

Group	3	Insecticide
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UP-Cyde® 2.5 EC

Insecticide

Emulsifiable Concentrate

AGRICULTURAL

ACTIVE INGREDIENT:

Cypermethrin250 g per litre

**READ THE LABEL AND ENTIRE LEAFLET BEFORE USING
KEEP OUT OF REACH OF CHILDREN**

EYE AND SKIN IRRITANT

DANGER



POISON

**REGISTRATION NO. 28795
PEST CONTROL PRODUCTS ACT**

NET CONTENTS: 1 Litre, 3.79 Litre, 5 Litre and 10 Litre

UPL NA Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406, USA

1-800-438-6071

For Chemical Emergency: spill, leak, fire, exposure or accident,
call CHEMTREC 1-800-424-9300

NOTICE TO USER

This control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label.

UP-Cyde 2.5EC is a synthetic pyrethroid insecticide of low mammalian toxicity. It is a fast acting stomach and contact insecticide with no systemic or fumigant effect.

FIRST AID

IN CASE OF POISONING Contact a physician or a poison control centre **IMMEDIATELY**.

IF SWALLOWED Call a poison control centre or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

IF ON SKIN/CLOTHING Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

IF IN EYES Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

TOXICOLOGICAL INFORMATION

DANGER: This product contains petroleum distillates – vomiting may cause aspiration pneumonia.

Skin exposure may cause transient sensations (tingling, burning, itching, numbness). Treat symptomatically. Treat symptomatically.

PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN

- Fatal or poisonous if swallowed or absorbed through the skin.
- Causes eye and skin irritation. Avoid contact with skin, eyes and clothing.
- Apply only when the potential for drift to areas of human habitation or areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.
- See booklet for additional information including directions for use, precautions, REIs and personal protective equipment.

Environmental Precautions:

Toxic to aquatic organisms. Observe buffer zones and vegetative filter strips specified under DIRECTIONS FOR USE.

TOXIC to bees. Bees may be exposed through direct spray, spray drift, and residues on leaves, pollen and nectar in flowering crops and weeds. Minimize spray drift to reduce harmful effects on bees in habitats close to the application site. Avoid applications when bees are foraging in the treatment area in ground cover containing blooming weeds. To further minimize exposure to pollinators, refer to the complete guidance “Protecting Pollinators during Pesticide Spraying – Best Management Practices” on Canada.ca (www.canada.ca/pollinators). Follow crop specific directions for application timing.

For applications on crops that are highly attractive to pollinators [canola, rapeseed, mustard, sunflowers, apples, peaches, nectarines, plums, pears, evening primrose, CG12 Stonefruit, Berry and small fruit, CG 13-07F-small fruit vine climbing, 13-07A caneberry, 13-07G-low growing berry, excluding grape and strawberry] or when using managed bees for pollination services: DO NOT apply during the crop blooming period.

For applications on all other pollinator attractive crops [strawberry, grape, corn, potato, tobacco, tomato, summer fallow, roadsides, headlands]: Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to evening when most bees are not foraging.

Toxic to certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to the application site such as hedgerows and woodland.

To reduce runoff from treated areas into aquatic habitats, avoid application to areas with a moderate to steep slope, compacted soil, or clay.

Avoid application when heavy rain is forecast.

To reduce risk to aquatic organisms from runoff, a vegetative filter strip of at least 10 metres wide between the field edge and adjacent, downhill aquatic habitats must be observed, as specified under DIRECTIONS FOR USE.

See booklet for additional information.

STORAGE

Store this product away from food or feed.

SPILL CLEANUP

Wear appropriate protective equipment when attempting to clean up the spill. If the container is leaking, secure leak and place the container into a drum or heavy gauge plastic bag. Contact UPL NA Inc. for further information.

For spills and leaks; contain the liquid with dikes of inert material (soil, clay, kitty litter etc.). Absorb the spill onto inert material and shovel into a sealable waste container.

On hard surfaces - sprinkle spill area with detergent and scrub in a small quantity of

water with a coarse broom. Let stand 10 minutes then absorb onto an inert material and shovel into the waste container.

On soil - remove the top 15 cm of soil in the spill area and replace with fresh soil. Dispose of all waste including scrub brush in accordance with provincial requirements.

For more information on the disposal of waste and the clean up of spills, contact the Provincial Regulatory Agency or the manufacturer. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

DECONTAMINATION AND DISPOSAL

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean up of spills.

CONTAINER DISPOSAL:

FOR DISPOSAL OF PLASTIC JUGS:

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

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UP-Cyde is a registered trademark of United Phosphorus, Inc.

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PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN

- Fatal or poisonous if swallowed or absorbed through the skin.
- Causes eye and skin irritation. Avoid contact with skin, eyes and clothing.
- For application with groundboom equipment, wear coveralls over long sleeved shirt and long pants, chemical resistant gloves, socks and chemical resistant footwear during mixing, loading, application, clean up and repair. For application with airblast equipment, wear coveralls over long sleeved shirt and long pants, chemical resistant gloves, socks and chemical resistant footwear during mixing, loading, application, clean up and repair. Wear goggles or face shield during mixing/loading for all equipment. Wash thoroughly after handling and before

- eating or smoking.
- DO NOT enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours except for sweet corn hand harvesting (5 days) and grape girdling or turning (7 days).
 - . Apply only when the potential for drift to areas of human habitation or areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

ENVIRONMENTAL PRECAUTIONS

Toxic to aquatic organisms. Observe buffer zones and vegetative filter strips specified under DIRECTIONS FOR USE.

