

**2012 Hudson Valley Lab Scouting Report  
NYSAES Entomology Dept., Highland, NY**

**Baskerville-Emin (BE)**

<b>Date</b>	<b>DD Accumulations (previous day NEWA)</b>		<b>Field Observations / Trap Catches / Models</b>
	<b>43 F</b>	<b>50 F</b>	<b># / trap / day (pheromone trap)</b>
3/1	16.5	0.0	Beginning degree day accumulations beginning 1 Jan. 2011
3/5	18.0	0.0	Apple – McIntosh – Dormant
			1.27” Weekly Rainfall
			1.27” Total Rainfall from 1 March
3/12	38.5	8.0	Apple – McIntosh – Dormant Apple – Empire, Ginger Gold, Spur Red Delicious – Silver Tip  Spotted Green Fruitworm (SGFW) trap set
			0.0 Psylla eggs / bud ( 0 egg / 100 buds / 2 trees)
			0.0 Spotted Green Fruitworm (SGFW) (0/0 )
			0.12” Weekly Rainfall
			1.39” Total Rainfall from 1 March
3/14			Apple – Empire – Green-tip 0.6 Psylla eggs / bud ( 65 egg / 102 buds / 5 trees) <b>First observation</b> 0.2 Spotted Green Fruitworm (SGFW) (1/0 ) <b>First observation</b>
3/19	159.4	76.0	Hudson
	145.3	68.2	Red Hook
	118.6	50.6	Marlboro
	54.9	18.8	Highland (2011)
	156.2	44.0	Highland (2012)
			Apple – Empire – late green tip
			Apple – Ginger Gold – late green tip
			Apple – Golden Delicious – delayed dormant
			Apple – Red Delicious – delayed dormant
			Apricot – Early – white bud
			Cherry – Early (Danube, Hudson) – late green tip
			Cherry – Late – delayed dormant
			Pear – Bartlet – swollen bud
			Stanley plum – delayed dormant
		< 0.1	Psylla eggs / bud (6 egg / 100 Bartlet buds / 4 trees) Psylla adult activity
		< 0.1	Spotted Green Fruitworm (SGFW) ( 1 / 0)
		< 0.1	Red Banded Leafroller (RBLR) ( 1 / 0) <b>First observation</b>
			0.02” Weekly Rainfall
			1.42” Total Rainfall from 1 March

**Baskerville-Emin (BE)**

**Date DD Accumulations (previous day NEWA) Field Observations / Trap Catches / Models**

**43 F 50 F # / trap / day (pheromone trap)**

3/26	292.6	163.3	Hudson
	267.1	144.5	Red Hook
	263.6	138.6	Marlboro
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	127.2	54.0	Highland (2010)
	55.7	18.8	Highland (2011)
	280.3	145.6	Highland (2012)
			Apple – Empire – early tight cluster
			Apple – Ginger Gold – tight cluster
			Apple – Golden Delicious – early tight cluster
			Apple – McIntosh– tight cluster
			Apple – Red Delicious – early tight cluster
			Apricot – Early – 80% petal fall
			Cherry – Early (Ulster, Danube, Hudson) – Early white bud
			Cherry – Mid – (Balaton) bud burst
			Cherry – Late – (Attica) swollen bud
			Peach – Early - 60% Bloom
			Peach – Late - 80% Bloom
			Pear – Bartlet – green cluster
			Pear – Asian Early – (Shinsui) early white bud
			Pear – Asian Late – (Hosui) white bud
			Plum – (Stanley ) early white bud
			Overwintering OBLR larvae observed feeding on Bartlett
			Psylla oviposition observed on developing leaves (50% of total)
			Psylla 1 <sup>st</sup> generation observed on lvs
	10.3		Psylla eggs / bud or leaves ( 568 egg / 55 Bartlet buds / 4 trees)
	< 0.1		Psylla nymphs / bud or leaves ( 4 / 55 Bartlet buds / 4 trees)
	0.0		Spotted Green Fruitworm (SGFW) ( 0 / 0)
	0.0		Red Banded Leafroller (RBLR) ( 0 / 0)
		0.01”	Weekly Rainfall
		1.42”	Total Rainfall from 1 March
3/27		<0.1	Spotted Tentiform Leafminer (STLM) ( 2 / 0) <b>First flight</b>

**Baskerville-Emin (BE)**

**Date**      **DD Accumulations (previous day NEWA)**      **Field Observations / Trap Catches / Models**

**43 F                      50 F                      # / trap / day (pheromone trap)**

4/2

312.1	167.1	Hudson
282.4	148.0	Red Hook
284.3	144.5	Marlboro

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151.6	62.8	Highland (2010)
58.5	19.2	Highland (2011)
300.6	151.0	Highland (2012)

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Apple – Empire – late tight cluster  
 Apple – Ginger Gold – early pink  
 Apple – Golden Delicious – tight cluster  
 Apple – McIntosh– tight cluster  
 Apple – Red Delicious – tight cluster  
 Apricot – Early – petal fall  
 Cherry – Early (Ulster, Danube, Hudson, Rainer) – 1<sup>st</sup> bloom  
 Cherry – Mid – (Balaton) early white bud  
 Cherry – Late – (Attica) early white bud  
 Peach – Early - bloom  
 Peach – Late - bloom  
 Pear – Bartlet – white bud  
 Pear – Asian Early – (Shinsui) early white bud  
 Pear – Asian Late – (Atago) bloom  
 Pear – Asian Late – (Hosui) white bud  
 Plum – (Stanley ) 1<sup>st</sup> bloom

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41.3	Psylla eggs / cluster ( 413 egg / 10 UT Bartlet flowering cluster)
5.4	Psylla nymphs / cluster ( 54 nym. / 10 UT Bartlet flowering cluster)
0.0	Codling moth (CM) ( 0 / 0)
0.2	Grape berry moth (GBM) ( 0 / 0)
0.2	Oriental fruitworm (OFM) ( 3 / 0) First flight 4/2
5.4	Red Banded Leafroller (RBLR) ( 40 / 35)
0.0	Spotted Green Fruitworm (SGFW) ( 0 / 0)
18.8	Spotted Tentiform Leafminer (STLM) ( 153 / 110)
0.0	Spotted Wing Drosophila (SWD) ( 0 / 0 / 0)
0.0	Tufted apple budmoth (TABM) ( 0 / 0)
0.0	Varigated leafroller (VLR) ( 0 / 0)

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0.40"	Weekly Rainfall (3/26-4/2)
1.84"	Total Rainfall for March
0.23"	Total Rainfall from 1 April

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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)**

4/9

347.8	179.5	Hudson
313.5	159.4	Red Hook
324.7	159.6	Marlboro

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294.6	159.0	Highland (2010)
80.9	22.5	Highland (2011)
342.5	167.3	Highland (2012)

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Apple – Empire – late pink  
 Apple – Ginger Gold –1<sup>st</sup> bloom  
 Apple – Golden Delicious –pink  
 Apple – McIntosh– pink  
 Apple – Red Delicious – late pink  
 Apricot – Early – petal fall, husks on  
 Cherry – Early (Ulster, Danube, Hudson, Rainer) – bloom  
 Cherry – Mid – (Balaton) bloom  
 Cherry – Late – (Attica) bloom  
 Peach – Early - petal fall, husks on  
 Peach – Late - petal fall, shuck on  
 Pear – Bartlet – 1<sup>st</sup> bloom  
 Pear – Bosc – 1<sup>st</sup> bloom  
 Pear – Asian Early – (Shinsui) Bloom  
 Pear – Asian Late – (Atago) Bloom  
 Pear – Asian Late – (Hosui) Bloom  
 Plum – (Stanley ) Bloom

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101.0	Psylla eggs / cluster ( 505 egg / 5 UT Bartlet flowering cluster)
14.0	Psylla nymphs / cluster ( 70 nym. / 5 UT Bartlet flowering cluster)
0.00	Codling moth (CM) ( 0 / 0 )
0.0	Grape berry moth (GBM) ( 0 / 0 )
0.9	Lesser Apple Worm (LAW) ( 0 / 0 )
0.3	Oriental fruitworm (OFM) ( 4 / 2 ) First flight 4/2
1.9	Red Banded Leafroller (RBLR) ( 12 / 15 )
<0.1	Spotted Green Fruitworm (SGFW) ( 0 / 1 )
14.4	Spotted Tentiform Leafminer (STLM) ( 90 / 112 )
0.0	Spotted Wing Drosophila (SWD) ( 0 / 0 / 0 )
0.0	Tufted apple budmoth (TABM) ( 0 / 0 )
0.0	Varigated leafroller (VLR) ( 0 / 0 )

