



KCMS TREE FRUIT REPORT

May 7, 2010

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Tender Fruit:

OFM WARNING/UPDATE

OFM trap numbers from earlier this week have remained elevated however, the most recent trap numbers (May 6) have dropped. This indicates that peak flight and peak mating likely occurred last weekend which is slightly later than originally predicted and will result in delayed predicted egg hatch by an additional 1-2 days. As well, recent weather conditions have been quite windy and upcoming temperatures are predicted to be cool. When there are high winds and/or if temperatures get very cool (e.g. below 10°C), moths are unlikely to fly, mate and lay eggs. Cool temperatures will also delay egg hatch. **After taking everything into consideration, updated regional spray dates are now as follows; for the early areas May 8-10, the mid-season areas May 9-11 and the late season areas May 10-12. Lorsban is still suggested as the preferred material for the first generation of OFM. Be aware of the 4 day re-entry interval with Lorsban.** All bearing and non-bearing peach blocks should be covered for the first generation. Since there is no fruit present, the larvae from this generation will feed, and tunnel into soft terminal growth.

There are new products registered for the control of OFM on peaches, however, Lorsban use is restricted to application for the first generation, whereas other products may be used later in the season. Use of Lorsban in future growing seasons is not assured at this time. If you intend to use products like Intrepid, Altacor or Delegate for this generation, be aware that they have a different mode of action and should be applied 1-2 days before the above recommended spray dates.

Remember, Lorsban cannot be applied to trees that are in bloom. For this reason, petal fall timing is suggested for trees that are still in bloom during the recommended spray dates.

Peaches: Most of the peach cultivars are now at the petal fall stage of development. Infection from brown rot can occur if conditions become warm and wet through the shuck fall period. Forecast temperatures for the next week are relatively cool which will decrease the risk for severe infection, nevertheless, if it has been more than 10 days since your last fungicide application, another application will be needed to get through the blossom blight risk period. Good products for blossom blight include; Indar, Lance, Rovral, Topas, Mission and Pristine. Remember that Indar, Topas, Mission and Nova are from the same chemical family and should not be used as rotation alternatives. As well, Pristine and Lance are from the same chemical family and should not be used in succession.

Captan/Maestro is also labelled for blossom blight protection but these are surface protectant materials and are prone to wash off. Be sure to follow the resistance management strategy if using Rovral, Topas or Vanguard. Check all product labels for rates, crops and restrictions.

If you intended to use mating disruption for OFM control, it is now too late to apply dispensers to disrupt mating of the 1st generation. Apply Lorsban on the dates listed above then put out the pheromone dispensers to disrupt mating of subsequent generations.

Plums: Presence of knots in an orchard indicates that Black Knot inoculum sources are likely nearby. Black knot infects the tree through leaf axils. Removal of infected knots from the orchard and burning should be completed prior to bloom. Plums are susceptible to black knot and brown rot infections until shuck drop.

Remember that both Bravo and Echo will scar exposed plums if it comes in contact with the exposed fruit. Do not use these products after petal fall. European plums should avoid the use of Captan/Maestro as phytotoxicity may occur.

Many of the plum cultivars are going through the shuck split stage of development. At this stage, growers should begin protection against Plum Curculio. PC adults start to move into orchards from hedgerows or the edges of wooded areas when temperatures exceed 15°C combined with significant precipitation. Forecast temperatures for the next week are relatively cool which will decrease the risk of feeding injury and egg laying. Adults feed mostly at night and, depending on temperatures, can remain active for up to 6 weeks after petal fall. Border damage is most common since PC is a migrant pest. If more than 2% fruit injury is observed then an insecticide should be applied. Since most of the damage occurs at night, routine monitoring for the first signs of injury is critical for effective spray timings. The new product Clutch is labelled for use on plums and has shown good control of PC in trials. Guthion and Imidan are also labelled for PC on plums, however be aware of any re-entry restrictions associated with these products. Check product labels for rates and restrictions.

Sweet Cherries: In sweet cherries, the majority of the petals have fallen and many of the shucks have begun to split. At this time brown rot is the key disease

issue until the shucks have fallen. Follow a similar strategy for control of brown rot as outlined in peaches and always check labels for crop registration and restrictions

Black Cherry Aphids can be present in sweet cherry orchards throughout the bloom and shuck period. This pest curls and stunts the leaves and a petal fall inspection of terminals can warrant an application of Diazinon, Thiodan, Movento or the new product Clutch.

Sour Cherries: Most sour cherry blocks are now at petal fall. Infection from black knot and brown rot can take place until all of the shucks have fallen. Removal and burning of old black knot infected limbs should have been completed prior to bloom to reduce the inoculum in the orchard. Black knot infects the tree through leaf axils. Captan/Maestro, Indar, Topas or Mission will control brown rot and suppress black knot.

Cherry leaf spot can be a problem at the petal fall stage of development if conditions become wet between bloom and shuck split. Most products that are applied for brown rot and black knot also control leaf spot. These include; Bravo, Echo, Captan/Maestro, Nova, Topas, Mission and Pristine. Be aware that Bravo and Echo will scar the fruit if applied after shuck split.

