

New Products and Updates for Berry Protection

The following products are new product registrations and changes from October 2018 to April 2019.

Please note **Bravo has a 30 day PHI in strawberries** (correction on page 173 and 185 of Pub 360).

Product (group) PCP #	Insect/Disease	Timing	Rate	Comments	Other Information
Blueberry					
Cormoran (4A & 15) 33353	Cherry Fruitworm	• Petal fall	1.4 L/ha	Apply in a minimum spray volume of 200 L/ha. Repeat applications if needed but do not make applications less than 10 - 14 days apart. Higher spray volumes will minimize the risk of transient phytotoxic symptoms on newly expanded foliage. Do not make a foliar application following a soil application of a Group 4A insecticide. Maximum 2 applications of products from Group 4A per season.	Common name: novaluron + acetamiprid Preharvest interval: 8 days Re-entry period: 12 hours Maximum per season: 3
	Japanese Beetle	• Green fruit	700 mL/ha		
	Aphids	• Green fruit	750 mL/ha		
	Blueberry maggot	• Fruit ripening	1.2-1.4 L/ha		
	Tipworm	• Special sprays	750 mL/ha		
	Gall midge	• Special sprays	750 mL/ha		
Malathion 85E (1B) 8372	Spotted wing drosophila	• Fruit ripening	1 L /1000L water	Suppression only.	Common name: malathion Preharvest interval: 1 day Re-entry period: 2 days Maximum per season: 3
Scorpio Ant and Insect Bait (5) 33306	Spotted wing drosophila	• Fruit ripening	35-45 kg/ha	Suppression only. Scatter the bait on the soil around or near the plants to be protected. Bait can be placed in a ring around the base of individual plants. Apply at the higher rate when spotted wing drosophila pressure is high. Reapply after heavy rain or watering. Reapply as the bait is consumed or every 4 weeks. This is a different use pattern and there is limited commercial experience with this product in Ontario.	Common name: spinosad Preharvest interval: 1 day Re-entry period: 12 hours Maximum per season: 3

Currant and Gooseberry					
Cormoran (4A & 15) 33353	Aphids	<ul style="list-style-type: none"> • Just before blossoms open • Green fruit • postharvest 	750 mL/ha	Apply in a minimum spray volume of 200 L/ha. Repeat applications if needed but do not make applications less than 10 - 14 days apart. Higher spray volumes will minimize the risk of transient phytotoxic symptoms on newly expanded foliage. Maximum 2 applications of products from Group 4A per season.	Common name: novaluron + acetamiprid Preharvest interval: 8 days Re-entry period: 12 hours Maximum per season: 3
	Japanese Beetle	<ul style="list-style-type: none"> • Postharvest 	700 mL/ha		
Summer-Fruit Raspberry and Blackberry					
Malathion 85E (1B) 8372	Spotted wing drosophila	<ul style="list-style-type: none"> • Preharvest and harvest 	975 mL /1000L water	Suppression only.	Common name: malathion Preharvest interval: 1 day Re-entry period: 1 day Maximum per season: 2
Scorpio Ant and Insect Bait (5) 33306	Spotted wing drosophila	<ul style="list-style-type: none"> • Preharvest and harvest 	35-45 kg/ha	Suppression only. Scatter the bait on the soil around or near the plants to be protected. Bait can be placed in a ring around the base of individual plants. Apply at the higher rate when spotted wing drosophila pressure is high. Reapply after heavy rain or watering. Reapply as the bait is consumed or every 4 weeks. This is a different use pattern and there is limited commercial experience with this product in Ontario.	Common name: spinosad Preharvest interval: 1 day Re-entry period: 12 hours Maximum per season: 3
Fall-Bearing Raspberry					
Malathion 85E (1B) 8372	Spotted wing drosophila	<ul style="list-style-type: none"> • Preharvest and harvest 	975 mL /1000 L water	Suppression only.	Common name: malathion Preharvest interval: 1 day Re-entry period: 1 day Maximum per season: 2