TOXIC to bees. Bees may be exposed through direct spray, spray drift, and residues on leaves, pollen and nectar in flowering crops and weeds. Minimize spray drift to reduce harmful effects on bees in habitats close to the application site. Avoid applications when bees are foraging in the treatment area in ground cover containing blooming weeds. To further minimize exposure to pollinators, refer to the complete guidance “Protecting Pollinators during Pesticide Spraying – Best Management Practices” on Canada.ca (www.canada.ca/pollinators). Follow crop specific directions for application timing.

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For applications on all other pollinator attractive crops [strawberry, grape, corn, potato, tobacco, tomato, summer fallow, roadsides, headlands]: Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to evening when most bees are not foraging.

Toxic to certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to the application site such as hedgerows and woodland.

To reduce runoff from treated areas into aquatic habitats, avoid application to areas with a moderate to steep slope, compacted soil, or clay.

Avoid application when heavy rain is forecast.

To reduce risk to aquatic organisms from runoff, a vegetative filter strip of at least 10 metres wide between the field edge and adjacent, downhill aquatic habitats must be observed, as specified under DIRECTIONS FOR USE.

STORAGE

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SPILL CLEANUP

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For spills and leaks; contain the liquid with dikes of inert material (soil, clay, kitty litter etc.). Absorb the spill onto inert material and shovel into a sealable waste container.

On hard surfaces - sprinkle spill area with detergent and scrub in a small quantity of water with a coarse broom. Let stand 10 minutes then absorb onto an inert material and shovel into the waste container.

On soil - remove the top 15 cm of soil in the spill area and replace with fresh soil. Dispose of all waste including scrub brush in accordance with provincial requirements.

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2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

For Chemical Emergency: spill, leak, fire, exposure or accident,
call CHEMTREC 1-800-424-9300

DIRECTIONS FOR USE

PRECAUTIONS

- Avoid application when temperatures are above 27°C. Best control is obtained at cooler temperatures.
- Cover crop or crop treated with UP-Cyde 2.5EC must not be used as a green feed for animals except as noted for corn, rutabagas and turnips.

- To protect pollinators, follow the instructions regarding bees in the ENVIRONMENTAL PRECAUTIONS section.
- As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.
- DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.
- Crop Rotation: Rotational crops may not be planted within 30 days after the last application, except crops on which cypermethrin is registered (listed on this label)
- A 30-day plant-back interval must be observed for all unlabelled crops.
- Unless otherwise specified, the restricted-entry interval (REI) for all activities is 12 hours.

Vegetative Filter Strips:

A Vegetative Filter Strip (VFS) of at least 10 metres wide must be constructed and maintained. The VFS is required between the field edge and adjacent, downhill aquatic habitats to reduce risk to aquatic organisms from runoff. Aquatic habitats include, but are not limited to, lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, and estuaries.

The VFS is to be composed of grasses and may also include shrubs, trees, or other vegetation. Additional guidance can be found on the PMRA Environmental Risk Mitigation webpages.

Both VFS and spray drift buffer zones must be observed.

Spray Drift Buffer Zones:

Spray drift buffer zones are to protect terrestrial and aquatic habitats from spray drift in the air. Spray drift buffer zones are a separate requirement from VFS which are required to mitigate risks from runoff on the ground.

Field sprayer application: DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply when wind speed is greater than 8 km/h at the site of application. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) medium classification. Air-induction nozzles must be used for the ground application of this product. Boom height must be 60 cm or less above the crop or ground.

Airblast application: DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** direct spray above plants to be treated. Turn off outward pointing nozzles at row ends and outer rows. **DO NOT** apply when wind speed is greater than 16 km/h at the application site as measured outside of the treatment area on the upwind side.

Aerial application: DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply when wind speed is greater than 8 km/h at flying height at the site of application. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) medium-

coarse classification. DO NOT apply under weather conditions of less than 50% relative humidity and temperatures greater than 20°C. Reduce drift caused by turbulent wingtip vortices. Nozzle distribution along the spray boom length MUST NOT exceed 65% of the wing- or rotorspan.

Buffer zones:

Spot treatments using hand-held equipment **DO NOT** require a buffer zone.

The buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine/marine habitats.

