

GROUP	4	INSECTICIDE
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ACTARA® 25WG

INSECTICIDE

COMMERCIAL

Water Dispersible Granule Insecticide for control of listed insect pests on fruits, vegetables and outdoor ornamentals.

ACTIVE INGREDIENT:

Thiamethoxam25%

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

CAUTION - EYE IRRITANT

REGISTRATION NO.:**28408**
PEST CONTROL PRODUCTS ACT

NET CONTENTS: **450 g - 3.4 kg**

Syngenta Canada Inc.
140 Research Lane, Research Park
Guelph, ON N1G 4Z3
1-877-964-3682

Label

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1.0 NOTICE TO USER

This pest 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.

2.0 FIRST AID

IF POISONING IS SUSPECTED, call a doctor or poison control centre **IMMEDIATELY**. Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

If swallowed, call a poison control centre or doctor **IMMEDIATELY** for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

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.

If on skin or 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 inhaled, move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

3.0 TOXICOLOGICAL INFORMATION

There is no specific antidote for this product if ingested. If a large amount has been ingested and emesis is inadequate, lavage stomach. Treat symptomatically.

4.0 PRECAUTIONS

Safety Precautions:

1. Hazard to Humans and Domestic Animals.
2. KEEP OUT OF THE REACH OF CHILDREN and domestic animals. PREVENT ACCESS BY UNAUTHORIZED PERSONNEL.
3. Causes moderate eye irritation. Harmful if swallowed, inhaled or absorbed through skin. DO NOT get in eyes. Avoid contact with skin. Avoid inhalation of vapours and spray mist. Wash

hands and face after handling and before eating or smoking.

4. Avoid contamination of feed and foodstuffs.
5. For aerial application on potatoes. Do not use human flaggers with this product.

RESTRICTED ENTRY INTERVAL: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

If this pest control product is to be used on a commodity that may be exported to other countries in the world and you require information on acceptable residue levels in these countries, please contact Syngenta Canada Inc. at 1-87-SYNGENTA / 1-877-964-3682.

5.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

Wear long-sleeved shirt, long pants, chemical resistant gloves, socks and boots during mixing, loading, clean-up and repair; wear long-sleeved shirt, long pants, socks and boots during application.

Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Wash splashes from skin IMMEDIATELY with plenty of water. Remove PPE immediately after handling this product. Wash the outside of gloves with soap and water before removing. As soon as possible, wash thoroughly and change into clean clothing. After spraying, wash hands and shower thoroughly with soap and water.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Wear freshly laundered clothes daily.

Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

6.0 ENVIRONMENTAL PRECAUTIONS

Toxic to aquatic organisms and non-target terrestrial plants. Observe spray buffer zones specified under DIRECTIONS FOR USE.

Toxic to bees. This product is systemic and residues from soil may be transported through plants into leaves, pollen and nectar. Bees may be exposed directly, through spray drift, or to residues on/in leaves, pollen and nectar in flowering crops and weeds. To minimize exposure to bees from foliar application, DO NOT apply this product to flowering crops or weeds if bees are visiting the treatment area. Minimize spray drift to reduce harmful effects on bees in habitats close to the application site. To further minimize exposure to pollinators, refer to the complete guidance "Protecting Pollinators during Pesticide Spraying- Best Management Practices" on the Health Canada website (www.canada.ca/pollinators). Follow crop specific directions for application timing.

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

This product is 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.

Avoid application of this product when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

7.0 STORAGE

To prevent contamination, store this product away from food or feed.

STORE IN A COOL, DRY PLACE.

8.0 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.

For Recyclable Containers

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.

***IN CASE OF EMERGENCY INVOLVING A MAJOR SPILL, FIRE OR POISONING,
CALL 1-800-327-8633 (1-800-FASTMED)***

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Pamphlet

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Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

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9.0 PRODUCT INFORMATION

ACTARA® 25WG Insecticide controls listed sucking and chewing insects through contact and ingestion when used on the crops listed on this label.

ACTARA 25WG Insecticide should be applied to plant foliage when insect pest populations begin to build, but before pest populations reach economically damaging levels. Economic thresholds for pests controlled by ACTARA 25WG Insecticide may be available from your local

agricultural authorities.

ACTARA 25WG Insecticide is taken up into foliage after application. However, thorough spray coverage is essential for best performance. Apply ACTARA 25WG Insecticide in sufficient water to ensure good coverage. See specific application information in the Use Directions section of this label. The use of higher water volumes will generally result in better coverage, especially under adverse conditions (e.g. hot, dry weather) or where a dense plant canopy exists.

