

## June 2018 - Labeled Insecticides for Control of Spotted Wing Drosophila in New York Berry Crops – Quick Guide

Compiled by Greg Loeb, Laura McDermott, Peter Jentsch & Juliet Carroll, Cornell University. Updated regularly.

BLUEBERRIES										
PRODUCT	AI <sup>1</sup>	IRAC group <sup>2</sup>	EPA#	Rate/A	REI <sup>3</sup>	DTH <sup>4</sup>	Max. Prod/A/yr (ai)	Total applic's	Spray Interval	Probable efficacy
^@Entrust Naturalyte (2ee) <sup>a</sup>	spinosad	5	62719-282	1.25-2 oz	4 hr	3 d	9 oz (0.45 lb)	3 per crop	> 6 d	Good to Excellent <sup>#</sup>
^@Entrust SC <sup>a</sup>	spinosad	5	62719-621	4-6 fl oz	4 hr	1 d	29 fl oz (0.45 lb)	3 per crop	> 6 d	Good to Excellent <sup>#</sup>
@Delegate WG	spinetoram	5	62719-541	3-6 oz	4 hr	3 d	19.5 oz (0.305 lb)	6	> 6 d	Excellent <sup>#</sup>
@Delegate WG (suppl. label)	spinetoram	5	62719-541	3-6 oz	4 hr	1 d	17.9 oz (0.281 lb)	3	6 d (1 <sup>st</sup> -2 <sup>nd</sup> ) 12 d (3 <sup>rd</sup> -4 <sup>th</sup> )	Excellent <sup>#</sup>
*Exirel	cyazypyr	28	352-859	13.5-20.5 fl oz	12 hr	3 d	61.5 fl oz (0.4 lb)	3	> 5 d	Excellent
*Brigade WSB (2ee)	bifenthrin	3A	279-3108	5.3-16 oz	12 hr	1 d	5 lb (0.5 lb)	-	> 7 d	Excellent
*Danitol 2.4EC	fenpropathrin	3A	59639-35	16 fl oz	24 hr	3 d	32 fl oz (0.6 lb)	2	-	Excellent
*Mustang Maxx Insecticide	zeta-cypermethrin	3A	279-3426	4 fl oz	12 hr	1 d	24 fl oz (0.15 lb)	6	> 7 d	Excellent
^Pyganic EC 1.4	pyrethrin	3A	1021-1771	1 pt-2 qts	12 hr	0 d	-	-	-	Fair to Poor
^Pyganic EC 5.0	pyrethrin	3A	1021-1772	4.5-18 fl oz	12 hr	0 d	-	-	-	Fair to Poor
Assail 30SG (2ee)	acetamiprid	4A	8033-36-70506	4.5-5.3 oz	12 hr	1 d	26.7 oz (0.5 lb)	5	> 7 d	Good <sup>#</sup>
*Lannate SP	methomyl	1A	352-342	0.5-1 lb	48 hr	3 d	4 lb (3.6 lb)	4	> 5-7 d	Excellent
*Lannate VP	methomyl	1A	352-384	1.5-3 pts	48 hr	3 d	12 pts (3.6 lb)	4	> 5-7 d	Excellent
*Imidan 70W	phosmet	1B	10163-169	1.33 lb	24 hr	3 d	7.125 lb (5.0 lb)	5	-	Excellent

\*Refer to label for details and additional restrictions.

#Adding sugar (sucrose) at 2 lb/100 gal water as a feeding stimulant will increase efficacy.

^Approved for organic use in NY.

@After two consecutive applications must rotate to different mode of action.

<sup>1</sup> Active Ingredient.

<sup>2</sup> Mode of Action, based on IRAC group code (UN = unknown).

<sup>3</sup> Re-entry Interval (hr = hours).