Buffer Zones Required

Method of application	Crop	Buffer Zones (metres) Required for the Protection of:			
		Freshwater Habitat of Depths:		Estuarine/Marine Habitat of Depths:	
		Less than 1 m	Greater than 1 m	Less than 1 m	Greater than 1 m
Field sprayer	Tobacco pre-plant	20	10	100	45
	Tobacco seedling	15	5	85	40
	Corn	20	10	55	25
	Conifer seedling, canola, mustard, tobacco post-treatment, stevia, potato, carrot, lettuce, onions, strawberry	15	5	55	25
	Barley, wheat, evening primrose	10	4	55	25
	Cole crops (cabbage, broccoli, cauliflower, Brussels sprouts), rutabaga, turnip	10	5	40	20
	Asparagus, celery, tomato	10	4	30	15
	Tobacco cover crop	5	3	30	15
	Roadside, summer fallow, headland, sunflower	5	3	25	10
	Bushberries (Crop Subgroup 13-07B)	15	5	55	25
	Caneberries (Crop Subgroup 13-07A)				
	Low growing berries (excluding lowbush blueberries)				

Airblast	Apple, pear, plum	Early growth stage	75	65	90	80
	Grape, peach, nectarine	Early growth stage	70	60	85	75
	Cherries (Crop Subgroup 12-09A)	Early growth stage	70	60	90	80
	Bushberries (Crop Subgroup 13-07B)	Early growth stage				
	Caneberries (Crop Subgroup 13-07A)	Early growth stage	75	65	90	85
	Low growing berries (excluding lowbush blueberries)	Early growth stage				
Aerial	Corn	Fixed wing	800	625	800	800
		Rotary wing	800	500	800	800
	Canola	Fixed wing	775	475	800	800
		Rotary wing	425	200	800	800
	Sunflower	Fixed wing	750	450	800	800
		Rotary wing	350	175	800	800
	Potato	Fixed wing	800	600	800	800
		Rotary wing	725	325	800	800

For tank mixes, consult the labels of the tank-mix partners and observe the largest (most restrictive) buffer zone of the products involved in the tank mixture and apply using the coarsest spray (ASAE) category indicated on the labels for those tank mix partners.

The buffer zones for airblast application of this product can be modified based on weather conditions and spray equipment configuration by accessing the Buffer Zone Calculator on the PMRA web site. Buffer zones for field sprayer or aerial application CANNOT be modified using the Buffer Zone Calculator.

DIRECTIONS FOR USE - Ground Equipment Only

FRUITS (Apples, Pears, Peaches, Plums, Grapes, Strawberries): Follow provincial spray calendars for optimum timing of spray applications. **NOTE:** Repeated applications are not advised in orchards where integrated pest management is in effect because severe reductions of beneficial arthropods may result.

APPLES: Bud moth, Spotted Tentiform Leafminer, Leafrollers, Plum Curculio, Apple Maggot, Codling Moth, Tarnished Plant Bug, Green Fruit Worm, Mullein Bug, Apple Brown Bug - Apply at 400 mL/ha. For **Bud moth, Leafrollers, Plum Curculio and Codling Moth**, apply when insects or damage first appear. For **Spotted Tentiform Leafminer**, apply at peak emergence of the first and later generations of adults. Follow recommendations for the timing of sprays as given by local agricultural authorities based on insect monitoring. For **Apple Maggot**, apply first spray when adults appear in late June or early July. Repeat sprays every 10 days. UP-Cyde 2.5EC is not to be used more than 3 times during the season. Do not apply within 7 days of harvest. **Apple Leaf curling Midge and White Apple Leafhopper** - Apply at 400 mL/ha when insects or damage first appear. **Winter Moth** - Apply at 280 mL/ha when insects or damage first appear. **Tarnished Plant Bug** – Apply pre-bloom and/or at calyx. **Green Fruit Worm** - Apply at the pink-bud or calyx stage. **Mullein Bug, Apple Brown Bug** - Apply at the calyx stage if necessary. UP-Cyde 2.5EC is not to be used more than 3 times during the season. Do not apply within 7 days of harvest. Use 3333 L/ha of water for dilute sprays, with a minimum of 7 days between applications.

Tank Mix with DIPEL - (Restricted for use in Nova Scotia only): Winter Moth, mix 28 mL of UP-Cyde 2.5EC with 560 mL of DiPel® WP and the recommended amount of spreader sticker in 600 to 800 L water and apply to one hectare. Apply once yearly at pre-bloom (half-inch green to pink stage) using an air blast orchard sprayer.

Toxic to bees. DO NOT apply during the crop blooming period.

PEARS: Pear Psylla, Nymphs and Adults (Eastern Canada) and Codling Moth - Apply at 280 mL/ha. For **Pear Psylla**, follow spray calendar recommendations when pest first appears. **Pear Psylla (British Columbia) - Overwintering Adults:** Apply at 200 mL/ha when overwintering adult densities are highest. This usually occurs between silver tip and green tip. **Post Bloom Pear Psylla, Nymphs and Adults**, apply at 400 mL/ha when signs first appear or according to provincial spray calendar recommendations. UP-Cyde 2.5EC does not control the hard shell of Pear Psylla. **Plum Curculio, Green Fruit Worm, Tarnished Plant Bug, Leafrollers** - Apply at 400 mL/ha as necessary following provincial recommendations.

Apply with 500 to 1500 L of water per hectare normally, and with 3333 L of water for dilute sprays. Repeat as necessary up to 3 times per season with a minimum of 7 days between applications. Do not apply within 7 days of harvest.

Toxic to bees. DO NOT apply during the crop blooming period.

GRAPES: Grape Leafhopper and Grape Berry Moth - Apply at 240 mL/ha in 100 to 500 L of water. For **Grape Leafhopper**, apply when insects first appear. For **Grape Berry Moth**, apply shortly before bloom and repeat immediately after bloom. Additional sprays should be applied as insects or damage appear. Do not apply within 7 days of harvest. UP-Cyde 2.5EC is not to be used more than 3 times per season with a minimum of 7 days between applications.