ACTARA 25WG Insecticide is rainfast once the spray solution has dried on treated plants.

NOTE: DO NOT use a foliar application of ACTARA 25WG Insecticide following in-furrow or soil application of ACTARA 240SC Insecticide which also contains thiamethoxam.

When tank-mixes are permitted, read and observe all label directions, including rates and restrictions for each product used in the tank-mix. Follow the more stringent label precautionary measures for mixing, loading and applying stated on both product labels.

10.0 DIRECTIONS FOR USE

10.1. General Information

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.

Apply ACTARA 25WG Insecticide using sufficient water volume to provide thorough and uniform coverage. For ground applications, use a minimum of 100 L/ha unless otherwise indicated on this label. In situations where a dense canopy exists and/or pest pressure is high, use greater water volumes. Avoid making applications under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur. Avoid spray overlap.

Precautions:

- 1) When using water volumes of 100 L/ha, fine-sized droplets may be used to improve spray coverage.
- 2) Select nozzles that can produce the desired droplet sizes at the normal rated pressure range.
- 3) When spraying fine-sized droplets, carefully check all nozzles for flow and calibrate the sprayer.
- 4) The sprayer should travel at a uniform speed across the field.
- 5) Monitor environmental conditions and follow **Recommendations to Avoid Spray Drift** carefully.
- 6) 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, application equipment and sprayer settings.

10.2. Ground Application

Field sprayer application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) fine classification. 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.

10.2.1. Mixing Instructions

1. Add 1/2 of the required amount of water to the mix tank.
2. With the agitator running, add the desired amount of ACTARA 25WG Insecticide to the tank.
3. Continue agitation while adding the remainder of the water.
4. Begin application of the solution after ACTARA 25WG Insecticide has completely dispersed into the mix water.
5. Maintain agitation until all of the mixture has been applied.

Prepare no more spray mixture than is needed for the immediate operation. Thoroughly clean spray equipment before using this product. Vigorous agitation is necessary for proper dispersal of the product. Maintain maximum agitation throughout the spraying operation. Do not let the spray mixture stand overnight in the spray tank. Flush the spray equipment thoroughly following each use and apply the rinsate to a previously treated area. Keep product container tightly closed when not in use.

10.2.2. Equipment Clean-Up

Before Spraying:

- Prior to using ACTARA 25WG Insecticide, ensure that the spray tank, lines and filter are thoroughly clean.

After Spraying:

- Thoroughly clean application equipment immediately after spraying. **DO NOT** allow ACTARA 25WG Insecticide residue to dry within the spray tank
- When using tank mixes, consult the tank-mix partner label for additional clean-up instructions.
- The following recommendations are provided:
 1. Drain and flush tank walls, boom and all hoses for ten minutes with a clean water/detergent mixture. Rinse with clean water. **DO NOT** clean the sprayer near desirable vegetation, wells or other water sources.
 2. Remove all nozzles and screens and wash separately.
 3. Dispose of all rinsate in accordance with provincial regulations.

10.3. Aerial Application

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 16 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) fine classification. Reduce drift caused by turbulent wingtip vortices. Nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing- or rotorspan.

10.3.1. General Information

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

Label rates, conditions and precautions are product specific. Read and understand the entire label before opening this product. Apply only at the labelled rate 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.

10.3.2. Use Precautions

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.

10.3.3. 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.

10.3.4. Product Specific Precautions

Read and understand the entire label before opening this product. If you have questions, call the manufacturer at 1-87-SYNGENTA (1-877-964-3682) 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:

Volume: **Unless otherwise stated**, apply the labelled rate in a minimum spray volume of 20 litres per hectare.

10.4. Spray Buffer Zones

A spray buffer zone is NOT required for:

- Uses with hand-held application equipment permitted on this label,
- in-furrow, soil drench or soil incorporation applications.

The spray buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands), and sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands).