Product (group) PCP #	Insect/Disease	• Timing	Rate	Comments	Other Information
Scorpio Ant and Insect Bait (5) 33306	Spotted wing drosophila	• Preharvest and harvest	35-45 kg/ha	Suppression only. Scatter the bait on the soil around or near the plants to be protected. Bait can be placed in a ring around the base of individual plants. Apply at the higher rate when spotted wing drosophila pressure is high. Reapply after heavy rain or watering. Reapply as the bait is consumed or every 4 weeks. This is a different use pattern and there is limited commercial experience with this product in Ontario.	Common name: spinosad Preharvest interval: 1 day Re-entry period: 12 hours Maximum per season: 3
Saskatoon berries					
Cormoran (4A & 15) 33353	Spanworm	• Flower bud break	1.4 L/ha	Apply in a minimum spray volume of 200 L/ha. Repeat applications if needed but do not make applications less than 10 - 14 days apart. Higher spray volumes will minimize the risk of transient phytotoxic symptoms on newly expanded foliage. Do not make a foliar application following a soil application of a Group 4A insecticide. Maximum 2 applications of products from Group 4A per season.	Common name: novaluron + acetamiprid Preharvest interval: 8 days Re-entry period: 12 hours Maximum per season: 3
	Japanese beetles	• Green fruit	700 mL/ha		
	Aphids	• Special sprays	750 mL/ha		
Malathion 85E (1B) 8372	Spotted wing drosophila	• Special sprays	1 L mL /1000 L water	Suppression only.	Common name: malathion Preharvest interval: 1 day Re-entry period: 12 hours Maximum per season: 3
Non-bearing strawberries					

Cormoran (4A & 15) 33353	Strawberry aphids	<ul style="list-style-type: none"> • May or early June • One month after planting and again once or twice at 2-week intervals • Mid-August and again once or twice 	500-750 mL/ha	Adequate coverage is essential, apply in a minimum spray volume of 200 L/ha. Begin applications when insect populations reach economic thresholds. Use the high rate under heavy pressure. Do not apply more than once every 10 - 14 days. Do not apply when bees are active. Do not make a foliar application following a soil application of a Group 4A insecticide. Maximum 2 applications of products from Group 4A per season.	Common name: novaluron + acetamiprid Preharvest interval: 1 day Re-entry period: 12 hours Maximum per season: 3
	Potato leafhoppers	<ul style="list-style-type: none"> • July to mid-August 			
Tivano* (NC) 30468	Powdery mildew	<ul style="list-style-type: none"> • July to mid-August 	1.4% v/v + (silicone based surfactant) Xiameter OFX-0309 fluid at 0.05%	Suppression only. Do not use silicone-based surfactant if angular leaf spot disease is active. Apply when disease is active. Apply in sufficient spray volume to ensure thorough coverage (usually 500-700 L/ha).	Common name: citric acid + lactic acid Preharvest interval: 0 days Re-entry period: 4 hours/when dry Maximum per season: none
	Angular leaf spot	<ul style="list-style-type: none"> • July to mid-August 			

Product (group) PCP #	Insect/Disease	• Timing	Rate	Comments	Other Information
Scorpio Ant and Insect Bait (5) 33306	Wireworms	<ul style="list-style-type: none"> • At planting or shortly after 	25-50 kg/ha	Reduces damage only, does not provide control or suppression. Incorporate into the soil at planting to a depth of 10-20 cm. There is limited experience with this product in Ontario.	Common name: spinosad Preharvest interval: 1 day Re-entry period: 12 hours Maximum per season: 3
June-bearing strawberry					
Cormoran (4A & 15) 33353	Strawberry aphids	<ul style="list-style-type: none"> • When flower buds are visible in the crown • Green fruit • New growth after renovation • Mid-August and again once or twice 	500-750 mL/ha	Adequate coverage is essential, apply in a minimum spray volume of 200 L/ha. Begin applications when insect populations reach economic thresholds. Use the high rate under heavy pressure. Do not apply more than once every 10 - 14 days. Do not apply when bees are active. Do not make a foliar application following a soil application of a Group 4A insecticide. Maximum 2 applications of products from Group 4A per season.	Common name: novaluron + acetamiprid Preharvest interval: 1 day Re-entry period: 12 hours Maximum per season: 3
	Strawberry clipper weevil	<ul style="list-style-type: none"> • As flower buds extend from the crown 	900 mL/ha		
	Tarnished plant bug	<ul style="list-style-type: none"> • As flower buds extend from the crown • Green fruit 	900 mL/ha		
Malathion 85E (1B) 8372	Spotted wing drosophila	<ul style="list-style-type: none"> • Preharvest 	1 L /1000L water	Suppression only.	Common name: malathion Preharvest interval: 3 days Re-entry period: 12 hours Maximum per season: 2