Multicolored Asian lady beetle and Yellow Jackets (foliar spray using airblast equipment) – Apply at 245 mL/ha. Apply in no less than 400 L water per hectare. Ensure enough water volume is used to provide thorough coverage of grapevine foliage. Apply prior to harvest when treatment thresholds have been reached, as determined by local monitoring. Consult local spray calendars or extension specialists for timing. Repeat application if required. **DO NOT USE ON TABLE GRAPES.** Not all grape varieties have been tested. A small area should be treated before widespread sprays are applied. For hand harvest, a maximum of 2 applications with a minimum of 7 days between applications are permitted with a pre-harvest interval of 7 days. For mechanical harvest, a maximum of 3 applications with a minimum of 7 days between applications are permitted with a pre-harvest interval of 2 days.

Toxic to bees. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to evening when most bees are not foraging. When using managed bees for pollination services, **DO NOT** apply during the crop blooming period.

STRAWBERRIES: Strawberry Weevil, Tarnished Plant Bug and Meadow Spittlebug. For **Strawberry Weevil (Clipper)**, apply 280 mL/ha in 100 to 500 L/ha of water when buds are first visible and repeat when first buds show white. For **Tarnished Plant Bug**, apply 400 mL/ha in 100 to 500 L/ha of water at first bloom and repeat 7 to 10 days after first bloom. For **Meadow Spittlebug** apply 280 mL/ha when first buds show white. UP-Cyde 2.5EC is not to be used more than 3 times per season with a minimum of 7 days between applications. Do not apply within 7 days of harvest.

For Mechanically Pressurized Handgun application to strawberry: Wear coveralls (over single layer of clothes) and chemical-resistant gloves during mixing, loading and application.

Toxic to bees. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to evening when most bees are not foraging. When using managed bees for pollination services, **DO NOT** apply during the crop blooming period.

PEACHES, NECTARINES: Oriental fruit moth, Tarnished plant bug and Oak Plant bug. Apply at 280 mL/ha with 550 L of water per hectare for airblast spraying, or with 3333 L of water per hectare for a dilute spray. Do not apply more than 2 applications with a minimum of 7 days between applications. Do not apply within 7 days of harvest. Toxic to bees. **DO NOT** apply during the crop blooming period.

PLUMS: Plum Curculio - Apply at 400 mL/ha in 500 to 1500 L/ha of water when insects or damage first appear. Do not apply more than 3 times per season with a minimum of 7 days between applications. Do not apply within 7 days of harvest.

Oriental fruit moth - Apply at 280 mL/ha with 550 L of water per hectare. Do not apply more than 2 applications. Do not apply within 7 days of harvest. Toxic to bees. **DO NOT** apply during the crop blooming period.

CROP	INSECT	DOSAGE	USE INSTRUCTIONS
Bushberries, CG 13-07B*	Spotted Wing Drosophila (<i>Drosophila suzukii</i>)	245 - 285 mL/ha	Timing of applications should be based on the presence of adult pest (flies) as determined by local monitoring. Do not enter or allow worker entry into treated areas during the REI of 12 hours.
<p>Allow a minimum of 7 days between treatments. Do not apply more than two treatments. Use sufficient water for thorough coverage. Allow a preharvest interval of 2 days. It is recommended that use of Up-Cyde 2.5 EC for spotted wing drosophila be part of an integrated pest management program. Toxic to bees. DO NOT apply during the crop blooming period.</p>			
<p>*Crop Subgroup 13-07B: Aronia berry (<i>Aronia</i> spp.), Blueberry, highbush (<i>Vaccinium</i> spp.), Blueberry, lowbush (<i>Vaccinium angustifolium</i>), Buffalo currant (<i>Ribes aureum</i>), Chilean guava (<i>Myrtus ugni</i>), Currant, black (<i>Ribes nigrum</i>), Currant, red (<i>Ribes rubrum</i>), Elderberry (<i>Sambucus</i> spp.), European barberry (<i>Berberis vulgaris</i>), Gooseberry (<i>Ribes</i> spp.), Highbush cranberry (<i>Viburnum opulus</i> var. <i>americanum</i>), Honeysuckle, edible (<i>Lonicera caerulea</i> var. <i>emphyllocalyx</i>), Huckleberry (<i>Gaylussacia</i> spp.), Jostaberry (<i>Ribes x nidigrolaria</i>), Juneberry (Saskatoon berry) (<i>Amelanchier</i> spp.), Lingonberry (<i>Vaccinium vitisidaea</i>), Native currant (<i>Acrotriche depressa</i>), Salal (<i>Gaultheria shallon</i>), Sea buckthorn (<i>Hippophae rhamnoides</i>), Cultivars, varieties and/or hybrids of these</p>			
Cherries (Crop Subgroup 12- 09A*)	Spotted Wing Drosophila (<i>Drosophila suzukii</i>)	245 - 285 mL/ha	For control of spotted wing drosophila, timing of applications should be based on the presence of adult pest (flies) as determined local monitoring. Do not enter or allow worker entry into treated areas during the REI of 12 hours.
<p>Allow a minimum of 7 days between treatments. Do not apply more than two treatments. Use sufficient water for thorough coverage. Allow a preharvest interval of 2 days. It is recommended that use of Up-Cyde 2.5 EC for spotted wing drosophila be part of an integrated pest management program. Toxic to bees. DO NOT apply during the crop blooming period.</p>			
<p>*Crop Subgroup 12-09A: Capulin (<i>Prunus serotina</i> var. <i>salicifolia</i>), Cherry, black</p>			

