



Integrated Pest Management Program

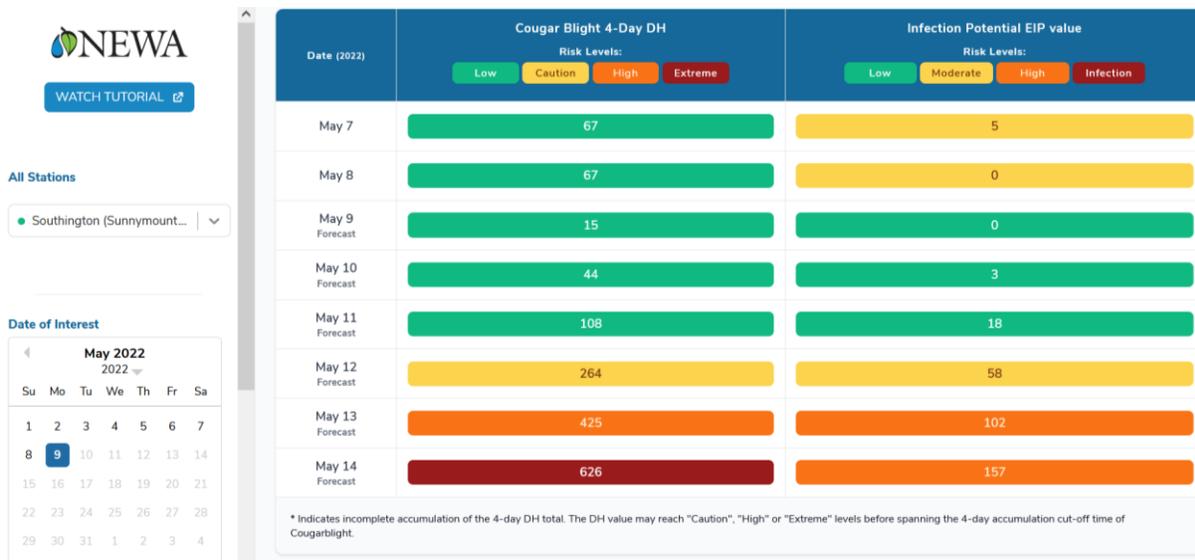
Department of Plant Science and Landscape Architecture
UConn Extension

Fruit Update: May 9, 2022

Mary Concklin, Visiting Extension Educator - Fruit Production & IPM
UConn IPM Program Coordinator

Fireblight potential is high later this week with predicted rain, open blossoms and warm weather. The EIP value is predicted to reach 100 by the 13th or 14th depending on location in CT. Both the Cougar blight model and the EIP value agree on infection potential

Although copper applications earlier this spring killed overwintering bacteria, it didn't get all of it. Bacteria spread with rain to open blossoms. An application of Strep within 48 hours of an infection will take care of those blossoms open at the time. Add Regulaid at 1 pt./100 gals – do not concentrate it. Organic growers can use Double Nickel, Serenade or LifeGard.



Petal Fall Entomology: Dr. Jaime Pinero, UMass

Petal fall, a critical time for insect pest control in apple. While insect pest activity continues to be low in the five orchards that are being monitored, including the UMass Cold Spring Orchard, it is time to start planning for the petal fall insecticide spray targeting all trees in the blocks. The insecticide application at the petal fall stage on apples is frequently well synchronized with the optimal period for the control of plum curculio (PC), European apple sawfly (EAS), rosy apple aphid (RAA), and Oriental fruit moth (OFM).

The choice of insecticides used at petal fall on apples should be solely determined by the pest(s) complex present in orchards. Undoubtedly, the most important pest being targeted is PC. Some broad spectrum products such as Imidan and Avaunt eVo should provide high levels of PC control. Avaunt eVo should provide moderate levels of control of OFM and CM.

If no dormant oil was applied during the pre-bloom period, then European red mite populations can be reduced with an application of Agri-Mek (or other formulations of abamectin) plus a penetrant (i.e., horticultural oil) at the petal fall stage. Abamectin still offers good control of ERM and spotted tentiform

leafminers, and fair to good control of white apple leafhopper. Agri-Mek should be applied before the leaves harden off, generally no later than 10 days after a petal fall. These are just examples of effective miticides. Additional miticides are listed in the petal fall spray table of the [New England Tree Fruit Management Guide](#).

If rosy apple aphid and leafhoppers need to be controlled, then neonicotinoids such as Admire Pro 4.6SC (imidacloprid) at 2.8 fl.oz./acre, Assail 30SG at 2.5-4 oz/acre will provide the additional broad spectrum activity needed. The anthranilic diamides Exirel (cyantraniliprole) at 13.5-20.5 fl. oz./acre and Verdepryn (Cyclaniliprole) at 5.5 to 11.0 fl. oz./acre (the higher rates will be needed for effective PC control) can also control multiple pests.

Below is an updated table of insecticides that are moderately or highly effective against insect pests at petal fall.

