

2019 Hudson Valley Research Lab Scouting Report

Cornell AgriTech Entomology Department, Highland, NY

<u>Date</u>	<u>Baskerville-Emin (BE)</u>		<u>Field Observations / Trap Catches / Models</u>	
	<u>DD Accumulations (previous day NEWA)</u>			
	43 F	50 F	# / trap / day (pheromone trap)	
3/19	54.2	20.6		Beginning degree day accumulations beginning 1 January, 2019
			0.0	Spotted Green Fruitworm (SGFW) (0/0)
			0.5	Redbanded Leafroller (RBLR) (0/1) FIRST CATCH
			0.0	Spotted Tentiform Leafminer (STLM) (0/0)
			0.0	Lesser Appleworm (LAW)
			0.0	Oriental Fruit Moth (OFM)
			0.0	Pear Psylla 0 Eggs/25 Buds
			0.11	Weekly Rainfall
			0.73	Total Rainfall (Since 1 March, 2019)
3/25	61.3	22.4		Beginning degree day accumulations beginning 1 January, 2019
			0.0	Spotted Green Fruitworm (SGFW) (0/0)
			0.0	Redbanded Leafroller (RBLR) (0/0)
			0.0	Spotted Tentiform Leafminer (STLM) (0/0)
			0.0	Lesser Appleworm (LAW)
			0.0	Oriental Fruit Moth (OFM)
			0.04	Pear Psylla 1 Egg/25 Buds FIRST CATCH
			1.01	Weekly Rainfall
			1.74	Total Rainfall (Since 1 March, 2019)
4/1	62.9	33.5		Beginning degree day accumulations beginning 1 January, 2019
			0.1	Spotted Green Fruitworm (SGFW) (0/2) FIRST CATCH
			0.2	Redbanded Leafroller (RBLR) (3/0)
			0.0	Spotted Tentiform Leafminer (STLM) (0/0)
			0.0	Lesser Appleworm (LAW)
			0.0	Oriental Fruit Moth (OFM)
			0.04	Pear Psylla 1 Egg/25 Buds FIRST SUSTAINED CATCH
				Mid-silver tip in Empire and Zestar
				Some green tissue visible on Jersey Mac and Zestar
			0.27	Weekly Rainfall
			2.01	Total Rainfall (Since 1 March, 2019)

Baskerville-Emin (BE)			
<u>Date</u>	<u>DD Accumulations (previous day NEWA)</u>		<u>Field Observations / Trap Catches / Models</u>
	43 F	50 F	# / trap / day (pheromone trap)
4/8	121.2	47.6	Beginning degree day accumulations beginning 1 January, 2019
			0.0 Spotted Green Fruitworm (SGFW) (0/0)
			1.6 Redbanded Leafroller (RBLR) (17/5) FIRST SUSTAINED CATCH
			0.0 Spotted Tentiform Leafminer (STLM) (0/0)
			0.0 Lesser Appleworm (LAW)
			0.0 Oriental Fruit Moth (OFM)
			0.2 Pear Psylla 6 Eggs/25 Buds
		Phenology:	
			Empire 71% ½” green
			Zestar 70% green tip
			Jersey Mac 57% green tip
			Honeycrisp 58% silver tip
			Ginger Gold 40% silver tip, 40% green tip
			Red Delicious (Red Chief) 47% silver tip
			McIntosh (Red Max) 50% silver tip
		0.79	Weekly Rainfall
		2.46	Total Rainfall (Since 1 March, 2019)
4/15	196.4	88.6	Beginning degree day accumulations beginning 1 January, 2019
			0.0 Spotted Green Fruitworm (SGFW) (0/0)
			5.8 Redbanded Leafroller (RBLR) (49/32)
			0.0 Spotted Tentiform Leafminer (STLM) (5/6) FIRST CATCH
			0.0 Lesser Appleworm (LAW) (0/0)
			0.1 Oriental Fruit Moth (OFM) (0/1) FIRST CATCH
			1.2 Pear Psylla 29 Eggs/25 Buds
		Phenology:	
			Ginger Gold 54% tight cluster
			Red Delicious (Red Chief) 54% ½” green
			McIntosh (Red Max) 55% ½” green
			Smoothie 56% tight cluster
		1.07	Weekly Rainfall
		3.53	Total Rainfall (Since 1 March, 2019)

Baskerville-Emin (BE)			
<u>Date</u>	<u>DD Accumulations (previous day NEWA)</u>		<u>Field Observations / Trap Catches / Models</u>
	43 F	50 F	# / trap / day (pheromone trap)
4/22	282.3	134.3	Beginning degree day accumulations beginning 1 January, 2019
			0.0 Spotted Green Fruitworm (SGFW) (0/0)
			9.1 Redbanded Leafroller (RBLR) (19/109)
			7.3 Spotted Tentiform Leafminer (STLM) (51/51) FIRST SUSTAINED CATCH
			0.0 Lesser Appleworm (LAW) (0/0)
			0.0 Oriental Fruit Moth (OFM) (0/0)
			0.1 Black Stem Borer (BSB)(adults in trap) (1/1) FIRST CATCH
			8.72 Pear Psylla 218 Eggs/25 Buds
			0.04 Pear Psylla 1 Nymph/ 25 Buds FIRST CATCH
			Phenology:
			Apples
			Empire 89.7% pink
			Zestar 90.3% pink
			Jersey Mac 83% tight cluster
			Honeycrisp 55% pink
			Brookfield Gala 75% tight cluster
			Red Delicious (Red Chief) 76% tight cluster
			McIntosh (Red Max) 72% pink
			Ginger Gold 74% pink
			Smoothie 93% tight cluster
			Pears
			Bartlett 86% green cluster
			Bosc 85% green cluster
			Cherry
			Black Pearl 98% bloom
			Ebony Pearl 73% bloom
			Regina 51% early white
			Peach
			Early 73% bloom
			Late 79% bloom
			1.34 Weekly Rainfall
			4.83 Total Rainfall (Since 1 March, 2019)