<i>(Prunus serotina)</i> , Cherry, Nanking (<i>Prunus tomentosa</i>), Cherry, sweet (<i>Prunus avium</i>), Cherry, tart (<i>Prunus cerasus</i>), Cultivars, varieties and/or hybrids of these			
Caneberries (Crop Subgroup 13-07A*)	Spotted Wing Drosophila (<i>Drosophila suzukii</i>)	245 - 285 mL/ha	Timing of applications should be based on the presence of adult pest (flies) as determined by local monitoring. Do not enter or allow worker entry into treated areas during the REI of 12 hours.
Allow a minimum 7 days between treatments. Do not apply more than three treatments. Use sufficient water for thorough coverage. Allow a preharvest interval of 2 days. It is recommended that use of Up-Cyde 2.5 EC for spotted wing drosophila be part of an integrated pest management program. Toxic to bees. DO NOT apply during the crop blooming period.			
*Crop Subgroup 13-07A: Blackberry (including Andean blackberry, arctic blackberry, bingleberry, black satin berry, boysenberry, brombeere, California blackberry, Chesterberry, Cherokee blackberry, Cheyenne blackberry, common blackberry, coryberry, darrowberry, dewberry, Dirksen thornless berry, evergreen blackberry, Himalaya berry, hullberry, lavacaberry, loganberry, lowberry, Lucretiaberry, mammoth blackberry, marionberry, mora, mures deronce, nectarberry, Northern dewberry, olallieberry, Oregon evergreen berry, phenomenal berry, rangeberry, ravenberry, rossberry, Shawnee blackberry, Southern dewberry, tayberry, youngberry, zarzamora, and cultivars, varieties and/or hybrids of these), Loganberry (<i>Rubus loganobaccus</i>), Raspberry, black and red (<i>Rubus spp.</i>), Wild raspberry (<i>Rubus muelleri</i>) and cultivars, varieties and/or hybrids of these.			
Low growing berries (excluding lowbush blueberries)	Spotted Wing Drosophila (<i>Drosophila suzukii</i>)	245 - 285 mL/ha	Timing of applications should be based on the presence of adult pest (flies) as determined by local monitoring. Do not enter or allow worker entry into treated areas during the REI of 12 hours.
Allow a minimum 7 days between treatments. Do not apply more than three treatments per crop per year. Use sufficient water for thorough coverage. Allow a preharvest interval of 2 days. It is recommended that the use of 2.5 EC for spotted wing drosophila be part of an integrated pest management program. Toxic to bees. DO NOT apply during the crop blooming period.			
*Low growing berries: Bearberry (<i>Arctostaphylos uva-ursi</i>), Bilberry (<i>Vaccinium myrtillus</i>), Cloudberry (<i>Rubus chamaemorus</i>), Cranberry (<i>Vaccinium macrocarpon</i>), Lingonberry (<i>Vaccinium vitis-idaea</i>), Muntries (<i>Kunzea pomifera</i>), Partridgeberry (<i>Mitchella repens</i>), Strawberry (<i>Fragaria x ananassa</i>), and cultivars, varieties and/or hybrids of these			

VEGETABLES

(Asparagus, Carrots, Celery, Cole Crops, Onions, Potatoes, Rutabagas, Tomatoes, Turnips): Apply at the rates indicated for each crop listed. Use sufficient water for thorough coverage unless the water volume is specified.

ASPARAGUS: Asparagus Beetle - Apply at 140 mL/ha in 100 to 500 L/ha of water to spears and ferns when insects are first observed. Repeat as required for a maximum of 3 applications per season with a minimum of 7 days between applications. Do not apply within 1 day of harvest.

CARROTS: Carrot Rust Fly - Apply at 280 mL/ha with 550 L of water per hectare when insects are first noticed. Follow recommendations for timing of sprays as given by local agricultural authorities based on insect monitoring. Do not apply more than 3 times per season with a minimum of 7 days between applications. Do not apply within 35 days of harvest.

CELERY: Potato Leafhopper - Apply at 140 mL/ha in 500 L of water per hectare when insects are first noticed. Repeat as required up to 3 applications per season with a minimum of 7 days between applications. Do not apply within 7 days of harvest.

COLE CROPS (Cabbage, Cauliflower, Broccoli, Brussels Sprouts): Cabbage Looper, Imported Cabbage Worm, Diamondback Moth Larvae, Flea Beetles - Apply at 140 mL/ha in 100 to 500 L/ha of water. Add AGRAL 90 surfactant at 0.03% v/v (300 mL/1000 L of spray mix). Do not apply to muck soils. Use as needed at 2-week intervals up to a maximum of 3 applications per season. Leave a 3-day interval between the last spray and harvest. **Thrips** - Apply 200 mL/ha in 100 to 500 L/ha of water. Add AGRAL 90 surfactant at 0.03% v/v (300 mL/1000 L of spray mix). Do not apply to muck soils. Use as needed at 2-week intervals up to a maximum of 3 applications per season. Leave a 3-day interval between the last spray and harvest.

