



Vermont Apple IPM News

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Summary of Stage of 2007 Bud Development:

2007 Reports of Apple Bud Stage (McIntosh) for Selected Sites				
Date	UVM HRC South Burlington Chittenden Co. Elev. 71 M	Shoreham Addison Co. Elev. 107 M	South Hero Grand Isle Co. Elev. 54M	Dummerston Windham Co. Elev. 171 M
4/01	Dormant	Dormant	Dormant	Early Silver Tip
4/07	Dormant	Dormant	Dormant	Early Silver Tip
4/15	Dormant	Dormant	Dormant	Early Silver Tip
4/23	Silver Tip (4/21) Green Tip (4/23)	Silver Tip(4/21) Green Tip (4/23) 1/4" Green Tip (4/25)	Silver Tip (4/21) Green Tip (4/23)	Green Tip (4/22)
4/30	Half Inch Green	HIG (4/28)	HIG	HIG (4/27)
5/05	Tight Cluster	Tight Cluster	Tight Cluster	Early Pink (5/4) Mid-Pink (5/7)
5/10	Pink	Pink	Pink	First Bloom
5/14	King Bloom	Pink (5/9) King Bloom (5/10) Full Bloom (5/13)	Pink, few Kings open	Full Bloom (5/12)
5/21	50% Petal Fall	95% Petal Fall (5/20)	Full Bloom (5/19)	95% Petal Fall (5/20)
5/29	95% Petal Fall (5/26)	-		-

Disease Management Update

Fire Blight — The warm temperatures this spring have made the risk of fire blight higher than normal. Hopefully, not all of the conditions necessary for infection were present at any one time in your orchard. We continue to run the Maryblyt predictive model for the above four sites and if there are any blossoms still present through the weekend, the risk of infection is still very high if there is a wetting event. We are also using the Maryblyt program to predict when blossom blight symptoms would appear if infection did occur. If infection did occur on May 11 in the above sites, it is predicted that blossom blight symptoms should already be present in the most southern location (Dummerston) with symptoms appearing within the next few days at the other sites. So, suffice to say, you should be looking at your orchard carefully for disease

symptoms. It is important to cut out fire blight strikes as soon as possible particularly on young trees. If possible, make cuts 8-12 inches or more below visible symptoms on a dry, sunny day. Make cuts into wood that is at least 2 years old. Do not cut back to the next healthy limb or spur but leave at least a 4-5 inch “ugly stub” which should be removed during the dormant period when the temperature is too cold for the fire blight bacteria to multiple.

Apple Scab - As you can see in the chart below, we have entered the final phase of ascospore release. Conservatively, it is estimated that the final ascospores will be released after 900 DD have been reached and when 0.1 inch of rain falls during the day when the temperature is at least 50 F. However, it will take at least 9-10 days (or more at cooler temperatures) from the last infection period of the primary scab season for any lesions to develop — so it will take more time to determine how successful your scab management program has been. Note that in cooler areas of the state, ascospore maturity will lag behind that indicated below. The good news is that so far, we have found it very difficult to find any primary lesions — even on non-sprayed McIntosh trees at the Hort. Res. Center. Hope this continues !!

2007 Degree Day Accumulation for Apple Scab Ascospore Maturity

2007 Estimated Degree-Day Accumulation (Base 32F, from McIntosh Green Tip) for Selected Sites				
	UVM HRC South Burlington Chittenden Co. Elev. 71 M.	Shoreham Addison Co. Elev. 107 M	South Hero Grand Isle Co. Elev. 54M	Dummerston Windham Co. Elev. 171 M.
Date	04/23 (GT)	04/23 (GT)	04/23 (GT)	04/22(GT)
4/28	120	123	120	150
5/05	230	236	231	279
5/12	423	425	426	474
5/19	547	556	550	620
5/27	772	782	778	856
5/28	802	812	807	888

Arthropod Management Update

Leafminers— It is time to start checking the undersurface of leaves for sap-feeding mines. Hope you are seeing what we are seeing — a very low LM population so far. The following are the thresholds for 1st generation LM sap-feeding mines: McIntosh: 7 mines per 100 leaves; Non-McIntosh: 14 mines/100 leaves.

European Apple Sawfly— We have also trapped below-threshold levels of the European Apple Sawfly. At Petal Fall, the cumulative trap capture thresholds are 9/trap in blocks which had received a broad spectrum pre-bloom insecticide; 5/trap in blocks that did not receive a pre-bloom insecticide.

Codling Moth — In orchards where CM are a problem, optimal spray timing can be estimated by calculating degree-days from first pheromone trap captures (biofix). At the UVM Hort. Res. Center, our estimated CM biofix is May 14th. As of May 28, 128 DD (base 50 F) had accumulated from the biofix. The biofix in the Shoreham area has been reported as May 24th and as of May 28th, 80 DD had accumulated. In orchards where one insecticide application is sufficient for management, optimal timing is at 360 DD after the biofix. If two treatments are needed, the first application should be applied at 250 DD, with the second application 3 weeks later.

White Apple Leafhopper - It is time to check your orchard for leafhoppers. So far, we have seen very few. Threshold for WAL: 25 nymphs/adults per 100 leaves. Observations should be made on 20 leaves/tree on 5 trees/block for WAL nymphs and adults.

Obliquebanded Leafroller - This insect overwinters as a second or third instar larva in a hibernaculum under fragments of bark or in cracks or crotches on the tree. They become active in the spring and feed on bud clusters, flowers, and developing fruit. Most of the severe damage caused from the overwintering larva occurs after petal fall and sprays applied at this time prevent damage. At the UVM Hort. Res. Center, we hung pheromone traps to monitor adult flight activity on May 21 and have not trapped any moths yet. The optimal time to begin to scout for second generation OBLR is about 600 DD (base 43F) after the beginning of the first gen. moth flight. We will keep you updated on DD accumulation.

Plum Curculio - These insects should be active and the warm weather should accelerate the ovipositioning period. We have been tracking Degree Day accumulation from Petal Fall at the locations listed in the next chart in order to use the predictive model developed at Cornell. The DD model estimates when PC management sprays are no longer necessary to protect fruit from damage. At 308 DD (Base 50F) after Petal Fall, PC stop immigrating into orchards and 40% of ovipositioning is complete. It is thought that PC adults that are already in the orchard are being killed by insecticide residues and thus, further ovipositioning is curtailed. The model predicts that no additional sprays are necessary whenever the date of

accumulation of 308 DD falls within 10-14 days after a previous spray. Below are the estimated DDs that have accumulated through May 28.

2007 Degree Day Accumulation for Plum Curculio Oviposition

2007 Estimated Degree-Day Accumulation (Base 50F, from 95% McIntosh Petal Fall Date) for Selected Sites				
Date	UVM HRC South Burlington Chittenden Co. Elev. 71 M	Shoreham Addison Co. Elev. 107 M	South Hero Grand Isle Co. Elev. 54M	Dummerston Windham Co. Elev. 171 M
95% McIntosh Petal Fall Date	5/26	5/20	-	5/20
5/27	27	95	-	105
5/28	36	107	-	119

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