Baskerville-Emin (BE)			
<u>Date</u>	<u>DD Accumulations (previous day NEWA)</u>		<u>Field Observations / Trap Catches / Models</u>
	43 F	50 F	# / trap / day (pheromone trap)
4/29	356.1	172.0	Beginning degree day accumulations beginning 1 January, 2019
			0.0 Spotted Green Fruitworm (SGFW) (0/0)
			8.2 Redbanded Leafroller (RBLR) (35/80)
			7.4 Spotted Tentiform Leafminer (STLM) (46/57)
			0.0 Lesser Appleworm (LAW) (0/0)
			3.1 Oriental Fruit Moth (OFM) (7/36)
			0.0 Codling Moth (CM) (0/0)
			0.3 Black Stem Borer (BSB)(adults in trap) (3/1) FIRST SUSTAINED CATCH
			0.0 Brown Marmorated Stink Bug (BMSB) (0/0)
			2.2 Pear Psylla 54 Eggs/25 Leaves
			1.8 Pear Psylla 45 Nymph/ 25 Leaves FIRST SUSTAINED CATCH
	Phenology:		
	Apples		
			Empire 55.6% bloom
			Zestar 70.0% bloom
			Jersey Mac 59.5% bloom
			Honeycrisp 52.3% king bloom
			Gala 69.0% pink
			Red Delicious (Red Chief) 80% pink
			McIntosh (Red Max) 37% bloom
			Ginger Gold 43.0% bloom
			Smoothie 93.8% pink
	Pears		
			Bartlett 69.2% bloom
			Bosc 73% bloom
	Cherry		
			Black Pearl 83% petal fall
			Ebony Pearl 74.5% bloom
			Regina 85.6% bloom
	Peach		
			Early 100% petal fall
			Late 87.2% petal fall
			1.18* Weekly Rainfall
			6.01* Total Rainfall (Since 1 March, 2019)
			*weather station indicates incomplete data

Baskerville-Emin (BE)			
<u>Date</u>	<u>DD Accumulations (previous day NEWA)</u>		<u>Field Observations / Trap Catches / Models</u>
	43 F	50 F	# / trap / day (pheromone trap)
5/6	424.9	200.8	Beginning degree day accumulations beginning 1 January, 2019
			0.0 Spotted Green Fruitworm (SGFW) (0/0)
			8.4 Redbanded Leafroller (RBLR) (43/75)
			9.4 Speckled Tentiform Leafminer (STLM) (72/59)
			0.0 Lesser Appleworm (LAW) (0/0)
			4.4 Oriental Fruit Moth (OFM) (7/54)
			0.0 Codling Moth (CM) (0/0)
			0.2 Black Stem Borer (BSB)(adults in trap) (1/2)
			0.0 Brown Marmorated Stink Bug (BMSB) (0/0)
			2.5 Pear Psylla 62 Eggs/25 Leaves
			1.0 Pear Psylla 26 Nymph/ 25 Leaves
			Phenology:
			Apples
			Empire 57% bloom
			Zestar 85% king bloom
			Jersey Mac 85% bloom
			Honeycrisp 87% bloom
			Gala 54.5% bloom
			Red Delicious (Red Chief) 78% bloom
			McIntosh (Red Max) 55% bloom
			Ginger Gold 54% bloom
			Smoothie 58% bloom
			Pears
			Bartlett 77% petal fall
			Bosc 68% petal fall
			Cherry
			Black Pearl 81% petal fall
			Ebony Pearl 93% petal fall
			Regina 50% bloom
			Peach
			Early 100% petal fall
			Late 100% petal fall
			1.19 Weekly Rainfall
			7.2 Total Rainfall (Since 1 March, 2019)

Baskerville-Emin (BE)			
<u>Date</u>	<u>DD Accumulations (previous day NEWA)</u>		<u>Field Observations / Trap Catches / Models</u>
	43 F	50 F	# / trap / day (pheromone trap)
5/13	520.3	251.7	Beginning degree day accumulations beginning 1 January, 2019
			0.0 Spotted Green Fruitworm (SGFW) (0/0)
			6.6 Redbanded Leafroller (RBLR) (50/43)
			0.0 Speckled Tentiform Leafminer (STLM) (0/0)
			27.1 Lesser Appleworm (LAW) (112/156)
			0.0 Oriental Fruit Moth (OFM) (0/0)
			0.29 Codling Moth (CM) (4/0) FIRST CATCH
			0.7 Black Stem Borer (BSB) (adults in trap) (5/5)
			0.0 Brown Marmorated Stink Bug (BMSB) (0/0)
			0.0 Pear Psylla 0 Eggs/25 Leaves
			0.0 Pear Psylla 0 Nymph/ 25 Leaves
			Phenology:
			Apples
			Empire - 5mm 44%
			Zestar - 7mm 58%
			Jersey Mac – petal fall 53%
			Honeycrisp - petal fall 58%
			Gala – petal fall 60%
			Red Delicious (Red Chief) – petal fall 62%
			McIntosh (Red Max) – petal fall 50%
			Ginger Gold – 5mm 49%
			Smoothie – petal fall 53%
			Pears
			Bartlett – petal fall 51%
			Bosc – fruit set 87%
			Cherry
			Black Pearl – fruit set 87%
			Ebony Pearl – fruit set 89%
			Regina – petal fall 90%
			Peach
			Early – fruit set, shucks on 71%
			Late – fruit set, shucks on 66%
			2.6 Weekly Rainfall
			9.8 Total Rainfall (Since 1 March, 2019)

Baskerville-Emin (BE)			
<u>Date</u>	<u>DD Accumulations (previous day NEWA)</u>		<u>Field Observations / Trap Catches / Models</u>
	43 F	50 F	# / trap / day (pheromone trap)
5/20	606.6	303.2	Beginning degree day accumulations beginning 1 January, 2019
			0.0 Spotted Green Fruitworm (SGFW) (0/0)
			2.9 Redbanded Leafroller (RBLR) (12/28)
			8.7 Speckled Tentiform Leafminer (STLM) (58/64)
			0.1 Lesser Appleworm (LAW) (0/2)
			4.8 Oriental Fruit Moth (OFM) (38/29)
			3.1 Codling Moth (CM) (6/38) FIRST SUSTAINED CATCH
			0.4 Black Stem Borer (BSB) (adults in trap) (5/1)
			0.0 Brown Marmorated Stink Bug (BMSB) (0/0)
			San Jose Scale Trap Set & 1st emergence
			2.6 Pear Psylla 64 Eggs/25 Leaves
			1.2 Pear Psylla 30 Nymph/ 25 Leaves
			PC 3% of untreated Ginger Gold fruit
			TPB 2% of untreated Ginger Gold fruit
			Phenology:
			Apples
			Empire – 43% 10mm
			Zestar – 55% 14mm
			Jersey Mac – 37% 10mm
			Honeycrisp – 33.9% 8mm & 33.9% 10mm
			Gala – 35% 8mm
			Red Delicious (Red Chief) – 54% 10mm
			McIntosh (Red Max) – 55% 10mm
			Ginger Gold – 26% 14mm
			Smoothie – 45% 10mm
			Degree Day Models
			San Jose Scale biofix 1st SJS adult emergence
			Pears
			Bartlett – 39% 12mm
			Bosc – 38% 10mm
			Cherry Fruit Set
			Peach Fruit Set, shucks off
			0.84 Weekly Rainfall
			10.64 Total Rainfall (Since 1 March, 2019)

