



KCMS TREE FRUIT REPORT

May 6, 2011







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NIAGARA WEATHER FORECAST

FRI 6	SAT 7	SUN 8	MON 9	TUES 10	WED 11
					
Isolated Showers	Sun and Clouds	Cloudy with Showers	Cloudy Periods	Cloudy Periods	Sun and Clouds
High: 15°C Low: 7°C POP: 60% Rain: 1 mm	High: 15°C Low: 8°C POP: 30% Rain: 1 mm	High: 14°C Low: 8°C POP: 60% Rain: 1 mm	High: 15°C Low: 7°C POP: 10% Rain: -	High: 16°C Low: 9°C POP: 20% Rain: -	High: 13°C Low: 9°C POP: 40% Rain: 5 mm

SOURCE – The Weather Network (<http://www.theweathernetwork.com>)

Tender Fruit:

Control for Peach leaf curl should have taken place prior to bud swell or last fall. At this point the buds have already started to swell and many blocks are at the pink stage of development. We are past the point where spring control of peach leaf curl can be obtained.

Do not use Captan, Maestro, Bravo or Echo within 10 to 14 days before or after an oil application due to concerns with phytotoxicity. Do not use oil in blocks that are in bloom.

The first **Oriental Fruit Moth** adults have been trapped at a few of our monitored locations and we have now begun accumulating degree days to predict when egg hatch is expected. With the cooler temperatures and wet conditions experienced so far this spring we do not expect OFM sprays to be until petal fall. Watch future reports for exact spray dates and recommended materials. If you are using mating disruption for OFM, start applying the pheromone dispensers very soon, as petal fall/shuck split will be far too late to disrupt mating.

Apricots, plums and any sweet cherries that have open blossoms are **now at risk for infection by Brown Rot/Blossom Blight**.

Peaches: From bud swell to first pink is the best timing for oil to control **mites**. Once flowers begin to open it is too late to apply oil as you risk injuring the flower parts. No more than a 2% oil solution is required with good coverage to effectively suffocate mite eggs.

As soon as the first blossoms open, **infection from brown rot/blossom blight** can occur if conditions become warm and wet. Be sure to follow a resistance management strategy when choosing materials for brown rot and rotate between chemical families. Check all product labels for rates, crops and restrictions.

Products Available for Brown Rot/Blossom Blight Control on Stone Fruit:

Chemical Family	Material	Rate (/ha)
DMI Group 3	Topas 240 E	500 mL
	Mission 418 EC	300 mL
	Indar 75 WSP	140 g
	Nova 40 W	340 g
Anilide carboxamide Group 7	Pristine WG	750 g
	Lance WDG	370 g
Chloronitrile Group M	Bravo 500	7.0 L
	Echo 720	3.5 – 6.3 L
Dicarboximide Group 2	Rovral	1.5 kg
Anilinopyrimidine Group 9	Vangard 75 WG	370 g
Hydroxyaniline Group 17	Elevate 50 WDG	1.7 kg
Phthalimide Group M	Supra Captan 80 WDG / Maestro 80 DF	4.5 kg
Inorganic Group M	Sulphur	See label

For peach blocks that have experienced problems with **Peach Scab** in the past, the shuck split and early fruit sizing stages of development are the time to maintain routine fungicide applications especially if conditions become wet during that time. More information will be included as we get closer to the end of bloom.

Plums: Fungicides alone will not provide adequate control of **Black Knot** without proper orchard sanitation. The most effective management of black knot in plums relies primarily on pruning infected branches and removing them from the orchard. All visible black knots should be removed from the orchard before bloom to help prevent further infections. Burning of the pruning waste should also be conducted shortly after pruning so that the major sources of black knot spores are eliminated.

Relative Susceptibility of Plum Cultivars to Black Knot:

Very Susceptible	Moderately Susceptible	Slightly Susceptible
Bluefre	Early Italian & Italian	Burbank
Damson	Valor	Early Golden
Stanley	Vanier	German Prune
Veeblue	Voyageur	Shiro
Vision	Valerie	
	Vanette	

Source: Black Knot of Plums, OMAFRA Fact Sheet (Reviewed 2009)

Remember – Do NOT use Captan or Maestro within 10 to 14 days of an oil application. European plums should avoid the use of Captan/Maestro altogether as phytotoxicity may occur.

