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**2010 Degree Day Accumulations**

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

Table 1.0 Degree day accumulations as of June 21, 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	2007	2008	2009	2010	5 year average
<b>Plant development (Base 5°C)</b>	485.6	515.9	528.7	606.3	524.6
<b>Insect development (Base 10°C)</b>	229.0	225.7	243.3	275.8	236.0

We are still about 6 days ahead of the five average for base 5°C.

**Diseases**

**Apple Scab**

Shower and thunder shower activity during the past week resulted in 3 secondary infection periods being recorded at Kentville. The first infection period was recorded for Thursday and Friday when a 26-28 hr wetting period occurred with an average temperature of 15°C. Thunder shower activity Sunday evening resulted in a wetting period lasting from 8 pm until 10 am Monday, June 21 with an average temperature of 18°C. A shower again Monday evening resulted in a 16 hour wetting period with an average temperature of 7.5°C.

Growers should now know how well they were able to control apple scab during the primary season. Those growers that can find no scab lesions should feel confident in using cover rates of the various fungicides and increase the spray interval to 14 days under good weather conditions. Growers that are able to find apple scab lesion easily in their orchard block will need to keep on top of their fungicide programs. Depending upon the severity of the scab growers may wish to stay with the cover rates for the remainder of the season. During periods of wet weather stick with a 7 to 10 day interval which will provide better protection.

## Fire Blight

The blossom stage of fire blight infection is only of concern for late planted apple trees that are still in bloom. Wetting events on Wednesday, June 23 and Thursday, June 24 would trigger an infection where the bacteria is present on the flowers. In the past week I have observed a few fire blight strikes in a couple of orchard blocks. Growers are encouraged to have a close look for fire blight. The sooner you detect fire blight the easier it is to deal with. When found; prune out infected limbs during dry weather. Cut several inches behind the infection and leave a stub which may prevent the fire blight moving further back down the tree. Spraying these stubs with florescent orange paint may make them easier to find at a later date. These stubs can be removed during the dormant pruning season. Disinfect pruning tools when going from block to block and several times during the day. Remove pruning's from the orchard and destroy.

## Powdery Mildew

Continue to monitor orchard block for the presence of powdery mildew. Do not forget to check your young non bearing trees for mildew. If mildew is easy to find then consider applying a fungicide that controls both apple scab and powdery mildew. Fungicide from now on will only keep mildew in check.

## Insect Activity

### Codling Moth

Codling Moth Development model (v1.2), written by Jeff Franklin AAFC Kentville, N.S.

Based on a biofix date of 149 (Julian days) May 29, and Degree day accumulation (base 10.0 Celsius)

Model run at 13:44 on 6 22 2010

JD	Date	Max Temp	Min Temp	DD	Acc_DD
168	Jun 17	15.7	10.5	3.1	205.3
169	Jun 18	28.7	9.1	9.0	214.3
170	Jun 19	30.9	10.9	10.9	225.2
171	Jun 20	26.9	15.8	11.4	236.5
172	Jun 21	23.7	13.2	8.5	245.0

The model indicates that in the warmer areas of the Valley the degree day accumulation would have reached 250 DD as of yesterday June 22. This means that the OP insecticides Guthion, Imidan and Zolone should be applied when trap captures indicate that codling moth control measures are required. Those growers that used one of the no OP insecticides to control codling moth will need to continue to monitor trap captures. Trap captures of 10 plus moths two weeks following the insecticide application would indicate that a second treatment is required.

## Codling Moth Decision Table

# of Moths	Percent of Full Crop						
	10-20%	21-50%	60%	70%	80%	90%	100%
10-19	-	-	-	-	-	-	-
20-39	-	¼ rate	¼ rate	¼ rate	¼ rate	-	-
40-99	¼ rate	¼ rate	¼ rate	¼ rate	¼ rate	¼ rate	¼ rate
100-199	½ rate	½ rate	½ rate	½ rate	½ rate	½ rate	½ rate

### European Saw Fly

I have been in a couple of orchard blocks this past week where it is quite easy to find damage from this pest. Apples that have a hole drilled in them by the larvae will eventually fall off however those with a surface scar will remain on the trees until harvest. Growers should make note of blocks with this type of damage so that steps can be taken next year to control this pest.

### Aphids

Rosy apple aphid is moving out onto terminal shoot growth and will be around well into July before they move to the alternate host. Green apple aphid is also moving onto terminal shoot growth. In mature trees some green apple aphid can be tolerated however if found on the fruit cluster control steps should be taken to prevent damage to the fruit. On young trees this aphid can adversely affect tree growth and should be controlled.

### Apple Maggot

It will not be long before apple maggot starts to emerge. Traps will need to be hung in the near future but they do not need to go up before the first full week of July.

### Mites

In blocks that require a miticide treatment growers should now be using one of the summer miticides such as Acramite, Kanemite or Envidor. Dr Hardman would encourage growers to make more use of Acramite and Kanemite as they have less impact on the beneficial mites than Envidor. It is also a good practice to rotate the type of miticides used as this will delay the development of resistance by the mites to a miticide. If you are using Acramite to control European red mite the higher rate of 850 g/ha is required. Acramite will not control apple rust mite.

### Pear Psylla

Check pear blocks for the presence of newly hatched nymphs. The life stage of this insect are starting to get stretched out which makes control more difficult. If a treatment is required use

one of the newer products such as Movento, Actara ,Assail and Clutch as there is less of a chance that the local population of pear psylla has developed a resistance to these products.

## **Horticulture**

### **Tree Training**

Do not forget to spend time in your young orchard plantings training trees. Trees that were headed will need to have the terminal singled back to the strongest shoot. The terminal can be pinched off on those shoot that are growing to strongly. This will set the growth back for a couple of weeks and allow the weaker shoots to catch up. Also it will help provide more uniform limb growth and direct growth to where it is required.

### **Supporting Young Trees**

Newly planted trees should be supported as soon as possible to prevent tree losses as a result of the trees breaking off at the union during periods of high wind. This holds true for trees that were grafted over last year. The graft can grow quite rapidly and break out during windy period as some growers found out last week.

### **Fertilizer Applications**

If you are planning on side dressing apple trees with a second application of Nitrogen it should go on before the end of this month. Nitrogen applied after June can result in late growth that is more prone to winter injury. High nitrogen levels in the fall can also have a negative impact on fruit colour.

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

*Editor: Bill Craig  
AgraPoint*