APPLE – PETAL FALL		*Bee hazard, S= Suppression only					HIGH AND MODERATE EFFECTIVENESS						
	a.i.	IRAC	TPB	EAS	PC	CM	OFM	OBLR	RBLR	SJS	Rosy apple aphid	STLM	
Intrepid 2F (IGR)	Methoxyfenozide	18				M	M	H	H				
Dipel DF (OMRI)	B.t.	11A				M	M	H	H				
Assail 30SG	Acetamiprid	4A		M		H	H				H	H	
Delegate 25WG	Spinetoram	7				H	H	H	H			H	
ALTACOR 35WDG	Chlorantraniliprole	28		H		H	H	H	H			H	
Avaunt 30WDG	Indoxacarb	22	M	M	H	M	M					M	
Exirel	Cyantraniliprole	28		?	H	H	H	H	H		H		
Imidan 70W	Phosmet	1B		H	H		H						
Movento 240SC	Spirotetramat	23								H	M		
Voliam Flexi WDG	Thiamethoxam + chlorantraniliprole	28 + 4A			H	H	H	H	H		H	H	
Belt 4SC	Flubendiamide	28				H	H	H	H			H	
Danitol 2.4 EC	Fenpropathrin	3				H							
Actara 25WDG	Thiamethoxam	4A		H*	H							H	
Entrust SC (OMRI)	Spinosad	5				M	M	H	H			H	
Admire PRO 4.6SC	Imidacloprid	4A									H	H	
Verdepryn 100SL	Cyclaniliprole	28		?	H	H	H	?	?			?	
Transform WG	Sulfoxaflor	4C	?							? S	?		

Planning ahead for Mites at petal fall is a good strategy if you have had trouble controlling them last year. According to Peter Jentsch, either Agri-Mek SC (IRAC 6) plus hort oil, or Savey 50DF (IRAC 10A), Onager Optek (IRAC 10A), or Zeal 72WS (IRAC 10B) should be applied at this time, when mite hatch is 100% completed.

Diseases of strawberry and blueberry. It is the king blossoms that are opening now and are susceptible to Botrytis blossom blight, a fungal disease, with the upcoming predicted rain at the end of the week. Skipping a spray or delaying the start of botrytis sprays will result in infected blossoms which = infected fruit. The king flower is not one you want to lose because it develops into the largest berries.

Phomopsis twig blight on blueberries should be treated IF you have had it in the past, OR you see lesions now. Not everyone will be impacted by this fungal disease which is why there is no need to spray unless you know it is a problem in your block. Look on the canes for a brown area around buds. This is where

the infection began. An infected twig will have dead or dying flower buds. Warm wet weather is ideal for infections to occur.

There are many options for both diseases and for both non-organic and organic growers in the [New England Small Fruit Management Guide](#).

Thinning with the Carbohydrate Model

The forecasted weather is for temperatures to finally get into the 70s this week which will be good for thinning (and pest emergence). The Carbohydrate model, developed at Cornell and used for many years now, is a tool to help determine with thinning decisions: use your usual rate, increase your rate or decrease your thinning rate, as well as whether there is a risk of over or under thinning. The model has been updated and can be found at [NEWA](#) along with information regarding the parameters used in the model.

As a grower, you will need to input 3 pieces of data at the top of the page: green tip date, bloom date and the percent flowering spurs.

Green Tip & Bloom Dates

Green tip and bloom dates below are estimated from growing degree day accumulations. Enter your orchard's dates to fine-tune results.

Green Tip Date

Bloom Date

Percent Flowering Spurs

Then scroll down to see the results.

Results Table

Forecast Details: Thinning efficacy: Mild Good Very Good Excessive

Date (2022)	Max Temp (°F)	Min Temp (°F)	Solar Rad (MJ/m2)	Tree Carbohydrate Status (g/day)		Accum 4°C DD since bloom	Thinning Recommendation
				Daily	7-Day Weighted Ave		
May 5	71	40	10.4	-14.02	-10.93	40.0	Thinning Rate by 30%
May 6	61	49	6.4	-34.8	-12.67	55.3	Increase Chemical Thinning Rate by 30%
May 7	53	46	5.2	-24.6	-6.34	60.9	Increase Chemical Thinning Rate by 30%
May 8	57	45	14.3	-3.35	-5.07	67.5	Increase Chemical Thinning Rate by 30%
May 9	65	42	24.1	6.65	-8.96	75.4	Increase Chemical Thinning Rate by 30%
May 10 Forecast	68	37	25	12.65	-20.15	82.8	Apply Standard Chemical Thinning Rate
May 11 Forecast	69	39	21.2	-0.28	-	91	-
May 12 Forecast	74	50	23.6	-32.25	-	103.6	-
May 13 Forecast	73	56	21.4	-51.26	-	117.7	-

Legend: L = Low Risk of Overthinning, C = Caution, D = Danger of Overthinning

Funding provided by USDA NIFA CPPM grant 2021-70006-35582

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