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Malathion 5EC (2ee)	malathion	1B	19713-217	2 pts	12 hr	1 d	6 pts (3.75 lb)	3	> 5 d	Good
Malathion 8 Aquamul (2ee)	malathion	1B	34704-474	2.5 pts	12 hr	1 d	3.75 pts (3.75 lb)	1	> 5 d	Good
Malathion 57 (2ee)	malathion	1B	67760-40-53883	2 pts	12 hr	1 d	6 pts (3.75 lb)	3	> 5 d	Good
^AzaSol	azadirachtin	UN	81899-4	6 oz in 50 gal	4 hr	0 d	-	-	-	Fair to Poor
^Grandevo	<i>Chromobacterium subsugae</i> strain PRAA4-1 and spent fermentation media	UN	84059-27	2-3 lb	4 hr	0 d	-	-	≤ 7 d	Fair <sup>#</sup>
^Venerate XC	<i>Burkholderia</i> spp. strain A396 and spent fermentation media	UN	84059-14	2-4 qts	4 hr	0 d	-	-	≤ 7 d	Poor

<sup>a</sup> In organic production, Entrust must be rotated with different IRAC insecticides, consider Grandevo or products containing the AI's azadirachtin or pyrethrin.

\*Refer to label for details and additional restrictions.

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RASPBERRIES & BLACKBERRIES										
PRODUCT	AI <sup>1</sup>	IRAC group <sup>2</sup>	EPA#	RATE/A	REI <sup>3</sup>	DTH <sup>4</sup>	Max. Prod/A/yr (ai)	Total applic's	Spray Interval	Probable efficacy
^@Entrust Naturalyte (2ee) <sup>a</sup>	spinosad	5	62719-282	1.25-2 oz	4 hr	1 d	9 oz (0.45 lb)	3 per crop	> 6 d	Good to Excellent <sup>#</sup>
^@Entrust SC (2ee) <sup>a</sup>	spinosad	5	62719-621	4-6 fl oz	4 hr	1 d	29 fl oz (0.45 lb)	3 per crop	> 6 d	Good to Excellent <sup>#</sup>
@Delegate WG	spinetoram	5	62719-541	3-6 oz	4 hr	1 d	19.5 oz (0.305 lb)	6	> 4 d	Excellent <sup>#</sup>
*Brigade WSB (2ee)	bifenthrin	3A	279-3108	8-16 oz	12 hr	3 d	2 lb (0.2 lb)	1 post bloom	-	Excellent
*Brigade EC (2ee)	bifenthrin	3A	279-3313	3.2-6.4 fl oz	12 hr	3 d	12.8 fl oz (0.2 lb)	1 post bloom	-	Excellent
*Danitol 2.4EC	fenpropathrin	3A	59639-35	16 fl oz	24 hr	3 d	32 fl oz (0.6 lb)	2	-	Excellent
*Mustang Maxx Insecticide	zeta-cypermethrin	3A	279-3426	4 fl oz	12 hr	1 d	24 fl oz (0.15 lb)	6	> 7 d	Excellent
^Pyganic EC 1.4	pyrethrin	3A	1021-1771	1 pt-2 qts	12 hr	0 d	-	-	-	Fair to Poor
^Pyganic EC 5.0	pyrethrin	3A	1021-1772	4.5-18 fl oz	12 hr	0 d	-	-	-	Fair to Poor
Assail 30SG (2ee)	acetamiprid	4A	8033-36-70506	4.5-5.3 oz	12 hr	1 d	26.7 oz (0.5 lb)	5	> 7 d	Good <sup>#</sup>
Malathion 5EC (2ee)	malathion	1B	19713-217	3 pts	12 hr	1 d	9 pts (6.0 lb)	3	> 7 d	Good
Malathion 8 Aquamul (2ee)	malathion	1B	34704-474	2 pts	12 hr	1 d	6 pts (6.0 lb)	3	> 7 d	Good
Malathion 57 (2ee)	malathion	1B	67760-40-53883	3 pts	12 hr	1 d	9 pts (6.0 lb)	3	> 7 d	Good

\*Refer to label for details and additional restrictions.