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0.23” Weekly Rainfall

0.23” Total Rainfall from 1 April

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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)**

4/16

414.3	213.9	Hudson
323.8	162.2	Red Hook
388.9	192.0	Marlboro

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367.3	197.2	Highland (2010)
149.8	58.7	Highland (2011)
412.0	202.1	Highland (2012)

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Apple – Empire – full bloom  
 Apple – Ginger Gold – full bloom  
 Apple – Golden Delicious – early bloom  
 Apple – McIntosh– full bloom  
 Apple – Red Delicious – full bloom  
 Apricot – Early – petal fall, husks on  
 Cherry – Early (Ulster, Danube, Hudson, Rainer) – full bloom  
 Cherry – Mid – (Balaton) full bloom  
 Cherry – Late – (Attica) full bloom  
 Peach – Early - petal fall, husks on  
 Peach – Late - petal fall, shuck on  
 Pear – Bartlet – full bloom  
 Pear – Bosc – full bloom – early PF  
 Pear – Asian Early – (Shinsui) early petal fall  
 Pear – Asian Late – (Atago) early petal fall  
 Pear – Asian Late – (Hosui) early petal fall  
 Plum – (Stanley ) full bloom

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Psylla eggs / cluster ( egg / 5 UT Bartlet flowering cluster)  
 Psylla nymphs / cluster ( nym. / 5 UT Bartlet flowering cluster)

0.0	Codling moth (CM) ( 0 / 0 )
<0.1	Fruit Tree Leafroller (FTLR) ( 2 / ) <b>First flight</b>
<0.1	Grape berry moth (GBM) ( 2 / ) <b>First flight</b>
0.0	Lesser Apple Worm (LAW) ( 0 / 0 )
5.6	Oriental fruitworm (OFM) ( 35 / 43 ) First flight 4/2
6.0	Red Banded Leafroller (RBLR) ( 29 / 55 )
0.0	Spotted Green Fruitworm (SGFW) ( 0 / 0 )
76.8	Spotted Tentiform Leafminer (STLM) ( 594 / 481 )
0.0	Spotted Wing Drosophila (SWD) ( 0 / 0 / 0 )
0.0	Tufted apple budmoth (TABM) ( 0 / 0 )
0.0	Varigated leafroller (VLR) ( 0 / 0 )

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0.23"	Weekly Rainfall (Highland)
0.23"	Total Rainfall from 1 April (Highland)
6.83"	Total Yearly Rainfall (3.42"J; 1.34"F; 1.84"M; 0.23" A)

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**Baskerville-Emin (BE)**

<b>Date</b>	<b>DD Accumulations (previous day NEWA)</b>		<b>Field Observations / Trap Catches / Models</b>
	<b>43 F</b>	<b>50 F</b>	<b># / trap / day (pheromone trap)</b>
4/23	521.7	285.6	Hudson
	498.5	262.5	Red Hook
	475.8	258.3	Marlboro
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	430.0	226.3	Highland (2010)
	177.0	65.7	Highland (2011)
	507.8	267.5	Highland (2012)
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			Apple – Empire – petal fall
			Apple – Ginger Gold – petal fall
			Apple – Golden Delicious –late bloom
			Apple – McIntosh– petal fall
			Apple – Red Delicious – late bloom
			Apricot – Early – petal fall, husks off
			Cherry – Early (Ulster, Hudson, Rainer) – petal fall
			Cherry – Mid – (Balaton) petal fall
			Cherry – Late – (Attica) late bloom
			Peach – Early - petal fall, husks on
			Peach – Late - petal fall, shuck on
			Pear – Bartlet –fruit set
			Pear – Bosc – full bloom –fruit set (
			Pear – Asian Early – (Shinsui) fruit set
			Pear – Asian Late – (Atago) fruit set
			Pear – Asian Late – (Hosui) fruit set
			Plum – (Stanley ) petal fall
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	0.5		Psylla eggs / cluster ( 12 egg / 25 UT Bartlet shoot leaves)
	0.2		Psylla nymphs / cluster ( 5 nym. / 25 UT Bartlet shoot leaves)
	0.0		Codling moth (CM) ( 0 / 0 )
	-		Fruit Tree Leafroller (FTLR) ( - / - )
	3.1		Grape berry moth (GBM) ( 22 / )
	0.0		Lesser Apple Worm (LAW) ( 0 / 0 )
	10.6		Oriental fruitworm (OFM) ( 69 / 79 ) First flight 4/2
	4.2		Red Banded Leafroller (RBLR) ( 27 / 32 )
	< 0.1		Spotted Green Fruitworm (SGFW) ( 1 / 0 )
	25.4		Spotted Tentiform Leafminer (STLM) ( 201 / 155 )
	0.0		Spotted Wing Drosophila (SWD) ( 0 / 0 / 0 )
	0.0		Tufted apple budmoth (TABM) ( 0 / 0 )
	0.0		Varigated leafroller (VLR) ( 0 / 0 )
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	1.01”		Weekly Rainfall (Highland)
	1.23”		Total Rainfall from 1 April (Highland)
	7.83”		Total Yearly Rainfall (3.42”J; 1.34”F; 1.84”M; 0.23” A)

**Baskerville-Emin (BE)**

<b>Date</b>	<b>DD Accumulations (previous day NEWA)</b>		<b>Field Observations / Trap Catches / Models</b>
	<b>43 F</b>	<b>50 F</b>	<b># / trap / day (pheromone trap)</b>
4/30	556.4	296.9	Hudson
	507.8	268.4	Red Hook
	531.4	272.8	Marlboro
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	502.5	262.1	Highland (2010)
	310.5	148.9	Highland (2011)
	542.5	278.9	Highland (2012)
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			Apple – Empire – fruit set
			Apple – Ginger Gold – fruit set
			Apple – Golden Delicious – late petal fall
			Apple – McIntosh– fruit set
			Apple – Red Delicious – petal fall
			Apple – Crimson Crisp (G11 3yr. old) – full bloom
			Apricot – Early – >15 mm
			Cherry – Early (Ulster, Hudson, Rainer) – fruit set
			Cherry – Mid – (Balaton) fruit set
			Cherry – Late – (Attica) petal fall
			Peach – Early - fruit set husks off
			Peach – Late - fruit set husks off
			Pear – Bartlet –fruit set king @ >8-10mm
			Pear – Bosc – fruit set king @ >8-10mm
			Plum – (Stanley ) fruit set
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	0.0		Codling moth (CM) ( 0 / 0 ) <b>First flight Milton (4/29)</b>
	0.0		Fruit Tree Leafroller (FTLR) ( - / - )
	< 0.1		Grape berry moth (GBM) ( 1 / )
	0.0		Lesser Apple Worm (LAW) ( 0 / 0 ) <b>First flight Milton (4/29)</b>
	10.6		Oriental fruitworm (OFM) ( 4 / 12 ) First flight 4/2
	4.2		Red Banded Leafroller (RBLR) ( 22 / 16 )
	0.0		Spotted Green Fruitworm (SGFW) ( 0 / 0 )
	25.4		Spotted Tentiform Leafminer (STLM) ( 34 / 31 )
	0.0		Spotted Wing Drosophila (SWD) ( 0 / 0 / 0 )
	0.0		Tufted apple budmoth (TABM) ( 0 / 0 )
	0.0		Varigated leafroller (VLR) ( 0 / 0 )
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	0.03”		Weekly Rainfall (Highland)
	1.82”		Total Rainfall from 1 April (Highland)
	8.42”		Total Yearly Rainfall (3.42”J; 1.34”F; 1.84”M; 1.82” A)

**Baskerville-Emin (BE)**

**Date DD Accumulations (previous day NEWA) Field Observations / Trap Catches / Models**

**43 F 50 F # / trap / day (pheromone trap)**

5/7

660.1	356.3	Hudson
600.9	317.9	Red Hook
610.9	314.4	Marlboro

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652.7	367.9	Highland (2010)
389.5	192.1	Highland (2011)
636.9	328.1	Highland (2012)

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Apple – Empire – >8mm  
 Apple – Ginger Gold – 8-10  
 Apple – Golden Delicious – >8mm  
 Apple – McIntosh – >8mm  
 Apple – Red Delicious – >8mm  
 Apple – Crimson Crisp (G11 3yr. old) – late bloom; >8mm  
 Apricot – Early – >22 mm