CORN: (Sweet and Field): European Corn Borer - Apply at 280 mL/ha in 300 to 500 L of water per hectare using a boom and nozzle arrangement to ensure thorough spray coverage. Spray no later than when the first feeding is seen on foliage. Repeat sprays at 7-day intervals depending on the area and corn borer numbers (consult provincial agricultural representatives). Where there are two generations, late plantings of sweet corn will require sprays from the late whorl stage until close to harvest. Do not apply more than 3 times per season. Do not apply within 5 days of harvest. **Sweet corn plants refused from processing plants and field corn silage derived from corn treated with UP-Cyde 2.5EC at the recommended rate and spray/harvest interval may be fed to lactating dairy cattle or beef cattle.**

Toxic to bees. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to evening when most bees are not foraging. When using managed bees for pollination services, DO NOT apply during the crop blooming period.

LETTUCE: Aster Leafhopper - Apply 200 mL/ha in 100 to 500 L of water per ha beginning when damage or insects are first noticed. Apply up to 4 applications at 7- to 14-day interval. Do not apply within 14 days of harvest.

NOT FOR GREENHOUSE USE

ONIONS: Onion Maggots - To control onion maggots later in the growing season or on windrow onions prior to harvest, apply at 280 mL/ha in 100 to 500 L of water per ha. Follow recommendations for timing of sprays as given by local agricultural authorities based on insect monitoring. **Thrips** - Apply at 280 mL/hectare in in 100 to 500 L of water per ha. Apply at 10-day intervals as advised by local agricultural authorities. Do not apply more than 3 times per season. Do not apply within 3 days of harvest.

POTATOES: Colorado Potato Beetle, Potato Flea Beetle, Potato Leafhopper, Tuber Flea Beetle - Apply at 140 mL/ha in 100 to 500 L of water per ha when first signs of insects appear and damage is visible. Repeat as required up to a maximum of 3 applications per season with a minimum of 10 days between applications. **Tarnished Plant Bugs:** Apply 200 mL/ha in 100 to 500 L of water per ha when insects appear. Repeat sprays as required up to a maximum of 3 applications per season with a minimum of 10 days between applications. Do not apply within 7 days of harvest.

Toxic to bees. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to evening when most bees are not foraging. When using managed bees for pollination services, DO NOT apply during the crop blooming period.

RUTABAGAS AND TURNIPS: Crucifer Flea Beetles - Apply at 200 mL/ha in 100 to 500 L/ha of water when insects appear. Repeat as required up to 3 times per season with a minimum of 7 days between applications. Do not apply within 21 days of harvest. Roots and tops may be fed to lactating dairy animals after the spray/harvest interval.

TOMATOES: Colorado Potato Beetle, Potato Flea Beetle, Potato Leafhopper - Apply at 140 mL/ha in 100 to 500 L/ha of water when first signs of insects appear and damage is visible. Repeat as required up to 3 times per season with a minimum of 7 days between applications. Do not apply within 3 days of harvest.

Toxic to bees. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to evening when most bees are not foraging. When using managed bees for pollination services, DO NOT apply during the crop blooming period.

NOT FOR GREENHOUSE USE

FIELD CROPS:

For control of grasshoppers and flea beetles use a minimum of 110 litres of water per hectare. Use a spray pressure of 250 - 300 kPa. Maximum of 3 applications per year with a minimum interval between applications of 7 days.

CROP	INSECT	DOSAGE	USE INSTRUCTIONS
Wheat Barley Summer Fallow Roadsides Headlands Canola	Grasshoppers	81 - 114 mL/ha Use the lower rates for small grasshoppers (5 mm long) and when soil temperatures are cool (15° - 20°C)	Apply when insects or signs of insect damage first appear. Repeat treatment as necessary. Use the higher rate for older insects or severe infestations.
Research clearly indicates that UP-Cyde 2.5EC activity is inversely temperature dependent. Activity on grasshoppers is reduced as soil temperatures increase.			
<p><u>Grasshoppers</u> Apply during early stage of insect development - up to the fourth instar (approximately 15 mm and before wing development).</p> <p><u>Temperature</u> Avoid spraying when temperatures are above 25°C. Above 25°C delay spraying until evening. Critical temperatures often occur on light, sandy loam soils after June 10th and on heavy clay loam soils after June 15th. If these high temperatures continue for 2-4 days, the use of UP-Cyde 2.5EC for grasshopper control should be discontinued.</p> <p><u>Note:</u> The above label directions are for grasshoppers only. No other insects have been identified that show this inverse temperature dependency. Allow 30 days between the last treatment and harvest for wheat. Allow 45 days for barley. Allow 30 days for rapeseed. For summer fallow, roadsides, and headlands: Toxic to bees. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to evening when most bees are not foraging. When using managed bees for pollination services, DO NOT apply during the crop blooming period. For canola: Toxic to bees. DO NOT apply during the crop blooming period.</p>			

Field Crops (Evening Primrose, Rapeseed, Mustard, Sunflowers and Tobacco) – Follow specific directions given for each crop listed. Unless otherwise indicated use sufficient water for thorough coverage.