Baskerville-Emin (BE)			
<u>Date</u>	<u>DD Accumulations (previous day NEWA)</u>		<u>Field Observations / Trap Catches / Models</u>
	43 F	50 F	# / trap / day (pheromone trap)
5/28	776.9	417.9	Beginning degree day accumulations beginning 1 January, 2019
			0.0 Speckled Green Fruitworm (SGFW) (0/0)
			1.4 Redbanded Leafroller (RBLR) (11/9)
			6.4 Spotted Tentiform Leafminer (STLM) (50/40)
			1.7 Lesser Appleworm (LAW) (14/10)
			3.7 Oriental Fruit Moth (OFM) (18/34)
			8.4 Codling Moth (CM) (6/38) Biofix 5/17/19
			1.6 Black Stem Borer (BSB) (adults in trap) (12/10)
			0.0 Obliquebanded Leafroller (OBLR)
			0.9 Tufted Apple Budmoth (TABM) FIRST CATCH
			0.0 Sparganothis (SPAR)
			0.1 Dogwood Borer (DWB) FIRST CATCH
			0.1 Brown Marmorated Stink Bug (BMSB) (1/1)
			61.2 San Jose Scale (SJS) FIRST CATCH
			0.4 Pear Psylla 11 Eggs/25 Leaves
			1.3 Pear Psylla 33 Nymph/ 25 Leaves
			Degree Day Models
			124 San Jose Scale model: Accumulated DD ₅₀ crawler emergence is predicted to occur approximately 260-360 DD ₅₀ (5/20)
			152 Codling Moth (CM) Biofix: Accumulated DD ₅₀ (5/17) first eggs are laid at about 50 DD, egg hatch at 220 DD
			141 Plum Curculio (PC) PF Biofix DD ₅₀ (90% PF in Mc): 308 DD ₅₀ Adults ovipositing (5/19)
			Fruit injury UTC Ginger Gold
			0% Plum Curculio (PC) injury
			3% Tarnished Plant Bug (TPB) injury
			9% Lepidopteran Injury
			1% European Apple Sawfly (EAS) injury
			Fruit injury in UTC Red Delicious
			25% Plum Curculio (PC) injury
			12% Tarnished Plant Bug (TPB) injury
			0% Lepidopteran injury
			0.26 Weekly Rainfall
			10.86 Total Rainfall (Since 1 March, 2019)

Baskerville-Emin (BE)			
<u>Date</u>	<u>DD Accumulations (previous day NEWA)</u>		<u>Field Observations / Trap Catches / Models</u>
	43 F	50 F	# / trap / day (pheromone trap)
6/3	901.1	500.1	Beginning degree day accumulations beginning 1 January, 2019
			0.0 Speckled Green Fruitworm (SGFW) (0/0)
			0.0 Redbanded Leafroller (RBLR) (0/0)
			0.3 Spotted Tentiform Leafminer (STLM) (2/2)
			0.3 Lesser Appleworm (LAW) (2/2)
			1.9 Oriental Fruit Moth (OFM) (11/15)
			6.6 Codling Moth (CM) (39/53) Biofix 5/17/19
			0.4 Black Stem Borer (BSB) (adults in trap) (5/0)
			0.1 Obliquebanded Leafroller (OBLR) (0/1) FIRST CATCH
			1.6 Tufted Apple Budmoth (TABM)(7/16)FIRST SUSTAINED CATCH
			0.0 Sparganothis (SPAR) (0/0)
			0.0 Dogwood Borer (DWB) (0/0)
			0.0 Brown Marmorated Stink Bug (BMSB) (0/0)
			2.4 San Jose Scale adult male (SJS) (2/31) FIRST SUSTAINED CATCH
			0.0 San Jose Scale crawlers (0/0)
			0.4 Pear Psylla 10 Eggs/25 Leaves
			0.08 Pear Psylla 2 Nymph/ 25 Leaves
			Degree Day Models
			197 San Jose Scale model: First trap catch 5/20. 6/2 accumulated DD ₅₀ =197. 1 st gen crawler development is predicted to occur at approximately 260-360 DD ₅₀ , period predicted to begin on 6/7 or 6/8.
			234 Codling Moth (CM) Biofix 5/17: First eggs are laid at about 50 DD, egg hatch at 220 DD Moth catches increasing and eggs beginning to hatch.
			214 Plum Curculio (PC) PF Biofix: 90% PF in Mc, 5/19) Adults oviposition decreasing. PC only need to be controlled until 30 DD ₅₀ , predicted for 6/9.
			Fruit injury UTC Ginger Gold
			20% Plum Curculio (PC) injury
			0% Tarnished Plant Bug (TPB) injury
			0% Lepidopteran Injury
			0% European Apple Sawfly (EAS) injury
			Fruit injury in UTC Red Delicious
			32% Plum Curculio (PC) injury
			0% Tarnished Plant Bug (TPB) injury
			4% Lepidopteran injury
			1.21 Weekly Rainfall
			12.07 Total Rainfall (Since 1 March, 2019)

Baskerville-Emin (BE)			
<u>Date</u>	<u>DD Accumulations (previous day NEWA)</u>		<u>Field Observations / Trap Catches / Models</u>
	43 F	50 F	# / trap / day (pheromone trap)
6/10	1057.8	609.3	Beginning degree day accumulations beginning 1 January, 2019
			0.0 Speckled Green Fruitworm (SGFW) (0/0)
			0.0 Redbanded Leafroller (RBLR) (0/0)
			2.6 Spotted Tentiform Leafminer (STLM) (4/33)
			1.4 Lesser Appleworm (LAW) (16/3)
			1.1 Oriental Fruit Moth (OFM) (7/8)
			6.3 Codling Moth (CM) (29/59) Biofix 5/17/19
			0.4 Black Stem Borer (BSB) (adults in trap) (2/3)
			2.1 Obliquebanded Leafroller (OBLR) (6/23) FIRST SUSTAINED CATCH
			4.1 Tufted Apple Budmoth (TABM)(24/34)
			0.0 Sparganothis (SPAR) (0/0)
			1.6 Dogwood Borer (DWB) (10/12)
			0.0 Brown Marmorated Stink Bug (BMSB) (0/0)
			2.0 San Jose Scale adult male (SJS) (20/0)
			0.0 San Jose Scale crawlers (0/0)
			0.4 Pear Psylla 9 Eggs/25 Leaves
			0.2 Pear Psylla 5 Nymph/ 25 Leaves
			Degree Day Models
			343 San Jose Scale model: First trap catch 5/20. 1 st gen crawler development is predicted to occur at approximately 260-360 DD ₅₀ , period predicted to begin on 6/7 or 6/8. Have not trapped crawlers as of 6/10 at HVRL.
			343 Codling Moth (CM) Biofix 5/17: Moth flight peaks and majority of eggs hatch
			323 Plum Curculio (PC) PF Biofix: 90% PF in Mc, 5/19 Adults stop ovipositing; PC control sprays are no longer necessary during the rest of the season.
			157 Obliquebanded Leafroller (OBLR) Biofix: 6/3 Peak moth flight, first egg hatch. Apply protective sprays with the first spray timed to coincide with the first hatch of larvae at approximately 350 DD base 43F after biofix (predicted 6/19).
			CM fruit injury in UTC Red Delicious: 7%
			0.07 Weekly Rainfall
			12.14 Total Rainfall (Since 1 March, 2019)

