, he reported peach buds were showing pink. This would indicate that a fungicide program on stone fruit should begin in the very near future. To control infection periods during the pre-bloom to shuck fall stages growers should select an appropriate fungicide as listed in the 2005/2006 *Stone Fruit Management Schedule*. Growers who have mixed blocks of stone fruit should make sure that the fungicide used is registered for all the types of stone fruit within the block.

Black Knot

Black knot is a fungal disease which attacks plums and sour cherry. This disease will reduce fruit production and, if not controlled, will eventually kill the tree. What makes control of this disease so difficult in Nova Scotia is that it also attacks wild cherry and plum trees which can be found growing in abundance in Nova Scotia. This means that there can be lots of inoculum from these wild trees available to infect the commercial trees. The black knot that is observed on twigs is a year or more in age and it is the source of spores for new infections. Spores are discharged during wet conditions with peak spore discharge occurring from the pink (white) bud stage of development until approximately two weeks after bloom. Control of the disease can be very difficult but it should begin with the pruning out of the knots. This should have been done by now to reduce the discharge of spores within the orchard. The removal of wild cherry and plum trees from around the perimeter of the orchard would also be of help. The application of Captan, Maestro or Indar for brown rot control from pink to shuck fall will provide some black knot control.

Insect Development

Cool temperatures which have been holding back bud development have also been holding up insect development. It is still too early in the growing season to be worried about the spring caterpillar complex but we will keep you posted as to their development and treatment dates.

Red Mite

In my travels I have noted that some orchard blocks have already been treated with oil for red mite control. Given the ever rising cost of crude oil since last summer it should come as no surprise that the cost of spray oil has gone up. Growers may be weighing in the added cost when it comes to applying 70 sec oil treatment this year. When you do this you should consider that oil is not disruptive on the beneficial insects, which in the long run may help to eliminate the need for future mite sprays. Frost may complicate the timing of oil applications because it should not be applied 48 hours prior to, or after, a frost. Oil applied to frosted tissue will increase the phytotoxic effect of oil and can reduce leaf growth and fruit size.

Herbicide Applications

The application of a mixture of 2,4-D and Roundup is a common herbicide treatment to control grasses and broadleaf weeds under the tree canopy. Growers who use this mixture early in the growing season should note that 2,4-D does not work well in cool temperatures. To avoid this problem apply 2,4-D when temperatures are above 10°C.

Tree Mortality

Some apple tree mortality has been observed. To date it appears to be mostly young Spy trees where the top two-thirds of the tree are dead. The death is still associated with a pathogen that enters the tree in the fall killing the conducting tissue. Trees can recover from the die back. Cut the diseased portion off making sure that you cut into healthy bark. When practical, tie up a limb to form a new leader.

Fertilizer Applications

Fertilizer applications to fruit trees can take place any time from now until early June. The sooner it is applied the sooner the tree will pick it up.

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