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Weather for September

The mean temperature for the month of September 14.23°C was slight lower than that of last year 14.73°C and the 48 year average of 14.71C°. The five year mean is 15.21. Total precipitation for the month was 66.7mm which compares to 115.9 mm in 2008 and a 48 year average of 91.9 mm. Total sunshine hours was 178.4 up slight over the 2008 total of 162.8 hrs and the 48 year average of 169.25 hrs.

The weather to date for the month of October has been downright miserable. This has been due to above average precipitation. As of October 27 Kentville recorded 143.9 mm of rain and Greenwood has recorded 139.9 mm. In October of 2008 the total rain fall for October was 69.0 mm and the 47 year average was 106.7 mm. Rain fall to date is 40% above average. The mean temperature up to October 27 was 7.5°C compared to 9.16°C in 2008 and the 4 year average is 9.2°C. The reduction in heat and sunshine may help to explain why Jonagold were slow to colour.

2009 Growing Season April 1- October 31

Month	Degree C			Heat Units		Rain	Sun
	Max	Min	Mean	5 deg	10 deg	mm	Hrs
April	30.1	-4.3	6.7	76.8	18.8	118.6	202.6
May	29.6	0.6	12.4	220	80.8	58.3	182.0
June	27.7	4.3	16.6	348.7	198.7	62.3	169.4
July	30.8	6.9	19.2	440.9	285.9	112.1	187.8
August	32.1	6.9	20.1	468.2	313.2	177.8	245.8
September	25.9	1.5	14.2	276.8	133.5	66.7	178.4
October*	18.9	-2.5	7.5	79.2	13.4	149.8	80.4
Total				1910.6	1044.2	745.6	1246.4

*October weather data 1-27th

2008 Growing Season and 48 year Average April 1- October 31

Month	Degree C		Heat Units				Rain		Sun	
	2008	48 yr	2008	48 yr	2008	48 yr	2008	48 yr	2008	48 yr
	Mean	Mean	5 deg	5 deg	10 deg	10 deg	mm	mm	Hrs	Hrs
April	6.4	4.6	62.0	39.6	7.9	5.6	57.4	83.0	210.2	153.6
May	10.8	10.6	179.3	177.1	55.4	59.4	93.9	80.2	209.9	187
June	17.0	16.1	360.9	332.5	210.9	184.2	41.8	69.4	165	204.9
July	21.5	19.5	512.6	448.1	357.6	293.2	49.4	69.6	243.7	231.5
August	18.8	18.8	426.7	428	271.7	273.0	121.2	90.2	164.5	214.7
September	14.7	14.7	292	290.4	148.9	145.5	115.9	91.9	162.8	169.2
October	9.2	9.2	128.8	137.6	30.25	14.8	69.0	106.4	162.2	141.9
Total			1962.3	1853.3	1082.6	975.7	548.6	498.8	1318.3	1302.8

New Pesticide Registrations

The insecticide **Clutch™ 50WDG** was recently registered for use on Pome Fruit (apples & pears), Stone Fruit, Grapes and Potatoes. The active ingredient is clothianidin which belongs to the group 4A of insecticides and is a neonicotinoid. Group 4A is the second generation of neonicotinoids and when considering resistance management; group 4 and group 4A pesticides should be lump together. Clutch™ is registered for the following pests on apples and pears; aphids, leaf hoppers, plum Curculio, leafminers, oriental fruit moth, codling moth and pear psylla. It will only provide suppression of codling moth and oriental fruit moth. On stone fruit it has a registration for aphids, leafhopper, plum curculio and oriental fruit moth (suppression). The pre-harvest application interval (PHI) is 7 days for pome and stone fruit. The restricted entry interval (REI) is 12 hrs after treatment. It is toxic to bees therefore it is only registered for post bloom treatments. Neonicotinoids that are presently registered for apples are Assail Admire/Alias, Calypso and Actara and the use of these products should be limited to a couple of application during the growing season to prevent the development of resistance.