Baskerville-Emin (BE)			
<u>Date</u>	<u>DD Accumulations (previous day NEWA)</u>		<u>Field Observations / Trap Catches / Models</u>
	43 F	50 F	# / trap / day (pheromone trap)
6/17	1199.9	702.3	Beginning degree day accumulations beginning 1 January, 2019
			0.0 Speckled Green Fruitworm (SGFW) (0/0)
			0.1 Redbanded Leafroller (RBLR) (2/0)
			19.3 Spotted Tentiform Leafminer (STLM) (182/88)
			0.8 Lesser Appleworm (LAW) (3/8)
			0.0 Oriental Fruit Moth (OFM) (0/0)
			2.4 Codling Moth (CM) (18/16)
			0.0 Black Stem Borer (BSB) (adults in trap) (0/0)
			2.6 Obliquebanded Leafroller (OBLR) (18)
			4.3 Tufted Apple Budmoth (TABM) (32/28)
			0.0 Sparganothis (SPAR) (0/0)
			0.8 Dogwood Borer (DWB) (8/3)
			0.0 Brown Marmorated Stink Bug (BMSB) (0/0)
			0.1 San Jose Scale adult male (SJS) (0/1)
			San Jose Scale crawlers FIRST CATCH
			0.9 Pear Psylla 23 Eggs/25 Leaves
			1.4 Pear Psylla 34 Nymph/ 25 Leaves
			0.0 Spotted Wing Drosophila: Cherry=0, Honeysuckle=0
			Degree Day Models
			399 San Jose Scale model: First trap catch 5/20. 1 st generation crawlers emerged 6/17. Pheromone traps should be in place to record the second adult male flight
			436 Codling Moth (CM) Biofix 5/17: Moth flight peaks and majority of eggs hatch. Adult flights are relatively heavy during this period and the majority of eggs are likely to hatch, so control is critical at this time.
			299 Obliquebanded Leafroller (OBLR) Biofix: 6/3 Peak moth flight, first egg hatch. Apply protective sprays with the first spray timed to coincide with the first hatch of larvae at approximately 350 DD base 43F after biofix (predicted 6/19).
			CM fruit injury in UTC Red Delicious: 3%
			Potato leafhopper (PLH) 2 adults/ leaf and developing nymphs in newly developed terminal foliage.
			1.22 Weekly Rainfall
			13.36 Total Rainfall (Since 1 March, 2019)

Baskerville-Emin (BE)			
<u>Date</u>	<u>DD Accumulations (previous day NEWA)</u>	<u>Field Observations / Trap Catches / Models</u>	
	43 F	50 F	# / trap / day (pheromone trap)
6/24	1377.2	830.6	Beginning degree day accumulations beginning 1 January, 2019
			0.0 Speckled Green Fruitworm (SGFW) (0/0)
			0.7 Redbanded Leafroller (RBLR) (8/2)
			29.1 Spotted Tentiform Leafminer (STLM) (252/155)
			0.6 Lesser Appleworm (LAW) (0/8)
			0.7 Oriental Fruit Moth (OFM) (5/5)
			4.0 Codling Moth (CM) (25/31)
			0.3 Black Stem Borer (BSB) (adults in trap) (2/2)
			1.6 Obliquebanded Leafroller (OBLR) (3/8)
			5.6 Tufted Apple Budmoth (TABM) (46/32)
			0.0 Sparganothis (SPAR) (0/0)
			0.6 Dogwood Borer (DWB) (4/4)
			0.0 Brown Marmorated Stink Bug (BMSB) (0/0)
			0.0 San Jose Scale adult male (SJS) (0/0)
			0.2 Apple Maggot (AM) (1/1/2/1) FIRST TRAP CATCH
			0.9 Pear Psylla 5 Eggs/25 Leaves
			1.4 Pear Psylla 12 Nymph/ 25 Leaves
			1.3 Pear rust mite 33/25 Leaves
			0.0 Spotted Wing Drosophila: Cherry=0, Honeysuckle=0
			SWD oviposition in strawberries first found last week.

Degree Day Models

- 527 San Jose Scale model:** First trap catch 5/20. Pheromone traps should be in place at this time to record the second adult male flight.
- 564 Codling Moth (CM) Biofix 5/17:** Adult flights are relatively heavy during this period and the majority of eggs are likely to hatch, so control is critical at this time.
- 476 Obliquebanded Leafroller (OBLR) Biofix: 6/3.** Peak egg hatch: approximately 25% of total eggs have hatched by this point. It is still too early to sample for larvae. Residual activity from an initial protective spray will control hatching larvae at this time.
- 1181 Oriental Fruit Moth (OFM):** First trap catch 4/15, the second flight of OFM usually starts in late June-early July in western NY.

UTC Red Delicious:

- 4.5% CM fruit injury
- Potato leafhopper (PLH) increasing in newly developed terminal foliage, leaf bronzing and distortion.
- Lepidopteran damage to terminals: 5-15%
- Woolly apple aphid colony found on a single leaf.
- 0.51 Weekly Rainfall
- 13.87 Total Rainfall (Since 1 March, 2019)
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Baskerville-Emin (BE)			
Date	DD Accumulations (previous day NEWA)		Field Observations / Trap Catches / Models
	43 F	50 F	# / trap / day (pheromone trap)
7/1	1593.8	998.2	Beginning degree day accumulations beginning 1 January, 2019
			0.0 Speckled Green Fruitworm (SGFW) (0/0)
			5.6 Redbanded Leafroller (RBLR) (33/46)
			53.6 Spotted Tentiform Leafminer (STLM) (426/324)
			0.4 Lesser Appleworm (LAW) (2/4)
			1.3 Oriental Fruit Moth (OFM) (11/7)
			2.9 Codling Moth (CM) (21/20)
			0.3 Black Stem Borer (BSB) (adults in trap) (2/2)
			3.3 Obliquebanded Leafroller (OBLR) (11/12)
			2.5 Tufted Apple Budmoth (TABM) (21/14)
			0.0 Sparganothis (SPAR) (0/0)
			1.6 Dogwood Borer (DWB) (7/15)
			0.0 Brown Marmorated Stink Bug (BMSB) (0/0)
			0.0 San Jose Scale adult male (SJS) (0/0)
			0.2 Apple Maggot (AM) (4/0/2/0) FIRST SUSTAINED CATCH
			0.5 Pear Psylla 13 Eggs/25 Leaves
			0.6 Pear Psylla 15 Nymph/ 25 Leaves
			0.4 Spotted Wing Drosophila: Cherry=6, Honeysuckle=0
Degree Day Models			
	695	San Jose Scale model: First trap catch 5/20. Pheromone traps should be in place at this time to record the second adult male flight.	
	732	Codling Moth (CM) Biofix 5/17: It is too late to apply control sprays at this time because egg hatch is almost over and late sprays will not prevent fruit damage that has occurred earlier in the season. If fruit has become infested with CM during the first generation, it will make subsequent control more difficult later in the season; most apples infested by larvae at this time will drop prematurely and will not be detected at harvest.	
	693	Obliquebanded Leafroller (OBLR) Biofix: 6/3. Approximately half of egg masses have hatched at this time. Sampling at this time can determine the need for additional sprays if an initial protective spray has already been applied.	
	158	Oriental Fruit Moth (OFM): First trap catch 4/15, The second flight of OFM and oviposition is increasing. It is too soon to apply a control spray against the second generation of OFM. The initial spray should be applied when eggs begin to hatch.	
UTC Red Delicious:			
		18% CM injury on fruit	
		1% OFM injury on fruit	
		24% terminals with PLH injury	
		20% terminals with lepidopteran injury	
	1.09	Weekly Rainfall	
	14.96	Total Rainfall (Since 1 March, 2019)	