EVENING PRIMROSE: Seed Weevil, Tarnished Plant Bug and *Microlepidoptera* spp. – Apply 280 mL in 300 L of water per ha at 2- to 3-week intervals when an insect population reaches an economic (significant) level. Apply a maximum of three applications per year. Toxic to bees. DO NOT apply during the crop blooming period.

RAPESEED (CANOLA) AND MUSTARD: Crucifer Flea Beetle - Apply 140 mL/ha in 100 to 500 L/ha of water when leaf injury is first noticed. **Bertha Armyworm** - Apply 200 to 280 mL/ha in 100 to 500 L/ha of water. Use higher rate for high infestations. Do not apply within 30 days of harvest. Maximum number of applications per year is 3. Minimum number of days between applications is 7. Toxic to bees. DO NOT apply during the crop blooming period.

SUNFLOWERS: Sunflower Beetle - Apply at 100 mL/ha in 100 to 120 L of water per hectare when insects first appear. Repeat if required up to 2 times per season with a

minimum of 7 days between applications. Do not apply within 70 days of harvest. **Sunflower Seed Weevil** - Apply at 100 mL/ha in 100 to 120 L of water per hectare when insects first appear. Repeat if required up to 2 times per season with a minimum of 7 days between applications. Do not apply within 70 days of harvest. Toxic to bees. DO NOT apply during the crop blooming period.

TOBACCO: Cutworm (Darksided and White) Control: Tobacco (Greenhouse Plants): Mix 4.8 mL (1 teaspoonful) in 15 L of water and apply to 100 m² of plant bed. Do not apply by fogger or hand-held mistblower. **Tobacco (Field):** For control of darksided cutworm and white cutworm, by methods given below, apply the recommended rate of UP-Cyde 2.5EC in 225 to 450 L of water per hectare using nozzle pressure of 175 to 350 kPa. Cutworm activity is greatest during the late evening and night. Application of UP-Cyde 2.5EC should be timed as close as possible to insect feeding activity. **Cover Crop Treatment:** Apply 140 mL per hectare once to rye or wheat cover when crop is 10 to 15 cm high, 4-5 days before ploughdown. Application should also be made to fence rows and to a 15 m strip into nearby cover crop. Allow 60 days between the last treatment and harvest in barley and 30 days on wheat. Do not use treated cover crops as green feed for animals. **Soil Treatment:** Apply 280 mL per hectare once to the soil 5 days before transplanting. Do not incorporate. Do not disturb the soil surface for at least 5 days following treatment since mixing of UP-Cyde 2.5EC with soil will reduce its effectiveness. Application should also be made to fence rows and to a 15 m strip into nearby cover crops.

Post Planting Treatment: At transplanting, apply 280 mL per hectare of area sprayed in a 25 cm band over the row using 150 to 300 L of water per hectare. Under conditions of severe insect pressure, application should be made to fence rows and to a 15 m wide strip into nearby cover crops. A follow-up treatment may be necessary if there are late developing cutworms. Maximum 2 applications per season with a minimum of 7 days between applications.

Toxic to bees. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to evening when most bees are not foraging. When using managed bees for pollination services, DO NOT apply during the crop blooming period.

STEVIA: Cutworms-black, variegated and darksided - Apply at 280 mL/ha in sufficient water. Use a minimum of 100 litres and no more than 500 litres of spray solution per hectare. Maximum of two applications per year. Apply post transplant as indicated by scouting. Do not apply within 50 days of harvest.

CUTWORMS IN OTHER CROPS

DIRECTIONS FOR USE

Use 200 - 500 L of water per hectare using a spray pressure of 175 - 300 kPa.

CROP	INSECT	DOSAGE	MAXIMUM # APPLICATIONS	MINIMUM INTERVAL BETWEEN	USE INSTRUCTIONS
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				APPLICATIONS	
Lettuce	Cutworms - black, white, darksided, redbacked, army and pale western	285 mL/ha when cutworms or signs of cutworm feeding appear	3	7 days	Spray under warm moist conditions and do not disturb the soil surface for at least 5 days. Applications may be made to adjacent fence rows, but do not allow drift to contaminate adjacent crops.
Carrot seedlings			3	7 days	
Onions - seedling and transplants			1	n/a	
Cole crops (such as cabbage, cauliflower, broccoli, and Brussels sprouts) - seedlings			1	n/a	
Potatoes			2	10 days	
Corn - seedlings			1	n/a	
Wheat			1	n/a	
Barley			1	n/a	
Allow 21 days between last treatment and harvest. For corn and potatoes: Toxic to bees. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to evening when most bees are not foraging. When using managed bees for pollination services, DO NOT apply during the crop blooming period.					
Potatoes	Variegated (climbing cutworms)	285 mL/ha	2	10 days	Apply when cutworms or signs of cutworm feeding appear. Ensure good penetration of dense foliage.
Allow 7 days between last treatment and harvest. Toxic to bees. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to evening when most bees are not foraging. When using managed bees for pollination services, DO NOT apply during the crop blooming period.					