Cherries: Once the first sweet cherries begin bloom the risk of infections from **brown rot/blossom blight** increases. Fungicide applications should begin once 10-15% of the blooms are present and open.

Black Cherry Aphids can be present in sweet cherry orchards once soft green tissue is present. This pest curls and stunts the leaves and a pre-bloom and petal fall inspection of terminals can warrant an application of Diazinon, Thiodan, Clutch or the new product Beleaf. Read the labels for rates and suggested timings.

Apples and Pears:

For **European Red Mite** control in apples, oils are best applied at the tight cluster before we reach pink at no more than a 2% solution. We are now at that optimal growth stage at many locations. Blossom damage can occur when oils are applied at full pink or later in warm weather. Oil suffocates the mite eggs just as they are most active and about to hatch, so the closer your oil application is to egg hatch the better.

Over the past couple years an increase in the presence of **San Jose Scale** has been observed in many apple orchards. Early season dormant oil applications

(2% solution) have worked well in controlling this pest and the most effective timing for scale control is no later than silver tip.

We are **now past that optimal stage for SJS control** with oil. There are two generations of SJS crawlers present throughout the growing season, and generally treatments against the first generation are more effective than targeting the second generation. The 1st generation generally begins around petal fall and materials effective against the crawler stage of development include Movento and Guthion. Using Movento will also control Rosy Apple Aphids at the same time. Remember that the manufacturer of Movento recommends to tank mix with a non-ionic surfactant to improve efficacy. Two insecticides may be necessary to achieve control where high populations are present as the crawlers emerge over a 2-3 week period.

For pears, oil application timing is for around green tip. Oil sprays in pears act by injuring and discouraging female psylla from laying eggs. **Pear psylla** overwinters as adults under bark crevices on the host tree. When temperatures increase in the spring, they will move from protected areas and begin to lay eggs. There should be no need for an insecticide spray until egg hatch has taken place (often around petal fall).

The immediate pre-bloom period is the time to think about applying an insecticide for **pear blossom midge** ONLY if you have had trouble with this pest in the past. This spray must be applied before the blossoms open to be effective.

Now that new green tissue is present, infection by apple and pear **scab** can take place. It is important to begin spraying at green tip and to maintain good coverage with protectant fungicides on a 7-to-10 day spray interval. Scab can infect pears and apples from green tip onward. Most protectant fungicides are compatible with a recent oil application including; Dithane, Polyram and Manzate. Scala, Vanguard, Pristine, Flint, Sovran and the new fungicide Inspire should also be acceptable though there is no information on compatibility on their labels. Refer to labels for precautions.

Scala and Vanguard have post-infection activity against scab (on apple and pear) but be aware of 24 hour re-entry period. These fungicides are locally systemic so are not prone to rain wash-off and also move throughout the tissues that are sprayed. For resistance management, it is recommended that these products be tank-mixed with a half-rate of protectant fungicide.

Powdery mildew is also worthy of attention as susceptible apple cultivars reach the tight cluster and early pink bud stages. In the past, apple growers could almost ignore powdery mildew as long as one of the DMI fungicides was included in the scab protection program. The DMI fungicides (Nova, Funginex, etc) were very effective for controlling powdery mildew even when they were used after bloom. However, as we move away from DMI fungicides for scab control (resistance issues), mildew can potentially be an ongoing problem. Using products like Sovran, Flint or Pristine will provide good protection of both scab and powdery mildew. The new fungicide Inspire will also provide suppression of

powdery mildew as outlined on its label. Remember, Sovran and Flint are from the same chemical family and should not be used in succession.

Rosy Apple Aphid can begin early (green tip to tight cluster) in susceptible cultivars like Cortland, Ida Red or Golden Delicious. Assail, Actara, Clutch and the new product Beleaf are all labelled for RAA control. Be aware that Assail, Actara and Clutch are all in the same chemical family. RAA activity is site specific so monitor closely for activity before applying any insecticide.