Baskerville-Emin (BE)			
Date	DD Accumulations (previous day NEWA)		Field Observations / Trap Catches / Models
	43 F	50 F	# / trap / day (pheromone trap)
7/8	1820.5	1175.9	Beginning degree day accumulations beginning 1 January, 2019
			0.0 Speckled Green Fruitworm (SGFW) (0/0)
			3.8 Redbanded Leafroller (RBLR) (11/42)
			70.1 Spotted Tentiform Leafminer (STLM) (506/476)
			0.1 Lesser Appleworm (LAW) (0/2)
			1.2 Oriental Fruit Moth (OFM) (14/3)
			1.1 Codling Moth (CM) (8/7)
			0.4 Black Stem Borer (BSB) (adults in trap) (3/3)
			0.1 Black Stem Borer boring holes: 1 FIRST OCCURENCE
			2.1 Obliquebanded Leafroller (OBLR) (7/8)
			1.5 Tufted Apple Budmoth (TABM) (12/9)
			0.0 Sparganothis (SPAR) (0/0)
			2.0 Dogwood Borer (DWB) (6/22)
			0.4 Brown Marmorated Stink Bug (BMSB adults/nymphs) (2/3)
			0.0 San Jose Scale adult male (SJS) (0/0)
			0.7 Apple Maggot (AM) (1/2/4/12)
			0.1 Pear Psylla 3 Eggs/25 Leaves
			0.4 Pear Psylla 10 Nymph/ 25 Leaves
			3.2 Pear Rust Mite 32/10 leaves
			0.1 Spotted Wing Drosophila: Cherry=2 Honeysuckle=0
Degree Day Models			
	873	San Jose Scale model: First trap catch 5/20. Pheromone traps should be in place at this time to record the second adult male flight.	
	919	Obliquebanded Leafroller (OBLR) Biofix: 6/3. It is too late to apply control sprays for the summer generation of OBLR larvae.	
	384	Oriental Fruit Moth (OFM): First trap catch 4/15. Check the interval after the initial spray for OFM. If at least 10-14 days have elapsed, apply another control spray. If the interval is less than 10-14 days, delay the second spray until this time interval has accumulated. If this is a high pressure block, consider a material other than an organophosphate or pyrethroid for the second spray.	
	910	Codling Moth (CM) Biofix 5/17: The flight of second generation CM usually starts during this time.	
UTC Red Delicious:			
		30% lepidopteran injury on fruit	
		2% apple weevil injury on fruit	
		50% terminals with PLH injury	
		45% terminals with lepidopteran injury	
	0.66	Weekly Rainfall	
	15.62	Total Rainfall (Since 1 March, 2019)	

Baskerville-Emin (BE)			
Date	DD Accumulations (previous day NEWA)	Field Observations / Trap Catches / Models	
	43 F	50 F	# / trap / day (pheromone trap)
7/15	2043.9	1350.3	Beginning degree day accumulations beginning 1 January, 2019
			0.0 Speckled Green Fruitworm (SGFW) (0/0)
			2.6 Redbanded Leafroller (RBLR) (4/32)
			34.6 Spotted Tentiform Leafminer (STLM) (299/186)
			0.5 Lesser Appleworm (LAW) (4/3)
			2.0 Oriental Fruit Moth (OFM) (18/10)
			1.4 Codling Moth (CM) (17/3)
			0.6 Black Stem Borer (BSB) (adults in trap) (2/7)
			0.0 Black Stem Borer boring holes
			0.1 Obliquebanded Leafroller (OBLR) (1/0)
			0.5 Tufted Apple Budmoth (TABM) (2/5)
			0.0 Sparganothis (SPAR) (0/0)
			3.1 Dogwood Borer (DWB) (17/27)
			0.0 Brown Marmorated Stink Bug (BMSB adults/nymphs) (0/0)
			0.0 San Jose Scale adult male (SJS) (0/0)
			0.2 Apple Maggot (AM) (1/1/0/3)
			0.2 Pear Psylla 4 Eggs/25 Leaves
			0.2 Pear Psylla 4 Nymphs/ 25 Leaves
			2.4 Pear Rust Mite 61/25 leaves
			0.2 Spotted Wing Drosophila: Cherry=3 Honeysuckle=0
			Degree Day Models
			1047 San Jose Scale model: First trap catch 5/20. Note date of first capture of 2 nd generation adults to obtain biofix for predicting 2 nd generation crawler emergence.
			1143 Obliquebanded Leafroller (OBLR) Biofix: 6/3. First adult flight is almost over; larvae are large. It is too late to apply control sprays for the summer generation of OBLR larvae. If larvae have not been controlled by earlier treatments, fruit injury will already be substantial and remaining older larvae are less susceptible to insecticides.
			423 (7/2-7/14) Oriental Fruit Moth (OFM): First trap catch 4/15. Second generation flight start 7/2. Check the interval after the initial spray for OFM. If at least 10-14 days have elapsed, apply another control spray. If this is a high pressure block, consider a material other than an organophosphate or pyrethroid for the second spray.
			1084 Codling Moth (CM) Biofix 5/17: The flight of second generation CM usually starts during this time.
			UT Red Delicious Insect Injury
			30% plum curculio
			8% tarnished plant bug
			36% internal lep
			12% external lep
			0% European apple sawfly
			0% San Jose scale
			30% Clean
			0.01 Weekly Rainfall
			15.63 Total Rainfall (Since 1 March, 2019)