Note: UP-Cyde 2.5EC will only control climbing cutworms or cutworms which surface to feed.

CONIFER SEEDLING (NURSERY): Tarnished Plant Bug (Lygus sp) - Apply 280 mL/ha in 100 - 500 L of water per ha. Maximum of 3 applications per growing season. Minimum 7 days between applications. **NOT FOR GREENHOUSE USE.** Do not apply using back pack sprayers. Do not apply before stock thinning.

DIRECTIONS FOR USE

AERIAL APPLICATION

UP-Cyde 2.5EC may be applied once or twice per season as indicated for each crop listed below.

Specific Use Directions for Aerial Application

Read and understand the entire label before using this product.

Apply only by fixed-wing or rotary aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label.

Label rates, conditions and precautions are product specific. Apply only at the rate recommended for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment.

Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage. Apply only under conditions of good practice specific to aerial application as outlined in the National Aerial Pesticide Application Manual, developed by the Federal/Provincial/Territorial Committee on Pest Management and Pesticides.

Operator Precautions

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted.

It is desirable that the pilot have communication capabilities at each treatment site at the time of application.

The field crew and the mixer/loaders must wear chemical resistant gloves, coveralls and goggles or face shield during mixing/loading, cleanup and repair. Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing ground boom label. All personnel on the job site must wash hands and face thoroughly before eating and drinking. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

Clean and decontaminate protective clothing and application equipment regularly.

Product Specific Precautions

Read and understand the entire label before opening this product. If you have questions, call the manufacturer or obtain technical advice from the distributor or your provincial

agricultural representative. Application of this specific product must meet and/or conform to the following:

Apply in a spray volume of 20 to 45 litres per hectare. Use water volumes at the higher end of this range to ensure good coverage for optimum insect control and to minimize drift. Do not apply more than recommended rates of UP-Cyde 2.5EC per hectare per season by air.

CORN (Sweet and Field): European Corn Borer and Corn Earworm - Apply at 280 mL/ha in 20 to 45 L of water per hectare. Spray no later than when the first feeding is seen on foliage. Repeat sprays at 7-day intervals depending on the area and corn borer numbers (consult provincial agricultural representatives). Where there are two generations, late plantings of sweet corn will require sprays from the late whorl stage until close to harvest. For control of corn earworm, spray directly to ensure good coverage of ears and silks. Use 300-500 L water per hectare. Consult provincial recommendations for timing and number of repeat applications. Maximum 3 ground applications per year. Up to two applications per season by air may be applied as needed. Do not apply within 5 days of harvest. Toxic to bees. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to evening when most bees are not foraging. When using managed bees for pollination services, DO NOT apply during the crop blooming period.

Sweet corn plants refused from processing plants and field corn silage derived from corn treated with UP-Cyde 2.5EC at the recommended rate and spray/harvest interval may be fed to lactating dairy cattle or beef cattle.

POTATOES: Colorado Potato beetle, Potato Flea Beetle, Potato Leafhopper, Tuber Flea Beetle - Apply at 140 mL/ha in 20 to 45 L of water when first signs of insects appear and damage is visible. **Tarnished Plant Bug:** Apply 200 mL/ha in 20 to 45 L of water when insects appear. Repeat sprays as required. Up to two applications per season may be applied by air as needed. Do not apply within 7 days of harvest. Toxic to bees. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to evening when most bees are not foraging. When using managed bees for pollination services, DO NOT apply during the crop blooming period.

RAPESEED (CANOLA): Crucifer Flea Beetle - Apply 140 mL/ha when leaf injury is first noticed. **Bertha Armyworm** - Apply 200 to 280 mL/ha in 20 to 45 L of water. Use higher rate for high infestations. Only one application per season may be applied by air as needed. Do not apply within 30 days of harvest. Do not apply to mustard.

SUNFLOWERS: Sunflower beetle - Apply at 100 mL/ha in 20 to 45 L of water per hectare when insects first appear. Only one application per season may be applied by air as needed. Do not apply within 70 days of harvest.

Sunflower Seed Weevil - Apply at 100 mL/ha in 20 to 45 L of water per hectare when insects first appear. Only one application per season may be applied by air as needed. Do not apply within 70 days of harvest.

Toxic to bees. DO NOT apply during the crop blooming period.

Resistance-Management Recommendations

For resistance management, please note that UP-Cyde 2.5EC contains a Group 3 insecticide. Any insect population may contain individuals naturally resistant to UP-Cyde 2.5EC and other Group 3 insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same field. Other resistance mechanisms that are not linked to site of action but are specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

- To delay insecticide resistance: Where possible, rotate the use of UP-Cyde 2.5EC or other Group 3 insecticides with different groups that control the same pests in a field.
- Avoid application of more than the maximum number listed in the label and consecutive sprays of UP-Cyde 2.5EC or other insecticides in the same group in a season.
- Use tank mixtures with insecticides from a different group when such use is permitted.
- Insecticide use should be based on an IPM program that includes scouting, record keeping, and considers cultural, biological and other chemical control practices.
- Monitor treated pest populations for resistance development.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.

For further information or to report suspected resistance, contact UPL NA Inc.

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