As we approach the pink stage of development, **Tentiform Leafminer** begins to lay eggs. Although some mines can be present on early leaf growth, most orchards do not seem to reach a threshold level from the 1st generation (more than 1 mine per leaf at petal fall). This is likely due to the insecticides used at petal fall for OFM and Plum Curculio subsequently controlling TLM.

New Products or Expanded Labels for 2011 Tree Fruit

Product Name	Chemical Family	Labelled Pest & Crop	Rates & Comments
Quintec Quinoxifen	Quinolines New fungicide group for North America	Powdery Mildew Sour & Sweet Cherry Peach	<u>Cherry:</u> 500 mL/ha Quintec penetrates into the plant and redistribution occurs through local vapour movement. Provides suppression of Powdery Mildew on Peach
Intrepid 240F Methoxyfenozide	Ecdysone antagonist	OFM (1 st Gen.) Peaches OBLR (Suppression) Pears	<u>Peach:</u> 1.5 L/ha 14 day PHI / 12 hour REI Most effective when used to manage flagging / shoot damage (1 st Gen.) <u>Pear:</u> 0.75 L/ha Control achieved for overwintering generation (mid-May) however, only suppression achieved for summer generation (June-July).
Rimon 10 EC Novaluron	Benzoylureas	OFM All Stone Fruit OBLR Cherries (Sweet & Sour)	<u>Rate:</u> 1.35 – 3.35 L/ha Timing is for egg hatch of each generation 14 day PHI / 12 hour REI
Beleaf Flonicamid	Pyridinecarboxamide	Aphids All Pome Fruit & Stone Fruit	<u>Rate:</u> 120 – 160 g/ha <u>Pome Fruit:</u> 21 day PHI / 12 hour REI (most activities) & 2 days (thinning) Unsure of efficacy on WAA. <u>Stone Fruit:</u> 14 day PHI / 12 hour REI (most activities) & 2 days (thinning)

<p>Inspire Difenoconazole</p>	<p>DMI Same chemical family as Nova</p>	<p><u>Apple:</u> Scab Flyspeck Various Rusts Powdery Mildew (suppression)</p> <p><u>Pear:</u> Same as Apple + Sooty Blotch</p>	<p><u>Rate:</u> 292 mL/ha</p> <p>Recommend a ½ rate of a protectant material for resistance management and increased fruit protection</p> <p>14 day PHI / 2 days REI (for most activities) & 4 days (thinning)</p>
<p>Assail 70 WP Acetamiprid</p>	<p>Neonicotinoid</p>	<p><u>Pome Fruit:</u> Apple Maggot European Apple Sawfly Plum Curculio Mullein Bug</p>	<p><u>Rates:</u> 120-240 g/ha (AM, EAS & PC) 80 – 160 g/ha (Mullein bug)</p> <p>7 day PHI / 2 days REI (for most activities) & 6 days (thinning)</p>
<p>Spray Oil 13 E Mineral oil 99%</p> <p>-Organic-</p>	<p>Organic</p>	<p><u>Pome Fruit & Stone Fruit:</u></p> <p>Used anywhere Superior Oil is listed (dormant applications)</p> <p>Refer to label for summer applications (suppression only)</p>	<p><u>Rate:</u> 2% solution (dormant), 1% solution (summer)</p> <p>Incompatible with other fungicides including; Captan/Maestro, Folpet, Karathane, Sulphur & Pounce. Caution use with Copper.</p> <p>7 day PHI / 12 hour REI</p>

Critical Spring Temperatures for Tree Fruit Bud Stages (°C)