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0.8	Psylla eggs / cluster ( 21 egg / 5 UT Bartlet flowering cluster)
1.8	Psylla nymphs / cluster ( 45 nym. / 5 UT Bartlet flowering cluster)
1.4	Codling moth (CM) ( 4 / 15 ) <b>First flight Highland (5/6)</b>
0.0	Fruit Tree Leafroller (FTLR) ( 0 / 0 )
5.4	Grape berry moth (GBM) ( 38 / )
1..0	Lesser Apple Worm (LAW) ( 10 / 4 ) <b>First flight Highland (4/29)</b>
3.9	Oriental fruitworm (OFM) ( 46 / 9 ) First flight 4/2
1.3	Red Banded Leafroller (RBLR) ( 12 / 6 )
<0.1	Spotted Green Fruitworm (SGFW) ( 0 / 1 )
6.3	Spotted Tentiform Leafminer (STLM) ( 50 / 33 )
0.0	Spotted Wing Drosophila (SWD) ( 0 / 0 / 0 )
<0.1	Tufted apple budmoth (TABM) ( 0 / 0 )
0.0	Varigated leafroller (VLR) ( 0 / 0 )

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0.91"	Weekly Rainfall (Highland)
0.91"	Total Rainfall from 1 May (Highland)
9.33"	Total Yearly Rainfall (3.42"J; 1.34"F; 1.84"M; 1.82" A, 0.91 M)

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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)**

5/14

779.5	429.7	Hudson
707.8	382.6	Red Hook
735.7	388.2	Marlboro

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705.9	394.6	Highland (2010)
496.5	252.8	Highland (2011)
750.4	397.0	Highland (2012)

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1.7	Psylla eggs / cluster ( 42 egg / 25 UT Bartlet leaves)
0.8	Psylla nymphs / cluster ( 21 nym. / 25 UT Bartlet leaves)
4.6	Codling moth (CM) ( 16 / 49 )
0.0	Fruit Tree Leafroller (FTLR) ( 0 / 0 )
3.4	Grape berry moth (GBM) ( 9 / )
3.4	Lesser Apple Worm (LAW) ( 24 / 9 )
2.4	Oriental fruitworm (OFM) ( 24 / 9 ) First flight 4/2
0.4	Red Banded Leafroller (RBLR) ( 4 / 2 )
0.4	San Jose Scale (SJS) ( 0 / 5 ) First flight
0.0	Spotted Green Fruitworm (SGFW) ( 0 / 1 )
3.4	Spotted Tentiform Leafminer (STLM) ( 22 / 26 )
0.0	Spotted Wing Drosophila (SWD) ( 0 / 0 / 0 )
-	Tufted apple budmoth (TABM) ( - / - )
0.0	Varigated leafroller (VLR) ( 0 / 0 )
	Pear psylla 2 <sup>nd</sup> – 5 <sup>th</sup> instar; newly emerging adults, increasing egg
	Increasing EAS & leafroller feeding activity to fruit
	Decreasing OFM, RBLR
	Increasing LAW, CM populations

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0.76"	Weekly Rainfall (Highland)
1.67"	Total Rainfall from 1 May (Highland)
10.09"	Total Yearly Rainfall (3.42"J; 1.34"F; 1.84"M; 1.82" A, 0.91 M)

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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)**

5/21	927.2	531.3	Hudson
	NA	NA	Red Hook
	880.7	485.5	Marlboro
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	818.6	462.5	Highland (2010)
	610.0	317.3	Highland (2011)
	893.5	493.0	Highland (2012)
		23.5 /lf	Psylla eggs / cluster ( 588 egg / 25 UT Bartlet leaves)
		1.0 /lf	Psylla nymphs / cluster ( 25 nym. / 25 UT Bartlet leaves)
		2.6	Codling moth (CM) ( 16 / 21 )
		0.0	Fruit Tree Leafroller (FTLR) ( 0 / 0 )
		0.9	Grape berry moth (GBM) ( 6 / )
		1.7	Lesser Apple Worm (LAW) ( 9 / 15 )
		0.0	Obliquebanded leafroller (OBLR) ( 0 / 0 )
		1.0	Oriental fruitworm (OFM) ( 2 / 12 ) First flight 4/2
		0.0	Red Banded Leafroller (RBLR) ( 0 / 0 )
		< 0.1	San Jose Scale (SJS) ( 1 / 0 )
		0.0	Spotted Green Fruitworm (SGFW) ( 0 / 0 )
		0.8	Spotted Tentiform Leafminer (STLM) ( 5 / 6 )
		0.0	Spotted Wing Drosophila (SWD) ( 0 / 0 / 0 )
		2.2	Tufted apple budmoth (TABM) ( 15 / 16 )
		0.4	Varigated leafroller (VLR) ( 2 / 3 ) First flight
			Pear psylla emerging adults increasing egg laying, 1 <sup>st</sup> hatch of 2 <sup>nd</sup> generation nymphs observed.
			Decreasing STLM, CM, LAW, OFM, RBLR
			No OBLR observed
		493.0	SJS 500DD model prediction (control required this wk)
		246.0	PC 308DD model for required insecticide residue
			OFM; too late for control
		217.0	CM egg hatch at 220DD model prediction (control required this wk)
		0.98"	Weekly Rainfall (Highland)
		2.65"	Total Rainfall from 1 May (Highland)
		11.07"	Total Yearly Rainfall (3.42"J; 1.34"F; 1.84"M; 1.82" A, 2.65 M)

**Baskerville-Emin (BE) from 1 Jan.**

<b>Date</b>	<b>DD Accumulations (previous day NEWA)</b>		<b>Field Observations / Trap Catches / Models</b>
	<b>43 F</b>	<b>50 F</b>	<b># / trap / day (pheromone trap)</b>
5/29	1151.8	699.9	Hudson
	1051.4	626.2	Red Hook
	1083.2	632.0	Marlboro
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	1110.1	677.0	Highland (2010)
	892.5	522.8	Highland (2011)
	1096.9	640.6	Highland (2012)
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			2.9 /lf Psylla eggs / 5 shoot lvs ( 73 egg / 25 UT Bartlet leaves)
			2.1 /lf Psylla nymphs / 5 shoot lvs ( 52 nym. / 25 UT Bartlet leaves)
			2.5 Codling moth (CM) ( 17 / 23 )
			0.0 Fruit Tree Leafroller (FTLR) ( 0 / 0 )
			0.5 Grape berry moth (GBM) ( 5 )
			1.7 Lesser Apple Worm (LAW) ( 2 / 28 )
			1.1 Obliquebanded leafroller (OBLR) ( 11 / 8 ) First flight 5.27
			0.4 Oriental fruitworm (OFM) ( 1 / 8 ) First flight 4/2
			0.0 Red Banded Leafroller (RBLR) ( 0 / 0 )
			0.1 San Jose Scale (SJS) ( 2 / 0 )
			13.6 Spotted Tentiform Leafminer (STLM) ( 128 / 89 )
			0.0 Spotted Wing Drosophila (SWD) ( 0 / 0 / 0 / 0 )
			2.1 Tufted apple budmoth (TABM) ( 23 / 15 )
			9.4 Varigated leafroller (VLR) ( 9.4 / 7 )
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			Pear psylla 2 <sup>nd</sup> generation nymphs increasing.
			SJS crawler: no emergence observed
	632.4		SJS 500DD model prediction (control 5/22 )
	229.1		SJS 1 <sup>st</sup> DD <sub>50F</sub> adult male model prediction ( Biofix 5/14)
			First OBLR observed
	28 DD		OBLR 340DD <sub>43F</sub> model prediction (first catch on 5.27 )
	16 June		OBLR 340DD <sub>43F</sub> model prediction approximate date
	385DD		PC 308DD <sub>50F</sub> model for required insecticide residue (complete)
	27 May		PC 308DD <sub>50F</sub> model achieved (326DD)
	333DD		CM egg hatch at 220DD <sub>50F</sub> model prediction (control required)
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	1.25"		Weekly Rainfall (Highland)
	3.90"		Total Rainfall from 1 May (Highland)
	12.32"		Total Yearly Rainfall (3.42"J; 1.34"F; 1.84"M; 1.82" A, 3.90 M)