Method of application	Crop		Spray Buffer Zones (metres) Required for the Protection of		
			Freshwater Habitat of Depths:		Terrestrial Habitat:
			Less than 1 m	Greater than 1 m	
Field sprayer	Potato, Crop Group 1B and 1C Root vegetables		3	1	1
	Field Pepper, Celeriac, Cranberry (CG 13-07G), Outdoor nurseries and landscapes		5	3	1
	Crop Group 4 Leafy vegetables, Crop Group 8 Fruiting vegetables		4	2	1
	Crop Group 13-07A Cane berries, Crop Group 13-07B Bush berries (excluding lowbush blueberry), Crop Group 13-07G Low growing berries (excluding cranberry)		10	4	2
	Outdoor Ornamentals		10	5	2
Airblast	Crop Group 13-07A Cane berries, Crop Group 13-07G Bush berries (excluding lowbush blueberry)	Early growth stage	30	20	5
		Late growth stage	20	10	3
Aerial	Potato	Fixed wing	15	1	1
		Rotary wing	10	1	1

When tank mixes are permitted, consult the labels of the tank-mix partners and observe the largest (most restrictive) spray 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 spray buffer zones for this product can be modified based on the weather conditions and spray equipment configuration by accessing the Spray Buffer Zone Calculator on the Pesticides portion of the Canada.ca website.

10.5. Rotational Restrictions

Treated areas may be replanted immediately following harvest or as soon as practical following the last application with any crop listed on this label or to sorghum, wheat, barley, and canola. Any cover crop planted for erosion control or soil improvement may be planted as soon as practical following the last application. However, the cover crop may not be grazed or harvested for food or feed. For all other crops, a 120 day plant-back interval must be observed.

11.0 CROP USE DIRECTIONS

11.1. Potatoes

CROPS	POTATOES
PESTS	Colorado potato beetle Aphids (including green peach, potato, buckthorn, and foxglove aphid) Potato leafhopper
PRODUCT RATE	105 g/ha
REMARKS	Apply before pests reach damaging levels. Potato leafhopper: One application only by foliar application per year . Do not apply closer than 7 days before harvest (7 day PHI). Use sufficient water volume to ensure thorough coverage of foliage. Do not use less than 100 L/ha for ground applications. Do not apply treatment between 50% row closure and petal fall. Can be applied by aerial or ground application <u>Pollinator Precautions:</u> This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming plants if bees are visiting the treated area. After an ACTARA 25WG Insecticide application, wait at least <u>5 days</u> before placing the beehives in the treated field.

12.0 MINOR USES

The DIRECTIONS FOR USE for the uses described in this section of the label were developed by persons other than Syngenta Canada Inc. under the User Requested Minor Use Label Expansion program. For these uses, Syngenta Canada Inc. has not fully assessed performance (efficacy) and/or crop tolerance (phytotoxicity) under all environmental conditions or for all crop varieties when used in accordance with the label. The user should test the product on a small area first, under local conditions and using standard practices, to confirm the product is suitable for widespread application.

12.1. Root Vegetables (Crop Subgroups 1B and 1C)

CROPS	<p>ROOT VEGETABLES (CROP SUBGROUPS 1B AND 1C)</p> <p>Crop Subgroup 1B: Garden beet, edible burdock, carrot, celeriac, turnip-rooted chervil, chicory, ginseng, horseradish, turnip-rooted parsley, parsnip, radish, ornamental radish (daikon), rutabaga, salsify, black salsify, Spanish salsify, skirret, turnip,</p> <p>Crop Subgroup 1C: Arracacha, arrowroot, Chinese artichoke, Jerusalem artichoke, edible canna, bitter and sweet cassava, chayote (root), chufa, dasheen (taro), ginger, leren, potato, sweet potato, tanier (cocoyam), turmeric, yam bean, true yam.</p>
PESTS	<p>Aphids Aster leafhopper</p>
PRODUCT RATE	<p>105 g/ha</p>
SPRAY VOLUME	<p>Apply in sufficient water volume to ensure adequate coverage.</p> <p>Do not use less than 100 L/ha.</p>
APPLICATION INTERVAL	<p>Allow at least 7 days between applications.</p>
PRE-HARVEST INTERVAL (PHI)	<p>7 days</p>
REMARKS	<p>Apply before pests reach damaging levels. Scout fields and treat again if populations rebuild to potentially damaging levels.</p> <p>Ground application only. DO NOT apply by air.</p> <p>Maximum of 2 applications per year</p> <p>For Potato and Sweet Potato Only: Do not apply treatment between 50% row closure and petal fall. Do not make more than one application per year prior to 50% row closure.</p> <p>Pollinator Precautions: This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming crops or weeds if bees are foraging in/or adjacent to the treatment area. If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. After an ACTARA 25WG Insecticide application, wait at least <u>5 days</u> before placing the beehives in the treated field.</p>