Scorpio Ant and Insect Bait (5) 33306	Spotted wing drosophila	<ul style="list-style-type: none"> Preharvest 	35-45 kg/ha	<p>Suppression only. Scatter the bait on the soil around or near the plants to be protected. Bait can be placed in a ring around the base of individual plants. Apply at the higher rate when spotted wing drosophila pressure is high. Reapply after heavy rain or watering. Reapply as the bait is consumed or every 4 weeks. This is a different use pattern and there is limited commercial experience with this product in Ontario.</p>	<p>Common name: spinosad Preharvest interval: 1 day Re-entry period: 12 hours Maximum per season: 3</p>
Tivano* (NC) 30468	Powdery mildew	<ul style="list-style-type: none"> New growth after renovation 	1.4% v/v + (silicone based surfactant) Xiameter OFX-0309 fluid at 0.05%	<p>Suppression only. Do not use silicone-based surfactant if angular leaf spot disease is active. Apply when disease is active. Apply in sufficient spray volume to ensure thorough coverage (usually 500-700 L/ha).</p>	<p>Common name: citric acid + lactic acid Preharvest interval: 0 days Re-entry period: 4 hours/when dry Maximum per season: none</p>
	Angular leaf spot	<ul style="list-style-type: none"> Mid-August and again once or twice 	1.7% v/v	<p>Suppression only. Do not use silicone-based surfactant if angular leaf spot disease is active. Apply when disease is active (bacterial exudates) to prevent the spread by rain or mechanical disturbance. Apply in sufficient spray volume to ensure thorough coverage (usually 500-700 L/ha).</p>	<p>Common name: citric acid + lactic acid Preharvest interval: 0 days Re-entry period: 4 hours/when dry Maximum per season: none</p>

Day Neutral Strawberry

Product (group) PCP #	Insect/Disease	Timing	Rate	Comments	Other Information
Cormoran (4A & 15)	Strawberry clipper weevil	<ul style="list-style-type: none"> When flower buds extend 	900 mL/ha	Adequate coverage is essential, apply in a minimum spray volume of 200 L/ha. Begin applications when insect populations reach	<p>Common name: novaluron + acetamiprid Preharvest interval: 1 day</p>

33353		from the crown		economic thresholds. Use the high rate under heavy pressure. Do not apply more than once every 10 - 14 days. Do not apply when bees are active. Do not make a foliar application following a soil application of a Group 4A insecticide. Maximum 2 applications of products from Group 4A per season.	Re-entry period: 12 hours Maximum per season: 3
	Strawberry aphids	<ul style="list-style-type: none"> • When flower buds extend from the crown • Bloom, green fruit and harvest 	500-750 mL/ha		
	Tarnished plant bugs	<ul style="list-style-type: none"> • When flower buds extend from the crown • Bloom, green fruit and harvest (June, July, August) • Bloom, green fruit and harvest (September) 	900 mL/ha		
	Potato leafhoppers	<ul style="list-style-type: none"> • Bloom, green fruit and harvest (June, July, August) 	500-750 mL/ha	Adequate coverage is essential, apply in a minimum spray volume of 200 L/ha. Begin applications when insect populations reach economic thresholds. Use the high rate under heavy pressure. Do not apply more than once every 10 - 14 days. Do not apply when bees are active. Do not make a foliar application following a soil application of a Group 4A insecticide. Maximum 2 applications of products from Group 4A per season.	Common name: novaluron + acetamiprid Preharvest interval: 1 day Re-entry period: 12 hours Maximum per season: 3
Malathion 85E (1B)	Spotted wing drosophila	<ul style="list-style-type: none"> • Bloom, green fruit and 	1 L /1000L water	Suppression only.	Common name: malathion Preharvest interval: 3 days

8372		harvest (June, July, August) <ul style="list-style-type: none"> • Bloom, green fruit and harvest (September) 			Re-entry period: 12 hours Maximum per season: 2
Scorpio Ant and Insect Bait (5) 33306	Spotted wing drosophila	<ul style="list-style-type: none"> • Bloom, green fruit and harvest (June, July, August) • Bloom, green fruit and harvest (September) 	35-45 kg/ha	Suppression only. Scatter the bait on the soil around or near the plants to be protected. Bait can be placed in a ring around the base of individual plants. Apply at the higher rate when spotted wing drosophila pressure is high. Reapply after heavy rain or watering. Reapply as the bait is consumed or every 4 weeks. This is a different use pattern and there is limited commercial experience with this product in Ontario.	Common name: spinosad Preharvest interval: 1 day Re-entry period: 12 hours Maximum per season: 3
Tivano* (NC) 30468	Powdery mildew	<ul style="list-style-type: none"> • Bloom 	1.4% v/v + (silicone based surfactant) Xiameter OFX-0309 fluid at 0.05%	Suppression only. Do not use silicone-based surfactant if angular leaf spot disease is active. Apply when disease is active. Apply in sufficient spray volume to ensure thorough coverage (usually 500-700 L/ha).	Common name: citric acid + lactic acid Preharvest interval: 0 days Re-entry period: 4 hours/when dry Maximum per season: none
	Angular leaf spot	<ul style="list-style-type: none"> • Bloom 	1.7% v/v	Suppression only. Do not use silicone-based surfactant if angular leaf spot disease is active. Apply when disease is active (bacterial exudates) to prevent the spread by rain or mechanical disturbance. Apply in sufficient spray volume to ensure thorough coverage (usually 500-700 L/ha).	

*Potentially organic. Check with certifying body.