At the shuck split stage, growers should begin protection against Plum Curculio. PC adults start to move into orchards from hedgerows or the edges of wooded areas when temperatures exceed 15°C combined with significant precipitation. Forecast temperatures for the next week are relatively cool which will decrease the risk of feeding injury and egg laying. Adults feed mostly at night and, depending on temperatures, can remain active for up to 6 weeks after petal fall. Border damage is most common since PC is a migrant pest. If more than 2% fruit injury is observed then an insecticide should be applied. Since most of the damage occurs at night, routine monitoring for the first signs of injury is critical for effective spray timings. The new product Clutch is labelled for use on cherries (sweet and sour) and has shown good control of PC in trials. Guthion is labelled for PC control on sweet cherries and both Guthion and Imidan are labelled for PC on sour cherries, however be aware of any re-entry restrictions associated with these products. Check product labels for rates and restrictions.

Apples and Pears: Most of the apple blocks across the peninsula are now at the full bloom stage of development or into petal fall. Most pear blocks are at various stages of petal fall.

With open blossoms present, it is now too late to apply oil for **European Red Mite** control in apples and **Psylla** control in pears.

Recent pear samples confirm that **Pear Psylla** egg hatch has begun and early-mid instars are present and feeding. No insecticides can be applied during

bloom however, it is highly recommended to apply an insecticide targeting psylla at petal fall. This is the opportunity to use Movento since recent label changes have restricted the use of this product to petal fall timing only. Agri-Mek + Oil can also be used at petal fall but be aware of the Captan/Maestro 14 day fungicide interval if you use the Agri-mek plus oil mixture. This also applies if you use horticultural oil as a surfactant with Movento. Be sure to remove all hives immediately after pollination so that insecticides can be accurately timed. Some Spring Feeding Caterpillars have also been observed with damage levels remaining very low. Products applied for psylla control at petal fall will help in reducing SFC numbers.

Rosy Apple Aphid can establish early in susceptible cultivars like Cortland, Ida red or Golden Delicious. Assail, Actara and the new product Clutch are all labelled for RAA control however, they are all in the same chemical family and should not be used in rotation. RAA activity is site specific so monitor closely for activity before applying any insecticide.

For apples, the use of Apollo is targeted at the egg stage of mites. Be sure to check your orchard and apply Apollo before there are more than 3 active mites per leaf. If you choose to use this product it is suggested the best timing is within 2 weeks of petal fall. Apply Apollo alone with high water volumes to ensue thorough coverage.

For growers of Red Delicious and related cultivars, **Mullein bug** can become active during the calyx period. Publication 360 indicates that Calypso, Admire/Alias, Actara and Diazinon are effective for mullein bug.

For apples blocks with a history of **Tentiform Leaf Miner (TLM)** or **Plum Curculio (PC)**, an insecticide application at the post bloom period may be effective to control these pests. Either, Actara or Clutch is a good fit for TLM control that will also control Rosy Apple Aphid (RAA) and any early Plum Curculio. The other neonicotinoids like Alias, Admire or Assail will also provide control of RAA and suppress TLM but are weaker on PC.

If TLM, PC and aphid numbers are low you may choose to delay an insecticide until the OFM timing for apples which is not the same as for peaches and other stone fruit. Assail and Clutch are also labeled for control of OFM on apples, however early season pressure from OFM is low on apples.

Based on trap counts and the degree day model we do not expect **OFM** hatch in Apples to be until the week of May 17th. Specific dates will be in next week's report.

For pear blocks with a history of **Pear Sawfly**, an immediate post bloom insecticide application is recommended. This is a migrant pest that typically targets fruit found on perimeter trees. A border application may be adequate for lower pressure blocks.

With many new leaves and fruit present, infection by scab can take place with any significant rain event. Each rainfall event will result in further ascospore discharge. In orchards that had scab last year, it is important to maintain good coverage on a 7-to-10 day spray interval.

For resistance management and increased fruit protection, it is recommended that locally systemic fungicides be tank mixed with a half-rate of protectant fungicide such as (Dithane, Mancozeb, Polyram or Captan/Maestro). Sovran and Flint will give 7 to 10 days of protection and if used, they should be applied in consecutive sprays then alternate to products from different chemical families. Though Captan is listed as having some kick-back activity on scab, it does not have post-infection activity. Captan protects those spores that are released late during the rainfall period. It only acts on spore germination.

Powdery mildew is also worth mentioning as susceptible apple cultivars go through bloom. 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 applied 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, Pristine or Dikar will provide good protection of both scab and powdery mildew. Remember, Sovran and Flint are from the same chemical family and should not be used in succession.

Fire blight Risk for Apples and Pears – Fruit becomes resistant to fire blight infections after petal fall; however, infection can still take place through secondary blooms. Open flowers can become infected within minutes after a rain or heavy dew if bacteria are present. The fire blight bacteria overwinters on infected limbs and can infect by entering the tissue through open blossoms if the daily average temperature is 16°C or greater with wet or soaked blossom. Streptomycin applications are best used in a preventative mode and should give 3 days of protection. Serenade Max is also labelled for suppression of fire blight throughout bloom and should also be used in a preventative mode, before infection occurs. Excellent spray coverage is critical for both products. If you miss an infection period, you must apply Streptomycin within 24 hours to reduce blossom infection. Since Serenade is a biocontrol option it must be applied prior to an infection period so the bacteria can colonize the flowers before the fire blight bacteria enters.

Be sure to remove all hives immediately after pollination so that insecticides may be used at the optimum time.

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 7, 2010

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

PEARS:

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

PEACHES:

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

PLUMS:

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

CHERRIES:

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