12.2. Leafy Vegetables (Crop Group 4)

CROPS	LEAFY VEGETABLES (CROP GROUP 4) Celery, lettuce (head and leaf), spinach, amaranth, arugula, cardoon, Chinese celery, celtuce, fresh chervil leaves, edible leaved chrysanthemum, garland chrysanthemum, corn salad, garden cress, upland cress, dandelion leaves, dock, endives, fresh Florence fennel leaves and stalk, orach leaves, fresh parsley leaves, garden purslane, winter purslane, radicchio, rhubarb, New Zealand spinach, vine spinach, and Swiss chard.
PESTS	Aphids (green peach, potato and foxglove)
PRODUCT RATE	105 g/ha
SPRAY VOLUME	Apply in sufficient water volume to ensure adequate coverage. Use at least 100 L of water per hectare.
APPLICATION INTERVAL	Reapply after a minimum of 7 days if monitoring indicates further applications are required for aphid control.
PRE-HARVEST INTERVAL (PHI)	7 days
REMARKS	Maximum of 2 applications per year DO NOT apply by air . <u>Pollinator Precautions:</u> This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming crops or weeds if bees are foraging in/or adjacent to the treatment area. If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. After an ACTARA 25WG Insecticide application, wait at least <u>5 days</u> before placing the beehives in the treated field.
PESTS	Reduction in damage caused by tarnished plant bug
PRODUCT RATE	210 g/ha
SPRAY VOLUME	Apply in sufficient water volume to ensure adequate coverage. Use at least 100 L of water per hectare.
PRE-HARVEST INTERVAL (PHI)	7 days
REMARKS	Maximum 1 application per year DO NOT apply by air . <u>Pollinator Precautions:</u> This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming crops or weeds if bees are foraging in/or adjacent to the treatment area. If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. After an ACTARA 25WG Insecticide application, wait at least <u>5 days</u> before placing the beehives in the treated field.

12.3. Fruiting Vegetables (Crop Group 8)

CROPS	FRUITING VEGETABLES (CROP GROUP 8) Eggplant, Tomato, Peppers (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper), Tomatillo, Groundcherry, and Pepino.
PESTS	Aphids
PRODUCT RATE	105 g/ha (foliar)
APPLICATION INTERVAL	Maximum of 2 applications per year .
PESTS	Tarnished plant bug (<i>Lygus lineolaris</i>) Stink bugs (<i>Acrosternum hilare</i> <i>Euschistus servus</i> , <i>E. variolarius</i>)
PRODUCT RATE	105 – 210 g/ha (foliar)
APPLICATION INTERVAL	Maximum of 2 applications per year at 105 g/ha. Allow at least 7 days between applications. Maximum of 1 application per year at 210 g/ha.
PESTS	Reduction in damage caused by brown marmorated stink bug
PRODUCT RATE	210 g/ha (foliar)
SPRAY VOLUME	Apply in sufficient water volume to ensure adequate coverage. Use at least 100 L of water per hectare.
APPLICATION INTERVAL	Maximum of 1 application per year
PRE-HARVEST INTERVAL (PHI)	1 day
REMARKS	Apply before pests reach damaging levels. Scout fields and treat again if populations rebuild to potentially damaging levels when applying 105g/ha rate ONLY.. Do not apply pre-bloom or during bloom (Do not apply until petal fall). Do not apply when bees are present. Maximum of 2 applications per year at 105 g/ha. Maximum of 1 application per year at 210 g/ha rate. <u>Pollinator Precautions:</u> This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming crops or weeds if bees are foraging in/or adjacent to the treatment area. If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. After an ACTARA 25WG Insecticide application, wait at least <u>5 days</u> before placing the beehives in the treated field.

12.4. Field Pepper

CROPS	FIELD PEPPER
PESTS	Pepper Weevil (suppression)
PRODUCT RATE	280 g/ha
SPRAY VOLUME	Applied in sufficient water to ensure thorough coverage (minimum 100 L/ha).
APPLICATION INTERVAL	Maximum 1 application per year
PRE-HARVEST INTERVAL (PHI)	1 day
REMARKS	<p>Apply before pests reach damaging levels</p> <p>Maximum 1 application per year.</p> <p>DO NOT apply by air.</p> <p>Do not apply pre-bloom or during bloom (Do not apply until petal fall). Do not apply when bees are present.</p> <p><u>Pollinator Precautions:</u> This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming crops or weeds if bees are foraging in/or adjacent to the treatment area. If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. After an ACTARA 25WG Insecticide application, wait at least 5 days before placing the beehives in the treated field.</p>