**Baskerville-Emin (BE) from 1 Jan.**

**Date**      **DD Accumulations (previous day NEWA)**      **Field Observations / Trap Catches / Models**

**43 F**                      **50 F**                      **# / trap / day (pheromone trap)**

6/4

1295.5	801.8	Hudson (2012)
NA	NA	Red Hook (2012)
1227.7	734.5	Marlboro (2012)

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1195.6	741.5	Highland (2010)
963.5	572.8	Highland (2011)
1243.2	744.9	Highland (2012)

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15.5 /lf	Psylla eggs / 5 shoot lvs ( 387 egg / 25 UT Bartlet leaves)
8.0 /lf	Psylla nymphs / 5 shoot lvs ( 200 nym. / 25 UT Bartlet leaves)
1.7	Codling moth (CM) ( 14 / 6 )
0.3	Fruit Tree Leafroller (FTLR) ( 2 / - )
0.0	Grape berry moth (GBM) ( 0 )
0.5	Lesser Apple Worm (LAW) ( 2 / 4 )
2.3	Obliquebanded leafroller (OBLR) ( 13 / 15 ) First flight 5.27
0.4	Oriental fruitworm (OFM) ( 2 / 3 ) First flight 4/2
0.0	Red Banded Leafroller (RBLR) ( 0 / 0 )
1.0	San Jose Scale (SJS) ( 9 / 3 )
50.7	Spotted Tentiform Leafminer (STLM) ( 359 / 249 )
0.0	Spotted Wing Drosophila (SWD) ( 0 / 0 / 0 / 0 )
4.6	Tufted apple budmoth (TABM) ( 44 / 11 )
1.1	Varigated leafroller (VLR) ( 11 / 2 )
0.0	Brown Marmorated Stink Bug Adult in black light trap

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Pear psylla 2<sup>nd</sup> generation nymphs increasing.

**SJS crawler: 1st emergence observed beneath female scale**

736.7	SJS 500DD model prediction (control 5/22 )
333.4	SJS 1 <sup>st</sup> DD <sub>50F</sub> adult male model accumulations ( Biofix 5/14)
6 June	SJS 1 <sup>st</sup> DD <sub>50F</sub> adult male model prediction date
27 May	First OBLR observed
206 DD	OBLR 340DD <sub>43F</sub> model prediction (Biofix 5.27 )
10 June	OBLR 340DD <sub>43F</sub> model prediction approximate date
490DD	PC 308DD <sub>50F</sub> model for required insecticide residue
424DD	CM egg hatch at 220DD <sub>50F</sub> model prediction (control req.) BF5.6

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0.75" Weekly Rainfall (Highland)

0.75" Total Rainfall from 1 June (Highland)

14.04" Total Yearly Rainfall (3.42"J; 1.34"F; 1.84"M; 1.82" A, 4.87 M)

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**Baskerville-Emin (BE) from 1 Jan.**

<u>Date</u>	<u>DD Accumulations (previous day NEWA)</u>		<u>Field Observations / Trap Catches / Models</u>
	<b>43 F</b>	<b>50 F</b>	<b># / trap / day (pheromone trap)</b>
6/11	1436.5	893.9	Hudson (2012)
	1318.3	804.3	Red Hook (2012)
	1361.1	819.2	Marlboro (2012)
-----			
	1348.1	845.9	Highland (2010)
	1152.5	712.8	Highland (2011)
	1377.4	830.3	Highland (2012)
			NA Psylla eggs / 5 shoot lvs ( egg / 25 UT Bartlet leaves)
			NA Psylla nymphs / 5 shoot lvs ( nym. / 25 UT Bartlet leaves)
			0.6 Codling moth (CM) ( 9 / 0 )
			0.9 Fruit Tree Leafroller (FTLR) ( 1 / 11 )
			0.0 Grape berry moth (GBM) ( 0 )
			1.9 Lesser Apple Worm (LAW) ( 15 / 12 ) <b>Second flt. 6/11</b>
			0.9 Obliquebanded leafroller (OBLR) ( 9 / 4 ) First flight 5.27
			0.5 Oriental fruitworm (OFM) ( 7 / 0 ) First flight 4/2
			0.5 Red Banded Leafroller (RBLR) ( 7 / 0 )
			23.6 San Jose Scale (SJS) ( 100 / 231 )
			70.2 Spotted Tentiform Leafminer (STLM) ( 366 / 617 )
			0.0 Spotted Wing Drosophila (SWD) ( 0 / 0 / 0 / 0 )
			0.0 Tufted apple budmoth (TABM) ( 0 / 0 )
			0.9 Varigated leafroller (VLR) ( 8 / 3 )
			0.1 Brown Marmorated Stink Bug Adult in black light trap (1)
			1 June 1 <sup>st</sup> BMSB adult in landscape on Ailanthus altissima
			1 June 1 <sup>st</sup> BMSB egg cluster in landscape on Ailanthus altissima
			11 June 1 <sup>st</sup> BMSB egg cluster in orchard on apple
			11 June 1 <sup>st</sup> BMSB adult in black light trap
	418.8		SJS 1 <sup>st</sup> DD <sub>50F</sub> adult male model accumulations ( Biofix 5/14)
	6 June		SJS 1 <sup>st</sup> DD <sub>50F</sub> adult male model prediction date
			OBLR 340DD <sub>43F</sub> model prediction Biofix date: 27 May
	11 June		OBLR 340DD <sub>43F</sub> model prediction date
	575.0		PC 308DD <sub>50F</sub> model for required insecticide residue
	509.0		CM egg hatch at 220DD <sub>50F</sub> model prediction (control req.) BF5.6
			0.75 Weekly Rainfall (Highland)
			1.49 Total Rainfall from 1 June (Highland)
			14.78'' Yearly Rainfall (3.42''J; 1.34''F; 1.84''M; 1.82'' A, 4.87 M (13.29''))

**Baskerville-Emin (BE) from 1 Jan.**

**Date      DD Accumulations (previous day NEWA)      Field Observations / Trap Catches / Models**

**43 F                  50 F                  # / trap / day (pheromone trap)**

6/18

1619.2	1027.6	Hudson (2012)
1487.3	924.3	Red Hook (2012)
1505.6	921.7	Marlboro (6.16.2012)

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1506.1	954.9	Highland (2010)
1259.0	806.2	Highland (2011)
1536.6	940.4	Highland (2012)

---

0.4	Psylla eggs / 5 shoot lvs (10 egg / 25 UT Bartlet leaves)
1.2	Psylla nymphs / 5 shoot lvs ( 31 nym. / 25 UT Bartlet leaves)
0.0	Apple Magot (AM) ( 0 / 0 )
0.0	Brown Marmorated Stink Bug Adult in black light trap (0)
0.6	Codling moth (CM) ( 5 / 4 )
0.6	Fruit Tree Leafroller (FTLR) ( 5 / 4 )
0.1	Grape berry moth (GBM) ( 2 )
1.1	Lesser Apple Worm (LAW) ( 0 / 15 )
1.6	Obliquebanded leafroller (OBLR) ( 16 / 6 ) First flight 5.27
0.0	Oriental fruitworm (OFM) ( 0 / 0 )
1.6	Red Banded Leafroller (RBLR) ( 7 / 0 )
0.0	San Jose Scale (SJS) ( 0 / 0 )
0.1	Sparganothus Fruit Worm (SFW) ( 1 / 1 ) F Flight 6.18
7.6	Spotted Tentiform Leafminer (STLM) ( 345 / 321 )
0.0	Spotted Wing Drosophila (SWD) ( 0 / 0 / 0 / 0 )
4.6	Tufted apple budmoth (TABM) ( 29 / 35 )
0.8	Varigated leafroller (VLR) ( 11 / 0 )

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528.9      SJS 1<sup>st</sup> DD<sub>50F</sub> adult male model accumulations ( Biofix 5/14)

6 June      SJS 1<sup>st</sup> DD<sub>50F</sub> adult male model prediction date

499              OBLR 340DD<sub>43F</sub> model prediction Biofix date: 27 May

25%              OBLR egg hatch predictions based on model

11 June        OBLR 340DD<sub>43F</sub> model prediction date

95%              CM egg hatch predictions based on model

619.0            CM egg hatch at 220DD<sub>50F</sub> model prediction (control req.) BF5.6

---

1.53            Weekly Rainfall (Highland)

3.02            Total Rainfall from 1 June (Highland)

16.31”        Yearly Rainfall (3.42”J; 1.34”F; 1.84”M; 1.82” A, 4.87 M (13.29”))