Baskerville-Emin (BE)			
<u>Date</u>	<u>DD Accumulations (previous day NEWA)</u>		<u>Field Observations / Trap Catches / Models</u>
	43 F	50 F	# / trap / day (pheromone trap)
7/22	2296.3	1553.7	Beginning degree day accumulations beginning 1 January, 2019
			0.0 Speckled Green Fruitworm (SGFW) (0/0)
			1.4 Redbanded Leafroller (RBLR) (2/18)
			18.8 Spotted Tentiform Leafminer (STLM) (171/92)
			1.6 Lesser Appleworm (LAW) (1/21)
			1.5 Oriental Fruit Moth (OFM) (18/3)
			2.2 Codling Moth (CM) (12/19)
			0.4 Black Stem Borer (BSB) (adults in trap) (3/3)
			0.4 Black Stem Borer boring holes (3/1)
			0.7 Obliquebanded Leafroller (OBLR) (4/1)
			0.5 Tufted Apple Budmoth (TABM) (3/4)
			0.1 Sparganothis (SPAR) (0/1)
			2.9 Dogwood Borer (DWB) (29/12)
			0.3/1.9 Brown Marmorated Stink Bug (BMSB adults/nymphs) (4/27)
			62.6 San Jose Scale adult male (SJS) (168/708) 2 nd GEN FLIGHT
			0.7 Apple Maggot (AM) (2/3/6/3)
			0.0 Pear Psylla 0 Eggs/25 Leaves
			0.0 Pear Psylla 0 Nymphs/ 25 Leaves
			1.9 Pear Rust Mite 19/10 leaves
			3.2 Spotted Wing Drosophila: Cherry=1 Honeysuckle=44
Degree Day Models			
			San Jose Scale model: First trap catch 5/20. First capture of 2 nd generation adults 7/22. Second generation crawlers emerging between August 2 and 8.
			1395 Obliquebanded Leafroller (OBLR) Biofix: 6/3. Second flight of OBLR is now beginning
			703 Oriental Fruit Moth (OFM): Watching for the second flight of OFM
			1153 Codling Moth (CM) Biofix 5/17: The flight of second generation CM usually starts during this time.
			UT Red Delicious Insect Injury
			42% plum curculio
			5% tarnished plant bug
			34% internal lep
			22% external lep
			0% European apple sawfly
			2% San Jose scale
			0.23 Weekly Rainfall
			15.85 Total Rainfall (Since 1 March, 2019)

Baskerville-Emin (BE)			
Date	DD Accumulations (previous day NEWA)		Field Observations / Trap Catches / Models
	43 F	50 F	# / trap / day (pheromone trap)
7/29	2502.6	1711.0	Beginning degree day accumulations beginning 1 January, 2019
			0.0 Speckled Green Fruitworm (SGFW) (0/0)
			0.6 Redbanded Leafroller (RBLR) (4/1)
			38.5 Spotted Tentiform Leafminer (STLM) (334/205)
			2.3 Lesser Appleworm (LAW) (15/17)
			1.1 Oriental Fruit Moth (OFM) (14/1)
			6.3 Codling Moth (CM) (71/17) 2 ND GEN FLIGHT
			0.8 Black Stem Borer (BSB) (adults in trap) (0/11)
			0.0 Black Stem Borer boring holes (0/0)
			0.4 Obliquebanded Leafroller (OBLR) (1/2)
			0.4 Tufted Apple Budmoth (TABM) (3/2)
			0.1 Sparganothis (SPAR) (0/0)
			1.1 Dogwood Borer (DWB) (5/10)
			1.3/1.2 Brown Marmorated Stink Bug (BMSB adults/nymphs) (18/17)
			136.0 San Jose Scale adult male (SJS) (1554/350)
			0.7 Apple Maggot (AM) (2/3/6/3)
			0.2 Pear Psylla 4 Eggs/25 Leaves
			0.0 Pear Psylla 0 Nymphs/ 25 Leaves
			1.0 Pear Rust Mite 10/10 leaves
			7.0 Spotted Wing Drosophila: Cherry=5 Honeysuckle=93
Degree Day Models			
	260	San Jose Scale model: First trap catch 5/20. First capture of 2 nd generation adults 7/22. Second generation crawlers emerging between August 2 and 8.	
	1601	Obliquebanded Leafroller (OBLR) Biofix: 6/3. Second flight of OBLR is now beginning. Control of the second generation of OBLR larvae is not usually necessary if the first summer generation of larvae has been effectively controlled or if populations are low.	
	909	Oriental Fruit Moth (OFM): The second flight of OFM is diminishing. It is too late to apply control sprays against this generation of OFM.	
	1445	Codling Moth (CM) Biofix 5/17: CM nearing 2nd generation adult peak emergence with egg hatch and larval emergence continuing	
	UT Red Delicious Insect Injury		
		21% plum curculio	
		4% tarnished plant bug	
		11% internal lep	
		29% external lep	
		0% European apple sawfly	
		0% San Jose scale	
	1.87	Weekly Rainfall	
	17.72	Total Rainfall (Since 1 March, 2019)	

Baskerville-Emin (BE)			
<u>Date</u>	<u>DD Accumulations (previous day NEWA)</u>		<u>Field Observations / Trap Catches / Models</u>
	43 F	50 F	# / trap / day (pheromone trap)
8/5	2502.6	1711.0	Beginning degree day accumulations beginning 1 January, 2019
			0.0 Speckled Green Fruitworm (SGFW) (0/0)
			0.6 Redbanded Leafroller (RBLR) (0/3)
			38.5 Spotted Tentiform Leafminer (STLM) (358/194)
			2.3 Lesser Appleworm (LAW) (0/22)
			1.1 Oriental Fruit Moth (OFM) (0/0)
			6.3 Codling Moth (CM) (58/51) 2 ND GEN FLIGHT
			0.8 Black Stem Borer (BSB) (adults in trap) (3/1)
			0.0 Black Stem Borer boring holes (0/0)
			0.4 Obliquebanded Leafroller (OBLR) (0/0)
			0.4 Tufted Apple Budmoth (TABM) (0/1)
			0.1 Sparganothis (SPAR) (0/0)
			1.1 Dogwood Borer (DWB) (22/30)
			1.3/1.2 Brown Marmorated Stink Bug (BMSB adults/nymphs) (8/3)
			136.0 San Jose Scale adult male (SJS) (224/55)
			0.7 Apple Maggot (AM) (2/5/10/4)
			0.2 Pear Psylla Eggs/ Leaves
			0.0 Pear Psylla Nymphs/ Leaves
			1.0 Pear Rust Mite / leaves
			7.0 Spotted Wing Drosophila: Cherry=38 Honeysuckle=34
			Degree Day Models
			260 San Jose Scale model: First trap catch 5/20. First capture of 2 nd generation adults 7/22. Second generation crawlers emerging between August 2 and 8.
			1601 Obliquebanded Leafroller (OBLR) Biofix: 6/3. Second flight of OBLR is now beginning. Control of the second generation of OBLR larvae is not usually necessary if the first summer generation of larvae has been effectively controlled or if populations are low.
			909 Oriental Fruit Moth (OFM): The second flight of OFM is diminishing. It is too late to apply control sprays against this generation of OFM.
			1445 Codling Moth (CM) Biofix 5/17: CM nearing 2nd generation adult peak emergence with egg hatch and larval emergence continuing
			UT Red Delicious Insect Injury
			19% plum curculio
			2% tarnished plant bug
			13% internal lep
			9% external lep
			0% European apple sawfly
			1% San Jose scale
			1.02 Weekly Rainfall
			18.74 Total Rainfall (Since 1 March, 2019)