12.5. Celeriac

CROPS	CELERIAC
PESTS	Tarnished plant bug (<i>Lygus lineolaris</i>)
PRODUCT RATE	210 – 280 g/ha
SPRAY VOLUME	Apply in sufficient water volume to ensure adequate coverage. Use at least 100 L of water per hectare for ground application.
APPLICATION INTERVAL	Maximum 1 application per year
PRE-HARVEST INTERVAL (PHI)	7 days
REMARKS	<p>Apply as a foliar application by broadcast spray before pests reach damaging levels</p> <p>Maximum 1 application per year .</p> <p>Use the higher application rate for heavy infestations and for improved residual control.</p> <p>Do not apply by air.</p> <p><u>Pollinator Precautions:</u> This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACT ARA 25WG Insecticide or allow it to drift onto blooming crops or weeds if bees are foraging in/or adjacent to the treatment area. If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. After an ACTARA 25WG Insecticide application, wait at least 5 days before placing the beehives in the treated field.</p>

12.6. Caneberries (Crop Subgroup 13-07A)

CROPS	CANEBERRIES (CROP SUB GROUP 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, Himalayaberry, hullberry, lavacaberry, loganberry, lowberry, Lucretiaberry, mammoth blackberry, marionberry, mora, mures deronce, nectarberry, Northern dewberry, olallieberry, Oregon evergreen berry, phenomenalberry, rangeberry, ravenberry, rossberry, Shawnee blackberry, Southern dewberry, tayberry, youngberry, zarzamora,); Loganberry (<i>rubus loganobaccus</i>); Raspberry, black and red (<i>Rubus</i> spp.); Wild raspberry (<i>Rubus muelleri</i>) and cultivars, varieties and/or hybrids of these.
PESTS	Black vine weevil (<i>Otiorhynchus sulcatus</i>) and obscure root weevil (<i>Sciopithes obscurus</i>)
PRODUCT RATE	210 – 280 g/ha
SPRAY VOLUME	Apply in sufficient water volume to ensure adequate coverage. Use at least 100 L of water per hectare.
APPLICATION INTERVAL	Allow at least 7 days between treatments.
PRE-HARVEST INTERVAL (PHI)	3 days
REMARKS	<p>Apply as a foliar application by broadcast spray before pests reach damaging levels. Scout fields and treat again if populations rebuild to potentially damaging levels.</p> <p>Maximum 2 applications per year.</p> <p>DO NOT apply by air.</p> <p>Do not apply pre-bloom or during bloom (Do not apply until petal fall). Do not apply when bees are present.</p> <p>When applying after petal fall, renovation of woody plants (cutting back old growth) must occur after harvest and before the next season's bloom.</p> <p><u>Pollinator Precautions:</u> This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming plants if bees are visiting the treated area. After an ACTARA 25WG Insecticide application, wait at least <u>5 days</u> before placing the beehives in the treated field.</p>

12.7. Bushberries (Crop Group 13-07B) excluding Lowbush blueberries

CROPS	BUSHBERRIES (CROP GROUP 13-07B) excluding Lowbush blueberries Aronia berry; blueberry, highbush; buffalo currant; Chilean guava; currant, black; currant, red; elderberry; European barberry; gooseberry; cranberry, highbush; honeysuckle, edible; huckleberry; jostaberry; Juneberry; lingonberry; native currant; salal; sea buckthorn; cultivars, varieties, and/or hybrids of these.
PESTS	Weevils (<i>Otiorhynchus sulcatus</i> , <i>Sciopithes obscurus</i>)
PRODUCT RATE	210 – 280 g/ha
SPRAY VOLUME	Sufficient water volume to ensure adequate coverage of the foliage. Use at least 100 L/ha.
APPLICATION INTERVAL	7 days
PRE-HARVEST INTERVAL (PHI)	3 days
REMARKS	<p>Apply before pests reach damaging levels. Scout fields and treat again if populations rebuild to potentially damaging levels. Apply higher rates for heavy infestations.</p> <p>Ground application only. DO NOT apply by air.</p> <p>Maximum of 2 applications per growing year.</p> <p>Do not apply pre-bloom or during bloom (Do not apply until petal fall). Do not apply when bees are present.</p> <p>When applying after petal fall, renovation of woody plants (cutting back old growth) must occur after harvest and before the next season's bloom.</p> <p>Pollinator Precautions: This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming crops or weeds if bees are foraging in/or adjacent to the treatment area. If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. After an ACTARA 25WG Insecticide application, wait at least <u>5 days</u> before placing the beehives in the treated field.</p>