Label use for the fungicide **Pristine™ WG** has been expanded to include apples and pears. It had previously been registered for the control of blossom blight/brown rot, anthracnose, leaf spot and powdery mildew (suppression only) on stone fruit. The active ingredients in Pristine™ are boscalid group 7 and pyraclostrobin group 11. The strobilurins Sovran and Flint are also group 11 fungicides. Presently there are no additional fungicides in group 7 listed for apples and pears. On apples and pears Pristine is registered for the control of apple scab, pear scab, powdery mildew, flyspeck, sooty blotch and Brooks spot (take note for those growers that experienced brook spot infection on Honeycrisp in 2009). The recommended rate for apple scab and powdery mildew is 1.0-1.2 kg/ha and 0.6-0.8 kg/ha for flyspeck, sooty blotch and Brooks spot. The REI is 12 days for hand thinning and 5 days for harvesting.

Apple Scab Control for 2010

In general most growers were able to obtain good apple scab control in 2009 even through the precipitation for the month of July was 60% greater than average. The wet weather actually began the third week of June. A lot of the success in controlling scab came from the fact that growers were able to obtain control of the primary scab infection periods. Should you have failed to obtain adequate scab control you do have the option of trying to reduce the overwintering spore load in the orchard. Apple scab over winters in lesions on apple leaves that fall to the orchard floor. Unfortunately for you these leaves remain in the orchard well into the next growing season until they break down. If the leaves did decompose prior to the start of the next growing season they would not be a source of ascospores which are released during periods of wet weather and can result in scab infections. Research trials have indicated that ascospore numbers can be reduced by up to 95% if infected leaves decompose prior to bud break. To obtain this type of control the leaves need to fall off the tree and be sprayed with urea or a biological control agent. This would involve blowing the leaves out from under the trees and into the alley way so that they can be shred by a flail mower. The application of urea to the leaves will also help to speed up the decomposing process. This process may be a bit of a challenge for Nova Scotia growers because in some years the majority of leaves can still be on the tree well into late December when cold temperatures and snow cover prevent the decomposition of the leaves. Early spring is another opportunity to do this but the process needs to take place about 4 weeks before bud break. This could also be a bit of a challenge in a wet spring when equipment movement in the orchards is restricted by wet soils.

Mouse Control

Given the amount and duration of snow cover during the 2008-2009 winter I was surprised that mouse damage to fruit trees was only minor. I think I would be correct in saying that deer browsing caused more damage than mice last year. Just because there have been no major tree lose to mouse damage growers should not become complacent about mouse control. Given the cost of nursery trees and potential lost crop, mouse damage could represent a major financial loss which is easily preventable. A good population of natural predators has been of help in keeping mouse populations down but you cannot fully rely upon them as populations can change from year to year. Growers should follow a mouse control program that may involve the following process: 1) Following the completion of harvest mow the orchard to reduce vegetation to less than 10 cm. This will reduce suitable habitat for mice and expose them to predators. In many cases it is mice that move into the orchard in the fall and winter that cause the problem particularly in those blocks where good season long vegetation control has been maintained. To help prevent the movement of rodents into the orchard it is recommended that the borders of the orchard be kept as clean as possible. One should not assume that good vegetation control is all that is required. 2) Prior to snow the whole orchard should be checked for signs of rodent activity (mouse tunnels, droppings and chewed apples) because populations can vary from one part of the orchard to

another. If rodent activity is observed consider the use of poison bait to reduce the mouse population. When using poison bait, growers are strongly urged to use baiting stations. Broadcasting poison baits such as zinc phosphide and Ramik Brown can end up poisoning non-target species. Bait stations will reduce the risk of this happening, as well as providing a longer period of control. The inverted T bait station is an effective station and can be made from 1 ½ inch ABS pipe. The recommended number of stations is 25 per hectare. Where there is not a resident population of mice within the orchard, you may wish to place bait stations on the perimeter of the orchard where there is a risk of mice moving into the orchard from bordering fields, fence lines or ditches. Bait stations are the recommended means of using poison under IFP guidelines. 3) On young tree place a mouse guard on the tree. The guard should fit well enough that mice cannot get behind it or there should not be gaps in it that allows for feeding.

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