Baskerville-Emin (BE)			
<u>Date</u>	<u>DD Accumulations (previous day NEWA)</u>		<u>Field Observations / Trap Catches / Models</u>

	43 F	50 F	# / trap / day (pheromone trap)
8/12	2950.9	2054.3	Beginning degree day accumulations beginning 1 January, 2019
			0.0 Speckled Green Fruitworm (SGFW) (0/0)
			0.6 Redbanded Leafroller (RBLR) (5/4)
			34.6 Spotted Tentiform Leafminer (STLM) (147/337)
			1.9 Lesser Appleworm (LAW) (14/12)
			1.1 Oriental Fruit Moth (OFM) (0/0)
			9.6 Codling Moth (CM) (37/97) 2 ND GEN FLIGHT
			0.1 Black Stem Borer (BSB) (adults in trap) (0/2)
			0.0 Black Stem Borer boring holes (0/0)
			0.2 Obliquebanded Leafroller (OBLR) (2/1)
			0.0 Tufted Apple Budmoth (TABM) (0/0)
			0.0 Sparganothis (SPAR) (0/0)
			2.3 Dogwood Borer (DWB) (12/20)
			0.6 Brown Marmorated Stink Bug (BMSB adults/nymphs) (4/4)
			4.3 San Jose Scale adult male (SJS) (14/46)
			1.1 Apple Maggot (AM) (0/6/20/6)
			7.0 Spotted Wing Drosophila: Cherry=38 Honeysuckle=34
Degree Day Models			
			260 San Jose Scale model: First trap catch 5/20. First capture of 2 nd generation adults 7/22. Second generation crawlers emerging between August 2 and 8.
			1601 Obliquebanded Leafroller (OBLR) Biofix: 6/3. Second flight of OBLR is now beginning. Control of the second generation of OBLR larvae is not usually necessary if the first summer generation of larvae has been effectively controlled or if populations are low.
			909 Oriental Fruit Moth (OFM): The second flight of OFM is diminishing. It is too late to apply control sprays against this generation of OFM.
			1445 Codling Moth (CM) Biofix 5/17: CM nearing 2nd generation adult peak emergence with egg hatch and larval emergence continuing
			UT Red Delicious Insect Injury
			29% plum curculio
			9% internal lep
			21% external lep
			.16 Weekly Rainfall
			18.90 Total Rainfall (Since 1 March, 2019)

Baskerville-Emin (BE)

Date	DD Accumulations (previous day NEWA)		Field Observations / Trap Catches / Models
	43 F	50 F	# / trap / day (pheromone trap)
8/19	3140.4	2201.8	Beginning degree day accumulations beginning 1 January, 2019
			0.0 Speckled Green Fruitworm (SGFW) (0/0)
			1.4 Redbanded Leafroller (RBLR) (12/7)
			28 Spotted Tentiform Leafminer (STLM) (111/280)

2.5	Lesser Appleworm (LAW) (23/12)
1.1	Oriental Fruit Moth (OFM) (0/0)
4.2	Codling Moth (CM) (38/21) 2 ND GEN FLIGHT
0.0	Black Stem Borer (BSB) (adults in trap) (0/0)
0.0	Black Stem Borer boring holes (0/0)
0.3	Obliquebanded Leafroller (OBLR) (2/2)
0.5	Tufted Apple Budmoth (TABM) (0/7)
0.0	Sparganothis (SPAR) (0/0)
2.1	Dogwood Borer (DWB) (9/21)
1.3	Brown Marmorated Stink Bug (BMSB adults/nymphs) (16/2)
7.3	San Jose Scale adult male (SJS) (13/90)
0.6	Apple Maggot (AM) (1/3/13/0)
7.0	Spotted Wing Drosophila: Cherry=0 Honeysuckle=0

Degree Day Models

- 648 San Jose Scale model:** First trap catch 5/20. First capture of 2nd generation adults 7/22. Second generation crawlers emerging between August 2 and 8.
- 2239 Obliquebanded Leafroller (OBLR) Biofix:**
- 1520 Oriental Fruit Moth (OFM):** The second flight of OFM is diminishing. It is too late to apply control sprays against this generation of OFM.
- 313 Codling Moth (CM) Biofix 5/17:** CM nearing 2nd generation adult peak emergence with egg hatch and larval emergence continuing
- UT Red Delicious Insect Injury**
- 13% plum curculio
 - 12% internal lep
 - 20% external lep
 - 1% TPB

1.56	Weekly Rainfall
20.46	Total Rainfall (Since 1 March, 2019)

Baskerville-Emin (BE)

<u>Date</u>	<u>DD Accumulations (previous day NEWA)</u>		<u>Field Observations / Trap Catches / Models</u>
	43 F	50 F	# / trap / day (pheromone trap)
8/26	3341.0	2353.4	Beginning degree day accumulations beginning 1 January, 2019
			0.0 Speckled Green Fruitworm (SGFW) (0/0)
			1.6 Redbanded Leafroller (RBLR) (8/14)
			26.3 Spotted Tentiform Leafminer (STLM) (269/99)
			2.1 Lesser Appleworm (LAW) (16/14)
			1.1 Oriental Fruit Moth (OFM) (0/0)
			2.6 Codling Moth (CM) (32/4) 2 ND GEN FLIGHT
			0.3 Black Stem Borer (BSB) (adults in trap) (2/2)
			0.0 Black Stem Borer boring holes (0/0)
			0.1 Obliquebanded Leafroller (OBLR) (2/0)
			0.4 Tufted Apple Budmoth (TABM) (1/5)
			0.0 Sparganothis (SPAR) (0/0)
			2.6 Dogwood Borer (DWB) (10/10)

- 6.0 Brown Marmorated Stink Bug (BMSB adults/nymphs) (57/27)
- 6.9 San Jose Scale adult male (SJS) (20/77)
- 0.4 Apple Maggot (AM) (0/2/7/3)
- 2.6 Spotted Wing Drosophila: Cherry=14 Honeysuckle=22

Degree Day Models

- 2367 San Jose Scale model:** First trap catch 5/20. First capture of 2nd generation adults 7/22. Second generation crawlers emerging between August 2 and 8.
- 3361 Obliquebanded Leafroller (OBLR) Biofix:** Second moth flight declining
- 3361 Oriental Fruit Moth (OFM):** It is too soon to apply a control spray against the third generation of OFM. The initial spray should be applied when eggs begin to hatch. Since the third flight of OFM usually begins in late August, you may want to consider applying a final spray just before September 1, if you don't want to spray after Labor Day.
- 313 Codling Moth (CM) Biofix 5/17:** Apply a second spray 10-14 days after the initial spray timed at the first hatch of the second generation. OFM, summer OBLR, and AM may also be active during this time period so materials should also be selected that will control these pests if necessary.