#Adding sugar (sucrose) at 2 lb/100 gal water as a feeding stimulant will increase efficacy.

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RASPBERRIES & BLACKBERRIES										
PRODUCT	AI <sup>1</sup>	IRAC group <sup>2</sup>	EPA#	RATE/A	REI <sup>3</sup>	DTH <sup>4</sup>	Max. Prod/A/yr (ai)	Total applic's	Spray Interval	Probable efficacy
^AzaSol		UN	81899-4	6 oz in 50 gal	4 hr	0 d	-	-	-	Fair to Poor
Molt-X	azadirachtin	UN	68539-11	10 oz in 50 gal	4 hr	0 d	-	-	-	Fair to Poor
^Grandevo	<i>Chromobacterium subsugae</i> strain PRAA4-1 and spent fermentation media	UN	84059-27	2-3 lb	4 hr	0 d	-	-	≤ 7 d	Fair to Poor <sup>#</sup>
^Venerate XC	<i>Burkholderia</i> spp. strain A396 and spent fermentation media	UN	84059-14	1-4 qts	4 hr	0 d	-	-	≤ 7 d	Poor

<sup>a</sup> In organic production, Entrust must be rotated with different IRAC insecticides, consider Grandevo or products containing the AI's azadirachtin or pyrethrin.

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STRAWBERRIES										
PRODUCT	AI <sup>1</sup>	IRAC group <sup>2</sup>	EPA#	RATE/A	REI <sup>3</sup>	DTH <sup>4</sup>	Max. Prod/A/yr (ai)	Total applic's	Spray Interval	Probable efficacy
^@Entrust Naturalyte (2ee) <sup>a</sup>	spinosad	5	62719-282	1.25-2 oz	4 hr	1 d	9 oz (0.45 lb)	5	> 5 d	Good to Excellent <sup>#</sup>
^@Entrust SC (2ee) <sup>a</sup>	spinosad	5	62719-621	4-6 fl oz	4 hr	1 d	29 fl oz (0.45 lb)	5	> 5 d	Good to Excellent <sup>#</sup>
@Radiant	spinetoram	5	62719-545	6-10 fl oz	4 hr	1 d	39 fl oz (0.305 lb)	5	> 3 d	Excellent <sup>#</sup>
*Exirel	cyazypyr	28	352-859	13.5-20.5 fl oz	12 hr	1 d	61.5 fl oz (0.4 lb)	3	> 7 d	Excellent
*Brigade WSB (2ee)	bifenthrin	3A	279-3108	8-16 oz	12 hr	0 d	5 lb (0.5 lb)	-	> 7 d	Excellent
*Danitol 2.4EC	fenpropathrin	3A	59639-35	16-21.3 fl oz	24 hr	2 d	42.7 fl oz (0.8 lb)	2	-	Excellent
^Pyganic EC 1.4	pyrethrin	3A	1021-1771	1 pt-2 qts	12 hr	0 d	-	-	-	Fair to Poor
^Pyganic EC 5.0	pyrethrin	3A	1021-1772	4.5-18 fl oz	12 hr	0 d	-	-	-	Fair to Poor
Assail 30SG (2ee)	acetamiprid	4A	8033-36-70506	4.0-6.9 oz	12 hr	1 d	13.8 oz (0.26 lb)	2	> 7 d	Good <sup>#</sup>
Malathion 5EC (2ee)	malathion	1B	19713-217	3.2 pts	12 hr	3 d	12.8 pts (8 lb)	4	> 7 d	Good
Malathion 8 Aquamul (2ee)	malathion	1B	34704-474	2 pts	12 hr	3 d	8 pts (8 lb)	4	> 7 d	Good
Malathion 57 (2ee)	malathion	1B	67760-40-53883	3.2 pts	12 hr	3 d	12.8 pts (8 lb)	4	> 7 d	Good
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