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**Baskerville-Emin (BE) from 1 Jan.**

**Date      DD Accumulations (previous day NEWA)      Field Observations / Trap Catches / Models**

**43 F                  50 F                  # / trap / day (pheromone trap)**

6/25

1835.1	1194.5	Hudson (2012)
1694.3	1082.3	Red Hook (2012)
1738.6	1098.7	Marlboro (6.16.2012)

---

1722.1	1121.9	Highland (2010)
1472.0	934.2	Highland (2011)
1748.9	1103.7	Highland (2012)

---

0.2	Psylla eggs / 5 shoot lvs (6 egg / 25 UT Bartlet leaves)
0.5	Psylla nymphs / 5 shoot lvs ( 12 nym. / 25 UT Bartlet leaves)
0.5	Apple Maggot (AM) ( 7 / 7 / 1 / 4 ) First flight 6.22
0.0	Brown Marmorated Stink Bug Adult in black light trap (0)
0.6	Codling moth (CM) ( 2 / 7 )
1.2	Fruit Tree Leafroller (FTLR) ( 11 / 6 )
0.0	Grape berry moth (GBM) ( 0 )
3.3	Lesser Apple Worm (LAW) ( 20 / 26 )
1.4	Obliquebanded leafroller (OBLR) ( 13 / 6 ) First flight 5.27
0.0	Oriental fruitworm (OFM) ( 0 / 0 )
1.6	Red Banded Leafroller (RBLR) ( 7 / 0 )
0.4	San Jose Scale (SJS) ( 4 / 2 )
0.0	Sparganothus Fruit Worm (SFW) ( 0 / 0 ) F Flight 6.18
49.4	Spotted Tentiform Leafminer (STLM) ( 347 / 344 )
0.0	Spotted Wing Drosophila (SWD) ( 0 / 0 / 0 / 0 )
5.4	Tufted apple budmoth (TABM) ( 33 / 43 )
0.0	Varigated leafroller (VLR) ( 0 / 0 )

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768      OBLR 340DD<sub>43F</sub> model prediction Biofix date: 27 May

11 June      OBLR 340DD<sub>43F</sub> model prediction date

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2.36"      Weekly Rainfall (Highland; taken from Davis weather station)

5.38"      Total Rainfall from 1 June (Highland)

18.67"      Yearly Rainfall (3.42"J; 1.34"F; 1.84"M; 1.82" A, 4.87 M (13.29"))

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**Baskerville-Emin (BE) from 1 Jan.**

**Date      DD Accumulations (previous day NEWA)      Field Observations / Trap Catches / Models**

**43 F                  50 F                  # / trap / day (pheromone trap)**

7/2

2043.8	1354.2	Hudson (2012)
1883.8	1222.8	Red Hook (2012)
1946.6	1257.7	Marlboro (6.16.2012)

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1918.6	1269.4	Highland (2010)
1657.5	1070.7	Highland (2011)
1955.5	1261.3	Highland (2012)

---

< 0.1	Psylla eggs / 5 shoot lvs ( 1 egg / 25 UT Bartlet leaves)
0.0	Psylla nymphs / 5 shoot lvs ( 0 nym. / 25 UT Bartlet leaves)
0.9	Apple Maggot (AM) ( 0 / 9 / 11 / 4 ) First flight 6.22
0.0	Brown Marmorated Stink Bug Adult in black light trap (0)
0.1	Codling moth (CM) ( 1 / 1 )
0.2	Fruit Tree Leafroller (FTLR) ( 3 / 0 )
1.3	Grape berry moth (GBM) ( 9 )
2.5	Lesser Apple Worm (LAW) ( 21 / 14 )
2.5	Obliquebanded leafroller (OBLR) ( 8 / 27 ) First flight 5.27
1.6	Oriental fruitworm (OFM) ( 21 / 1 ) First flight 4/2; 2 <sup>nd</sup> Gen 7/2
1.4	Red Banded Leafroller (RBLR) ( 14 / 6 )
0.6	San Jose Scale (SJS) ( 0 / 8 )
0.3	Sparganothus Fruit Worm (SFW) ( 2 / 2 ) F Flight 6.18
49.4	Spotted Tentiform Leafminer (STLM) ( 358 / 333 )
0.0	Spotted Wing Drosophila (SWD) ( 0 / 0 / 0 / 0 )
2.0	Tufted apple budmoth (TABM) ( 14 / 14 )
< 0.1	Varigated leafroller (VLR) ( 0 / 1 )

---

22 June AM Biofix date: First baited trap capture adult

30 July AM model application date

---

0.40" Weekly Rainfall

0.00" Total Rainfall from 1 July (Highland)

5.78" Total Rainfall for June (Highland)

18.67" Yearly RF (3.42"J; 1.34"F; 1.84"M; 1.82" A, 4.87" M, 5.78" June  
0.00" July

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**Baskerville-Emin (BE) from 1 Jan.**

**Date**      **DD Accumulations (previous day NEWA)**      **Field Observations / Trap Catches / Models**

**43 F**                      **50 F**                      **# / trap / day (pheromone trap)**

7/9

2278.8	1540.2	Hudson (2012)
2096.3	1386.3	Red Hook (2012)
2178.1	1440.2	Marlboro (2012)

---

2155.6	1457.4	Highland (2010)
1861.0	1225.2	Highland (2011)
2179.4	1436.2	Highland (2012)

---

0.1	Psylla eggs / 5 shoot lvs ( 3 egg / 25 UT Bartlet leaves)
0.9	Psylla nymphs / 5 shoot lvs ( 22 nym. / 25 UT Bartlet leaves)
0.3	Apple Maggot (AM) ( 3 / 0 / 0 / 5 ) First flight 6.22
0.0	Brown Marmorated Stink Bug Adult in black light trap (0)
0.4	Codling moth (CM) ( 1 / 4 )
0.0	Fruit Tree Leafroller (FTLR) ( 0 / 0 )
0.0	Grape berry moth (GBM) ( 0 )
2.4	Lesser Apple Worm (LAW) ( 12 / 22 )
0.6	Obliquebanded leafroller (OBLR) ( - / 4 ) First flight 5.27
3.4	Oriental fruitworm (OFM) ( 40 / 8 )
0.8	Red Banded Leafroller (RBLR) ( 5 / 6 )
497.0	San Jose Scale (SJS) ( 6700 / 0 )
0.1	Sparganothus Fruit Worm (SFW) ( 1 / 0 ) F Flight 6.18
55.1	Spotted Tentiform Leafminer (STLM) ( 426 / 346 )
0.0	Spotted Wing Drosophila (SWD) ( 0 / 0 / 0 / 0 )
0.7	Tufted apple budmoth (TABM) ( 4 / 6 )
0.0	Varigated leafroller (VLR) ( 0 / 0 )

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210.0	OFM 2 <sup>nd</sup> Gen. DD <sub>45F</sub> adult male model prediction ( Biofix 7/2)
9 July	OFM 2 <sup>nd</sup> Gen. DD <sub>45F</sub> prediction date: Peak larval emergence
72.4	SJS 2 <sup>nd</sup> Gen. DD <sub>50F</sub> adult male model prediction ( Biofix 7/5)
21 July	SJS 2 <sup>nd</sup> Gen. DD <sub>50F</sub> prediction date: Nymph emergence (340DD)
93.0	STLM 2 <sup>nd</sup> Gen. DD <sub>43F</sub> adult male model prediction ( Biofix 7/6)
22 July	STLM 2 <sup>nd</sup> Gen. DD <sub>43F</sub> prediction model date: Hatch (690-840DD)
22 June	AM Biofix date: First baited trap capture adult
30 July	AM model application date

---

0.27"	Weekly Rainfall
0.27"	Total Rainfall from 1 July (Highland)
18.94"	Yearly RF (3.42"J; 1.34"F; 1.84"M; 1.82" A, 4.87" M 5.78" June 0.40" July

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**Baskerville-Emin (BE) from 1 Jan.**

**Date DD Accumulations (previous day NEWA) Field Observations / Trap Catches / Models**

**43 F 50 F # / trap / day (pheromone trap)**

7/16

2509.9 1722.3 Hudson (2012)  
 2309.8 1550.6 Red Hook (2012)  
 2403.1 1616.2 Marlboro (2012)

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2383.6 1636.4 Highland (2010)  
 2075.0 1390.2 Highland (2011)  
 2400.1 1607.9 Highland (2012)