Pome Fruit									
Apples	Silver Tip	Green Tip	½ inch Green	Tight Cluster	First Pink	Full Pink	First Bloom	Full Bloom	Post Bloom
10% kill	-9.4	-7.7	-5.0	-2.7	-2.2	-2.2	-2.2	-2.2	-2.2
90% kill	-16.6	-12.2	-9.4	-6.1	-4.4	-3.9	-3.9	-3.9	-3.9
Pears	Bud Swell	Bud Burst		Tight Cluster	First White	Full White	First Bloom	Full Bloom	Post Bloom
10% kill	-9.4	-6.7		-4.4	-3.9	-3.3	-2.8	-2.2	-2.2
90% kill	-17.8	-14.4		-9.4	-7.2	-5.6	-5.0	-4.4	-4.4
Stone Fruit									
Apricots	Bud Swell	Bud Burst	Red Tip	First White	First Bloom	Full Bloom	In the Shuck	Green Fruit	
10% kill	-9.4	-6.7	-5.6	-4.4	-3.9	-2.8	-2.8	-2.2	
90% kill	--	-17.8	-12.8	-10.0	-7.2	-5.6	-4.4	-3.9	
Peaches	Bud Swell	Calyx Green	Calyx Red		First Pint	First Bloom	Full Bloom	Post Bloom	
10% kill	-7.8	-6.1	-5.0		-3.9	-3.3	-2.8	-2.2	
90% kill	-17.2	-15.0	-12.8		-9.4	-6.1	-4.4	-3.9	
European Plums	Bud Swell	Side White	Tip Green	Tight Cluster	First White	First Bloom	Full Bloom	Post Bloom	
10% kill	-10.0	-8.3	-6.7	-4.4	-3.3	-2.8	-2.2	-2.2	
90% kill	-17.8	-16.1	-13.9	-8.9	-5.6	-5.0	-5.0	-5.0	
Sweet Cherries	Bud Swell	Side Green	Green Tip	Tight Cluster	Open Cluster	First White	First Bloom	Full Bloom	Post Bloom
10% kill	-8.3	-5.6	-3.9	-3.3	-2.8	-2.8	-2.2	-2.2	-2.2
90% kill	-15.0	-12.8	-10.0	-8.3	-6.1	-4.4	-3.9	-3.9	-3.9
Tart Cherries	Bud Swell	Side Green	Green Tip	Tight Cluster	Open Cluster	First White	First Bloom	Full Bloom	
10% kill	-9.4	-4.4	-3.3	-3.3	-2.2	-2.2	-2.2	-2.2	
90% kill	-17.8	-12.2	-5.5	-4.4	-4.4	-4.4	-4.4	-4.4	

Compiled by Mark Longstroth, District Extension Educator, MSU Extension

KCMS PEST RISK NOTES Week of May 6, 2011

The above chart is a summary of observed pest activity and projections of activity over the next 7 days. These are general observations and should not replace site specific scouting to determine if a particular pest should require control. The authors assume neither liability for the information nor its use.

APPLES:

PEST	RISK LEVEL
Apple Scab	M-H
Powdery Mildew (PM)	M
Rust Mites	L
Tentiform Leafminer (TLM)	M
Spring Feeding Caterpillars (SFC)	M
Sawfly	L
European Red Mite (ERM)	M
Rosy Apple Aphids	M
Oriental Fruit Moth (OFM)	L
Leafhoppers	L
OBLR	L-M

PEARS:

PEST	RISK LEVEL
Pear Scab	M-H
Fireblight	L
Pear Midge	M-H
Pear Psylla	M
European Red Mite (ERM)	L-M
Spring Feeding Caterpillars (SFC)	M
Pear Sawfly	L
Oblique Banded Leafroller (OBLR)	L-M

PEACHES:

PEST	RISK LEVEL
Peach Leaf Curl	L
Brown Rot (BR)	L-M
Oriental Fruit Moth (OFM)	L
Plum Curculio (PC)	L
Aphids	L
European Red Mite (ERM)	M

PLUMS:

PEST	RISK LEVEL
Brown Rot (BR)	M-H
Black Knot	M-H
Plum Curculio (PC)	L
Aphids	L
European Red Mite (ERM)	L-M

CHERRIES:

PEST	RISK LEVEL
Brown Rot (BR)	M
Black Knot	M
Plum Curculio (PC)	L
Aphids (Black Cherry)	M
Spring Feeding Caterpillars (SFC)	M