UT Red Delicious Insect Injury (100 Fruit)

44% plum curculio
 34% internal lep
 51% external lep
 7% TPB
 3% Clean

- 0.83 Weekly Rainfall
- 21.29 Total Rainfall (Since 1 March, 2019)

Baskerville-Emin (BE)

<u>Date</u>	<u>DD Accumulations (previous day NEWA)</u>		<u>Field Observations / Trap Catches / Models</u>
	43 F	50 F	# / trap / day (pheromone trap)
9/3	3526.9	2483.2	Beginning degree day accumulations beginning 1 January, 2019
			0.0 Speckled Green Fruitworm (SGFW) (0/0)
			5.1 Redbanded Leafroller (RBLR) (63/9)
			20.9 Spotted Tentiform Leafminer (STLM) (223/70)
			2.0 Lesser Appleworm (LAW) (14/14)
			0.0 Oriental Fruit Moth (OFM) (0/0)
			0.8 Codling Moth (CM) (8/3) 3 RD GEN FLIGHT
			0.07 Black Stem Borer (BSB) (adults in trap) (0/1)
			0.0 Black Stem Borer boring holes (0/0)
			0.07 Obliquebanded Leafroller (OBLR) (0/1)
			1.0 Tufted Apple Budmoth (TABM) (4/10)
			0.0 Sparganothis (SPAR) (0/0)
			0.9 Dogwood Borer (DWB) (1/12)

- 15.7 Brown Marmorated Stink Bug (BMSB adults/nymphs) (86/24)
- 0.5 San Jose Scale adult male (SJS) (3/4)
- 0.4 Apple Maggot (AM) (0/5/5/4)
- 2.6 Spotted Wing Drosophila: Cherry=14 Honeysuckle=22

Degree Day Models

- 2502 San Jose Scale model:** First trap catch 5/20. First capture of 2nd generation adults 7/22. Second generation crawlers emerging between August 2 and 8. SJS management decisions are over for the season. Control sprays are no longer needed.
- 3553 Obliquebanded Leafroller (OBLR) Biofix:** 6/3/19 OBLR season is over and control sprays are no longer necessary.
- 3553 Oriental Fruit Moth (OFM):** About 10% of the eggs laid by the third generation of OFM have hatched. In western NY, this usually occurs in late August to early September. Apply insecticides to control newly hatching larvae. In order to manage insecticide resistance it is best to apply a different class of material to control this third generation of OFM than was used earlier in the season against previous generations. Sprays to control the third generation of OFM may be necessary for high-pressure orchards. For mid-season maturing cultivars this spray timed for early hatch may be the last spray of the season. For late maturing apples, another spray may be needed 10-14 days later. Observations have shown that late sprays (during September or October) may be necessary to protect fruit of late maturing cultivars if damage from OFM is noted during fruit inspections in the summer.
- 2502 Codling Moth (CM) Biofix 5/17** The third generation of CM usually starts around mid-August and adults may continue to fly until September 10. In normal years not enough heat units will accumulate in the fall to allow third generation eggs to hatch. Traditionally, NY growers have stopped spraying for CM from Aug. 15-30. In most years it is not necessary to apply control sprays against the third generation, particularly when sprays have been timed properly against the first two generations. However, in some orchards, sprays may be necessary at this time to control OFM in high-pressure orchards.

- 0.53 Weekly Rainfall
- 21.82 Total Rainfall (Since 1 March, 2019)

Baskerville-Emin (BE)

<u>Date</u>	<u>DD Accumulations (previous day NEWA)</u>		<u>Field Observations / Trap Catches / Models</u>
	43 F	50 F	# / trap / day (pheromone trap)
9/9	3526.9	2483.2	Beginning degree day accumulations beginning 1 January, 2019
			0.0 Speckled Green Fruitworm (SGFW) (0/0)
			1.6 Redbanded Leafroller (RBLR) (21/0)
			18.6 Spotted Tentiform Leafminer (STLM) (182/79)
			2.1

0.0	Oriental Fruit Moth (OFM) (0/0)
0.3	Codling Moth (CM) (4/0) 3 RD GEN FLIGHT
0.0	Black Stem Borer (BSB) (adults in trap) (0/0)
0.0	Black Stem Borer boring holes (0/0)
0.3	Obliquebanded Leafroller (OBLR) (1/1)
0.3	Tufted Apple Budmoth (TABM) (1/3)
0.0	Sparganothis (SPAR) (0/0)
0.5	Dogwood Borer (DWB) (5/2)
6.4	Brown Marmorated Stink Bug (BMSB adults/nymphs) (67/22)
0.6	San Jose Scale adult male (SJS) (1/7)
0.5	Apple Maggot (AM) (2/3/3/2)
0.0	Spotted Wing Drosophila: Cherry= 0 Honeysuckle=0

Degree Day Models

- 2502 San Jose Scale model:** First trap catch 5/20. First capture of 2nd generation adults 7/22. Second generation crawlers emerging between August 2 and 8. SJS management decisions are over for the season. Control sprays are no longer needed.
- 3553 Obliquebanded Leafroller (OBLR) Biofix:** 6/3/19 OBLR season is over and control sprays are no longer necessary.
- 3553 Oriental Fruit Moth (OFM):** About 10% of the eggs laid by the third generation of OFM have hatched. In western NY, this usually occurs in late August to early September. Apply insecticides to control newly hatching larvae. In order to manage insecticide resistance it is best to apply a different class of material to control this third generation of OFM than was used earlier in the season against previous generations. Sprays to control the third generation of OFM may be necessary for high-pressure orchards. For mid-season maturing cultivars this spray timed for early hatch may be the last spray of the season. For late maturing apples, another spray may be needed 10-14 days later. Observations have shown that late sprays (during September or October) may be necessary to protect fruit of late maturing cultivars if damage from OFM is noted during fruit inspections in the summer.

- 2502 Codling Moth (CM) Biofix 5/17** The third generation of CM usually starts around mid-August and adults may continue to fly until September 10. In normal years not enough heat units will accumulate in the fall to allow third generation eggs to hatch. Traditionally, NY growers have stopped spraying for CM from Aug. 15-30. In most years it is not necessary to apply control sprays against the third generation, particularly when sprays have been timed properly against the first two generations. However, in some orchards, sprays may be necessary at this time to control OFM in high-pressure orchards.

0.33 Weekly Rainfall

22.05 Total Rainfall (Since 1 March, 2019)