---

< 0.1 Psylla eggs / 5 shoot lvs ( 2 egg / 25 UT Bartlet leaves)  
 0.2 Psylla nymphs / 5 shoot lvs ( 4 nym. / 25 UT Bartlet leaves)  
 0.2 Apple Maggot (AM) ( 3 / 0 / 0 / 3 ) First flight 6.22  
 0.0 Brown Marmorated Stink Bug Adult in black light trap (0)  
**1.4 Codling moth (CM) ( 3 / 17 ) 1<sup>st</sup> 5/6; 2<sup>nd</sup> gen. 7/16**  
 0.0 Fruit Tree Leafroller (FTLR) ( 0 / 0 )  
 0.0 Grape berry moth (GBM) ( 0 )  
 5.9 Lesser Apple Worm (LAW) ( 44 / 38 )  
 0.0 Obliquebanded leafroller (OBLR) ( 0 / 0 )First Gen. flt 5.27  
 1.0 Oriental fruitworm (OFM) ( 2 / 12 )  
 0.3 Red Banded Leafroller (RBLR) ( 1 / 3 )  
 692.4 San Jose Scale (SJS) ( 9612 / 81 )  
 0.0 Sparganothus Fruit Worm (SFW) ( 0 / 0 ) First Gen. flt 6.18  
 35.7 Spotted Tentiform Leafminer (STLM) ( 291 / 209 )  
 0.0 Spotted Wing Drosophila (SWD) ( 0 / 0 / 0 / 0 )  
 < 0.1 Tufted apple budmoth (TABM) ( 0 / 1 )  
 0.4 Varigated leafroller (VLR) ( 2 / 4 )

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26.0 CM 2<sup>nd</sup> Gen. DD<sub>50F</sub> adult male model prediction ( Biofix 7/15)  
 16 July CM 2<sup>nd</sup> Gen. DD<sub>50F</sub> prediction date: start of larval emergence  
 416.0 OFM 2<sup>nd</sup> Gen. DD<sub>45F</sub> adult male model prediction ( Biofix 7/2)  
 9 July OFM 2<sup>nd</sup> Gen. DD<sub>45F</sub> prediction date: Peak larval emergence  
 244.1 SJS 2<sup>nd</sup> Gen. DD<sub>50F</sub> adult male model prediction ( Biofix 7/5)  
 19 July SJS 2<sup>nd</sup> Gen. DD<sub>50F</sub> prediction date: Nymph emergence (340DD)  
 314.0 STLM 2<sup>nd</sup> Gen. DD<sub>43F</sub> adult male model prediction ( Biofix 7/6)  
 28 July STLM 2<sup>nd</sup> Gen. DD<sub>43F</sub> prediction model date: Hatch (690-840DD)  
 22 June AM Biofix date: First baited trap capture adult  
 30 July AM model 1<sup>st</sup> application date

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0.74" Weekly Rainfall  
 1.01" Total Rainfall from 1 July (Highland)  
 19.68" Yearly RF (3.42"J; 1.34"F; 1.84"M; 1.82" A; 4.87" M; 5.78" June;  
 1.01" July;

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**Baskerville-Emin (BE) from 1 Jan.**

**Date DD Accumulations (previous day NEWA) Field Observations / Trap Catches / Models**

**43 F 50 F # / trap / day (pheromone trap)**

7/22

2740.5 1903.9 Hudson (2012)  
 2495.3 1694.1 Red Hook (2012)  
 2616.1 1780.2 Marlboro (2012)

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2626.6 1830.4 Highland (2010)  
 2324.0 1590.2 Highland (2011)  
 2619.2 1778.0 Highland (2012)

---

0.0 Psylla eggs / 5 shoot lvs (0 egg / 25 UT Bartlet leaves)  
 0.0 Psylla nymphs / 5 shoot lvs (0 nym. / 25 UT Bartlet leaves)  
 0.2 Apple Magot (AM) ( 4 / 1 / 1 / 0 )  
 0.6 Brown Marmorated Stink Bug Adult in black light trap (4)  
 0.8 Codling moth (CM) ( 8 / 3 )  
 0.0 Fruit Tree Leafroller (FTLR) ( 0 / 0 )  
 0.0 Grape berry moth (GBM) ( 0 )  
 3.2 Lesser Apple Worm (LAW) ( 27 / 18 )  
 0.1 Obliquebanded leafroller (OBLR) ( 0 / 1 )  
 3.8 Oriental fruitworm (OFM) ( 32 / 21 )  
 0.2 Red Banded Leafroller (RBLR) ( 1 / 2 )  
 79.6 San Jose Scale (SJS) ( 901 / 362 )  
 0.0 Sparganothus Fruit Worm (SFW) ( 0 / 0 ) F Flight 6.18  
 36.9 Spotted Tentiform Leafminer (STLM) ( 304 / 213 )  
 0.0 Spotted Wing Drosophila (SWD) ( 0 / 0 / 0 / 0 )  
 0.0 Tufted apple budmoth (TABM) ( 0 / 0 )  
 0.6 Varigated leafroller (VLR) ( 0 / 8 )

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528.9 *SJS 1<sup>st</sup> DD<sub>50F</sub> adult male model accumulations ( Biofix 5/14)*  
 6 June *SJS 1<sup>st</sup> DD<sub>50F</sub> adult male model prediction date*  
 499 *OBLR 340DD<sub>43F</sub> model prediction Biofix date: 27 May*  
 25% *OBLR egg hatch predictions based on model*  
 11 June *OBLR 340DD<sub>43F</sub> model prediction date*  
 95% *CM egg hatch predictions based on model*  
 619.0 *CM egg hatch at 220DD<sub>50F</sub> model prediction (control req.) BF5.6*

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1.03 Weekly Rainfall (Highland)  
 1.88 Total Rainfall from 1 July (Highland)  
 16.31'' Yearly Rainfall (3.42''J; 1.34''F; 1.84''M; 1.82'' A; 4.87'' M;  
 13.29'' J; 1.88'' J)

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**Baskerville-Emin (BE) from 1 Jan.**

**Date      DD Accumulations (previous day NEWA)      Field Observations / Trap Catches / Models**

**43 F                      50 F                      # / trap / day (pheromone trap)**

7/30

2958.1	2072.5	Hudson (2012)
2732.3	1875.1	Red Hook (2012)
2829.1	1944.2	Marlboro (2012)

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2850.6	2005.4	Highland (2010)
2547.0	1764.2	Highland (2011)
2835.2	1945.0	Highland (2012)

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<0.1	Psylla eggs / 5 shoot lvs ( 1 egg / 25 UT Bartlet leaves)
0.0	Psylla nymphs / 5 shoot lvs ( 0 nym. / 25 UT Bartlet leaves)
1.2	Apple Maggot (AM) ( 3 / 5 / 7 / 2 ) First flight 6.22
0.0	Brown Marmorated Stink Bug Adult in black light trap (0)
<b>1.0</b>	<b>Codling moth (CM) ( 6 / 8 ) 1<sup>st</sup> 5/6; 2<sup>nd</sup> gen. 7/16</b>
0.0	Fruit Tree Leafroller (FTLR) ( 0 / 0 )
0.0	Grape berry moth (GBM) ( 0 )
5.1	Lesser Apple Worm (LAW) ( 52 / 19 )
0.0	Obliquebanded leafroller (OBLR) ( 0 / 0 ) First Gen. flt 5.27
1.1	Oriental fruitworm (OFM) ( 4 / 11 )
0.6	Red Banded Leafroller (RBLR) ( 3 / 5 )
14.7	San Jose Scale (SJS) ( 173 / 33 )
0.0	Sparganothus Fruit Worm (SFW) ( 0 / 0 ) First Gen. flt 6.18
32.4	Spotted Tentiform Leafminer (STLM) ( 273 / 180 )
0.1	Spotted Wing Drosophila (SWD) ( 1 / 0 / 0 / 2 )
	(Cherry /Grape/ Peach /Pumice)
0.3	Tufted apple budmoth (TABM) ( 2 / 2 )
1.7	Varigated leafroller (VLR) ( 11 / 13 )

---

1.27"	Weekly Rainfall
3.15"	Total Rainfall from 1 July (Highland)
22.22"	Yearly RF (3.42"J; 1.34"F; 1.84"M; 1.82" A; 4.87" M; 5.78" June; 3.15" July;

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**Baskerville-Emin (BE) from 1 Jan.**

<u>Date</u>	<u>DD Accumulations (previous day NEWA)</u>		<u>Field Observations / Trap Catches / Models</u>
	<b>43 F</b>	<b>50 F</b>	<b># / trap / day (pheromone trap)</b>
8/6	3200.8	2266.2	Hudson (2012)
	2959.3	2053.1	Red Hook (2012)
	3055.6	2121.7	Marlboro (2012)
-----			
	3065.1	2170.9	Highland (2010)
	2765.5	1892.5	Highland (2011)
	3065.0	2125.8	Highland (2012)
			0.1 Psylla eggs / 5 shoot lvs (2 egg / 25 UT Bartlett leaves)
			0.2 Psylla nymphs / 5 shoot lvs (5 nym. / 25 UT Bartlett leaves)
			1.9 Apple Maggot (AM) ( 0 / 2 / 46 / 6 )
			0.1 Brown Marmorated Stink Bug Adult in black light trap (1)
			1.3 Codling moth (CM) ( 12 / 6 ) <b>1<sup>st</sup> 5/6; 2<sup>nd</sup> gen. 7/16</b>
			0.0 Fruit Tree Leafroller (FTLR) ( 0 / 0 )
			0.0 Grape berry moth (GBM) ( 0 )
			3.1 Lesser Apple Worm (LAW) ( 20 / 24 )
			< 0.1 Obliquebanded leafroller (OBLR) ( 0 / 1 ) 1 <sup>st</sup> trap capture 2 <sup>nd</sup> gen.
			0.4 Oriental fruitworm (OFM) ( 3 / 3 )
			1.8 Red Banded Leafroller (RBLR) ( 13 / 12 ) 3 <sup>rd</sup> gen. flt. 8/6
			3.8 San Jose Scale (SJS) ( 40 / 13 ) traps moved to different trees
			< 0.1 Sparganothus Fruit Worm (SFW) ( 1 / 0 ) F Flight 6.18
			39.2 Spotted Tentiform Leafminer (STLM) ( 276 / 273 )
			0.8 Spotted Wing Drosophila (SWD) ( 0 / 2 / 33 / 0 / 0 / 0 )
			Cherry/Pumice/Peach/Grape/Twinberry/Rasp
			0.0 Tufted apple budmoth (TABM) ( 0 / 0 )
			1.4 Varigated leafroller (VLR) ( 5 / 14 )
			-----
			35.0 <i>OBLR 340DD<sub>43F</sub> model prediction Biofix date: 6 August</i>
			0 % <i>OBLR egg hatch predictions based on model</i>
			17 Aug. <i>OBLR 340DD<sub>43F</sub> model prediction date</i>
			> 90% <i>CM egg hatch predictions based on model</i>
			323.0 <i>CM egg hatch at 220DD<sub>50F</sub> model prediction (control req.) BF5.6</i>
			-----
			0.47'' Weekly Rainfall (Highland)
			0.47'' Total Rainfall from 1 Aug (Highland)
			22.69'' Yearly Rainfall (3.42''J; 1.34''F; 1.84''M; 1.82'' A; 4.87'' M;
			13.29'' J; 3.15'' J; 0.47Aug)

**Baskerville-Emin (BE) from 1 Jan.**

**Date      DD Accumulations (previous day NEWA)      Field Observations / Trap Catches / Models**

**43 F                  50 F                  # / trap / day (pheromone trap)**

8/13

3422.8	2439.2	Hudson (2012)
3167.8	2212.6	Red Hook (2012)
3271.1	2288.2	Marlboro (2012)

---

3285.6	2342.4	Highland (2010)
2968.0	2087.2	Highland (2011)
3278.1	2289.9	Highland (2012)

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0.6	Psylla eggs / 5 shoot lvs (9 egg / 25 UT Bartlett leaves)
0.4	Psylla nymphs / 5 shoot lvs (5 nym. / 25 UT Bartlett leaves)
1.4	Apple Maggot (AM) ( 3 / 10 / 3 / 4 )
0.0	Brown Marmorated Stink Bug Adult in black light trap (0)
1.3	Codling moth (CM) ( 11 / 7 ) <b>1<sup>st</sup> 5/6; 2<sup>nd</sup> gen. 7/16</b>
0.0	Fruit Tree Leafroller (FTLR) ( 0 / 0 )
0.0	Grape berry moth (GBM) ( 0 )
8.6	Lesser Apple Worm (LAW) ( 53 / 68 )
0.2	Obliquebanded leafroller (OBLR) ( 3 / 0 ) 1 <sup>st</sup> trap capture 2 <sup>nd</sup> gen.
0.6	Oriental fruitworm (OFM) ( 4 / 5 )
4.3	Red Banded Leafroller (RBLR) ( 26 / 34 )
1.1	San Jose Scale (SJS) ( 9 / 7 ) traps moved to different trees
0.0	Sparganothus Fruit Worm (SFW) ( 0 / 0 ) F Flight 6.18
28.4	Spotted Tentiform Leafminer (STLM) ( 183 / 214 )
11.3	Spotted Wing Drosophila (SWD) ( 1 / 17 / 129 / 11 / 0 / 0 ) Cherry/Pumice/Peach/Grape/Twinberry/Rasp
0.2	Tufted apple budmoth (TABM) ( 3 / 0 )
1.0	Variegated leafroller (VLR) ( 9 / 5 )

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*OBLR 340DD<sub>43F</sub> model prediction Biofix date: 6 August*

*213 DD OBLR egg hatch predictions based on model*

*18 Aug. OBLR 340DD<sub>43F</sub> model prediction date*

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0.71"	Weekly Rainfall (Highland)
1.18"	Total Rainfall from 1 Aug (Highland)
23.40"	Yearly Rainfall (3.42"J; 1.34"F; 1.84"M; 1.82" A; 4.87" M; 13.29" J; 3.15" J; 1.18 Aug)

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**Baskerville-Emin (BE) from 1 Jan.**

**Date DD Accumulations (previous day NEWA) Field Observations / Trap Catches / Models**

**43 F 50 F # / trap / day (pheromone trap)**

8/20

Hudson (2012)  
 Red Hook (2012)  
 Marlboro (2012)

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3486.1	2493.9	Highland (2010)
3152.0	2222.2	Highland (2011)
3464.6	2427.4	Highland (2012)

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0.6	Apple Maggot (AM) ( 1 / 9 / 3 / 4 )
0.0	Brown Marmorated Stink Bug Adult in black light trap (0)
0.6	Codling moth (CM) ( 2 / 7 )
0.0	Fruit Tree Leafroller (FTLR) ( 0 / 0 )
0.0	Grape berry moth (GBM) ( 0 )
3.5	Lesser Apple Worm (LAW) ( 27 / 22 )
0.1	Obliquebanded leafroller (OBLR) ( 0 / 1 )
0.3	Oriental fruitworm (OFM) ( 3 / 1 )
3.8	Red Banded Leafroller (RBLR) ( 24 / 29 )
1.2	San Jose Scale (SJS) ( 6 / 11 )
0.0	Sparganothus Fruit Worm (SFW) ( 0 / 0 ) F Flight 6.18
15.9	Spotted Tentiform Leafminer (STLM) ( 60 / 162 )
0.0	Spotted Wing Drosophila (SWD) ( 8 / 77 / 1 / 23 / 0 / 1 )
	(Pumice/Peach/Cherry&Plum/Grape/Twinberry/Raspberry)
0.4	Tufted apple budmoth (TABM) ( 4 / 1 )
0.7	Varigated leafroller (VLR) ( 3 / 7 )

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*OBLR 340DD<sub>43F</sub> model prediction Biofix date: 6 August*  
 399 DD *OBLR egg hatch predictions based on model*  
 18 Aug. *OBLR 340DD<sub>43F</sub> model prediction date*

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1.25"	Weekly Rainfall (Highland)
2.43"	Total Rainfall from 1 Aug (Highland)
24.65"	Yearly Rainfall (3.42"J; 1.34"F; 1.84"M; 1.82" A; 4.87" M; 13.29" J; 3.15" J; 2.43 Aug)

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**Baskerville-Emin (BE) from 1 Jan.**

**Date      DD Accumulations (previous day NEWA)      Field Observations / Trap Catches / Models**

**43 F                  50 F                  # / trap / day (pheromone trap)**

8/27	3817.3	2735.7	Hudson (2012)
	3533.8	2481.0	Red Hook (2012)
	3653.1	2572.2	Marlboro (2012)
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	3656.6	2615.4	Highland (2010)
	3338.0	2359.2	Highland (2011)
	3658.8	2572.6	Highland (2012)
		0.6	Apple Maggot (AM) ( 0 / 7 / 1 / 9 )
		0.0	Brown Marmorated Stink Bug Adult in black light trap ( 0 )
		0.5	Codling moth (CM) ( 5 / 2 )
		0.0	Fruit Tree Leafroller (FTLR) ( 0 / 0 )
		0.0	Grape berry moth (GBM) ( 0 )
		2.1	Lesser Apple Worm (LAW) ( 19 / 10 )
		0.0	Obliquebanded leafroller (OBLR) ( 0 / 0 )
		1.5	Oriental fruitworm (OFM) ( 8 / 13 ) 3 <sup>rd</sup> gen. flt. 8.27
		5.5	Red Banded Leafroller (RBLR) ( 37 / 40 )
		<b>2.1</b>	<b>San Jose Scale (SJS) ( 10 / 19 ) Adult 3<sup>rd</sup> gen. biofix</b>
		0.3	Sparganothus Fruit Worm (SFW) ( 1 / 3 ) F Flight 6.18
		28.4	Spotted Tentiform Leafminer (STLM) ( 185 / 213 )
		4.2	Spotted Wing Drosophila (SWD) ( 25 / 135 / 4 / 9 / 2 / 0 )
			(Pumice/Peach/Cherry&Plum/Grape/Twinberry/Raspberry)
		0.5	Tufted apple budmoth (TABM) ( 4 / 3 )
		0.6	Varigated leafroller (VLR) ( 3 / 5 )
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			<i>6 Aug. OFM 340DD<sub>43F</sub> model prediction Biofix date: 6 August</i>
			<i>18 Aug. OBLR 340DD<sub>43F</sub> model prediction date</i>
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		0.05"	Weekly Rainfall (Highland)
		2.61"	Total Rainfall from 1 Aug (Highland)
		31.07"	Yearly Rainfall (3.42"J; 1.34"F; 1.84"M; 1.82" A; 4.87" M;
			13.29" J; 3.15" J; 2.61 Aug)

**Baskerville-Emin (BE) from 1 Jan.**

**Date      DD Accumulations (previous day NEWA)      Field Observations / Trap Catches / Models**

**43 F                      50 F                      # / trap / day (pheromone trap)**

9/4

4042.1	2904.4	Hudson (2012)
3739.8	2631.5	Red Hook (2012)
3876.6	2739.7	Marlboro (2012)

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3901.6	2804.4	Highland (2010)
3547.5	2512.7	Highland (2011)
3886.3	2744.1	Highland (2012)

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1.0	Apple Maggot (AM) ( 8 / 14 / 5 / 6 )
0.0	Brown Marmorated Stink Bug Adult in black light trap (0)
0.6	Codling moth (CM) ( 4 / 5 )
0.0	Fruit Tree Leafroller (FTLR) ( 0 / 0 )
0.0	Grape berry moth (GBM) ( 0 )
1.1	Lesser Apple Worm (LAW) ( 15 / 2 )
0.3	Obliquebanded leafroller (OBLR) ( 3 / 2 )
4.3	Oriental fruitworm (OFM) ( 42 / 27 ) F Flight 8/27
14.9	Red Banded Leafroller (RBLR) ( 48 / 190 )
9.6	San Jose Scale (SJS) ( 56 / 97 )
0.2	Sparganothus Fruit Worm (SFW) ( 0 / 3 )
12.1	Spotted Tentiform Leafminer (STLM) ( 108 / 86 )
2.5	Spotted Wing Drosophila (SWD) ( 5 / 108 / 0 / 0 / 0 / 8 ) (Pumice/Peach/Cherry/Twinberry/Raspberry/Grape)
3.1	Tufted apple budmoth (TABM) ( 23 / 27 )
2.0	Variegated leafroller (VLR) ( 13 / 19 )

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>10%	<i>Percentage of OFM egg hatch predictions based on model</i>
211	<i>OFM egg hatch model prediction 150-180 DD<sub>45</sub> (10% larva emerg.)</i>

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1.33"	Weekly Rainfall (Highland)
0.00"	Total Rainfall from 1 Sept (Highland)
32.40"	Yearly Rainfall (3.42"J; 1.34"F; 1.84"M; 1.82" A; 4.87" M; 13.29" J; 1.88" J; 3.94" A; 0.00" S)

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**Baskerville-Emin (BE) from 1 Jan.**

**Date      DD Accumulations (previous day NEWA)      Field Observations / Trap Catches / Models**

**43 F                  50 F                  # / trap / day (pheromone trap)**

9/10

4212.2	3032.5	Hudson (2012)
3901.3	2751.0	Red Hook (2012)
4045.1	2866.2	Marlboro (2012)

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4042.6	2903.5	Highland (2010)
3692.5	2615.7	Highland (2011)
4054.9	2870.7p	Highland (2012)

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0.5	Apple Maggot (AM) ( 9 / 3 / 0 / 2 )
---	Brown Marmorated Stink Bug Adult in black light trap (-)
0.3	Codling moth (CM) ( 3 / 1 )
0.1	Fruit Tree Leafroller (FTLR) ( - / 1 )
0.0	Grape berry moth (GBM) ( 0 )
0.4	Lesser Apple Worm (LAW) ( 2 / 3 )
0.1	Obliquebanded leafroller (OBLR) ( 0 / 1 )
1.7	Oriental fruitworm (OFM) ( 4 / 20 )
4.3	Red Banded Leafroller (RBLR) ( 39 / 21 )
26.2	San Jose Scale (SJS) ( 99 / 268 )
0.2	Sparganothus Fruit Worm (SFW) ( 0 / 3 )
11.9	Spotted Tentiform Leafminer (STLM) ( 98 / 68 )
1.7	Spotted Wing Drosophila (SWD) ( 23 / 34 / - / 2 / 0 / 0 ) (Pumice/Peach/Cherry/Twinberry/Raspberry/Grape)
0.9	Tufted apple budmoth (TABM) ( 3 / 10 )
2.4	Variegated leafroller (VLR) ( 7 / 27 )

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0.70"	Weekly Rainfall (Highland)
1.35"	Total Rainfall from 1 Sept (Highland)
33.75"	Yearly Rainfall (3.42"J; 1.34"F; 1.84"M; 1.82" A; 4.87" M; 13.29" J; 1.88" J; 3.94" A; 1.35" S)

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**Baskerville-Emin (BE) from 1 Jan.**

**Date**      **DD Accumulations (previous day NEWA)**      **Field Observations / Trap Catches / Models**

**43 F                      50 F                      # / trap / day (pheromone trap)**

9/17

4355.8	3129.3	Hudson (2012)
3947.8	2780.5	Red Hook (2012)
4182.1	2955.4	Marlboro (2012)

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4163.1	2976.7	Highland (2010)
3846.5	2723.0	Highland (2011)
4193.6	2962.5	Highland (2012)

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0.6	Apple Maggot (AM) ( 10 / 1 / 5 / 0 )
---	Brown Marmorated Stink Bug Adult in black light trap (-)
>0.1	Codling moth (CM) ( 1 / 0 )
0.0	Fruit Tree Leafroller (FTLR) ( 0 / 0 )
0.0	Grape berry moth (GBM) ( 0 )
0.9	Lesser Apple Worm (LAW) ( 0 / 12 )
0.0	Obliquebanded leafroller (OBLR) ( 0 / 0 )
0.7	Oriental fruitworm (OFM) ( 3 / 7 )
1.4	Red Banded Leafroller (RBLR) ( 7 / 12 )
1.6	San Jose Scale (SJS) ( 10 / 13 )
>0.1	Sparganothus Fruit Worm (SFW) ( 1 / 0 )
7.8	Spotted Tentiform Leafminer (STLM) ( 70 / 39 )
1.1	Spotted Wing Drosophila (SWD) ( 25 / 4 / 10 / 2 / 1 / 3 )
	(Pumice/Peach/Cherry/Twinberry/Raspberry/Grape)
0.4	Tufted apple budmoth (TABM) ( 3 / 3 )
0.8	Variegated leafroller (VLR) ( 11 / 0 )

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0.10"	Weekly Rainfall (Highland)
1.45"	Total Rainfall from 1 Sept (Highland)
33.85"	Yearly Rainfall (3.42"J; 1.34"F; 1.84"M; 1.82" A; 4.87" M; 13.29" J; 1.88" J; 3.94" A; 1.35" S)

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