Low Growing Berries

CROPS	LOW GROWING BERRIES Bearberry, bilberry, cloudberry, lingonberry, muntries, partridgeberry, strawberry, and cultivars, varieties and/or hybrids of these.
PESTS	Adult black vine weevil (<i>Otiorhynchus sulcatus</i>) Cranberry weevil (<i>Anthonomus musculus</i>)
PRODUCT RATE	210 – 280 g/ha
SPRAY VOLUME	Apply in sufficient water volume to ensure adequate coverage (minimum 200 L of water per hectare).
APPLICATION INTERVAL	7 days
PRE-HARVEST INTERVAL (PHI)	3 days
REMARKS	<p>Apply as a foliar application by broadcast spray before pests reach damaging levels. If pests reach damaging levels during bloom, applications are to be made as soon as possible post-bloom. Scout fields and treat again if populations rebuild to potentially damaging levels.</p> <p>Maximum two (2) foliar applications per year.</p> <p>DO NOT apply by air.</p> <p>Do not follow a soil application of a Group 4 insecticide with a foliar application of ACTARA 25WG Insecticide.</p> <p>Do not apply pre-bloom or during bloom (Do not apply until petal fall). Do not apply when bees are present.</p> <p>When applying after petal fall, renovation of woody plants (cutting back old growth) must occur after harvest and before the next season's bloom.</p> <p>Pollinator Precautions: This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming crops or weeds if bees are foraging in/or adjacent to the treatment area. If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. After an ACTARA 25WG Insecticide application, wait at least 5 days before placing the beehives in the treated field.</p>

12.8.
Cranberries

CROPS	Cranberries
PESTS	Adult black vine weevil (<i>Otiorhynchus sulcatus</i>) Cranberry weevil (<i>Anthonomus musculus</i>)
PRODUCT RATE	210 – 280 g/ha
SPRAY VOLUME	Apply in sufficient water volume to ensure adequate coverage (minimum 200 L of water per hectare).

APPLICATION INTERVAL	Maximum 1 application per year
PRE-HARVEST INTERVAL (PHI)	3 days
REMARKS	<p>Apply as a foliar application by broadcast spray before pests reach damaging levels. If pests reach damaging levels during bloom, applications are to be made as soon as possible post-bloom.</p> <p>Maximum 1 foliar application per year.</p> <p>30 day retention of flood waters.</p> <p>DO NOT apply by air.</p> <p>Do not follow a soil application of a Group 4 insecticide with a foliar application of ACTARA 25WG Insecticide.</p> <p>Do not apply pre-bloom or during bloom (Do not apply until petal fall). Do not apply when bees are present.</p> <p>When applying after petal fall, renovation of woody plants (cutting back old growth) must occur after harvest and before the next season's bloom.</p> <p>Pollinator Precautions: This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming crops or weeds if bees are foraging in/or adjacent to the treatment area. If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. After an ACTARA 25WG Insecticide application, wait at least 5 days before placing the beehives in the treated field.</p>

12.9. Outdoor Ornamentals

CROPS	OUTDOOR ORNAMENTALS (CONIFEROUS EVERGREENS AND ORNAMENTAL GRASSES ONLY)
PESTS	Aphids Leafhoppers
PRODUCT RATE	105 g/ha
PESTS	Tarnished plant bug (suppression)
PRODUCT RATE	210 – 280 g/ha
SPRAY VOLUME	Sufficient water volume to ensure adequate coverage of the foliage, use at least 100 L/ha. Do not exceed 1000 L/ha.
APPLICATION INTERVAL	7 days
REMARKS	<p>Foliar application only.</p> <p>DO NOT make more than 2 applications per year.</p> <p>Apply before pests reach damaging levels or damage is first observed. Scout</p>

	<p>fields and treat again if populations rebuild to potentially damaging levels.</p> <p>Apply higher rates for heavy infestations.</p> <p>DO NOT apply by airu.</p> <p><u>Pollinator Precautions:</u></p> <p>This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming crops or weeds if bees are foraging in/or adjacent to the treatment area. If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. After an ACTARA 25WG Insecticide application, wait at least 5 days before placing the beehives in the treated field.</p>
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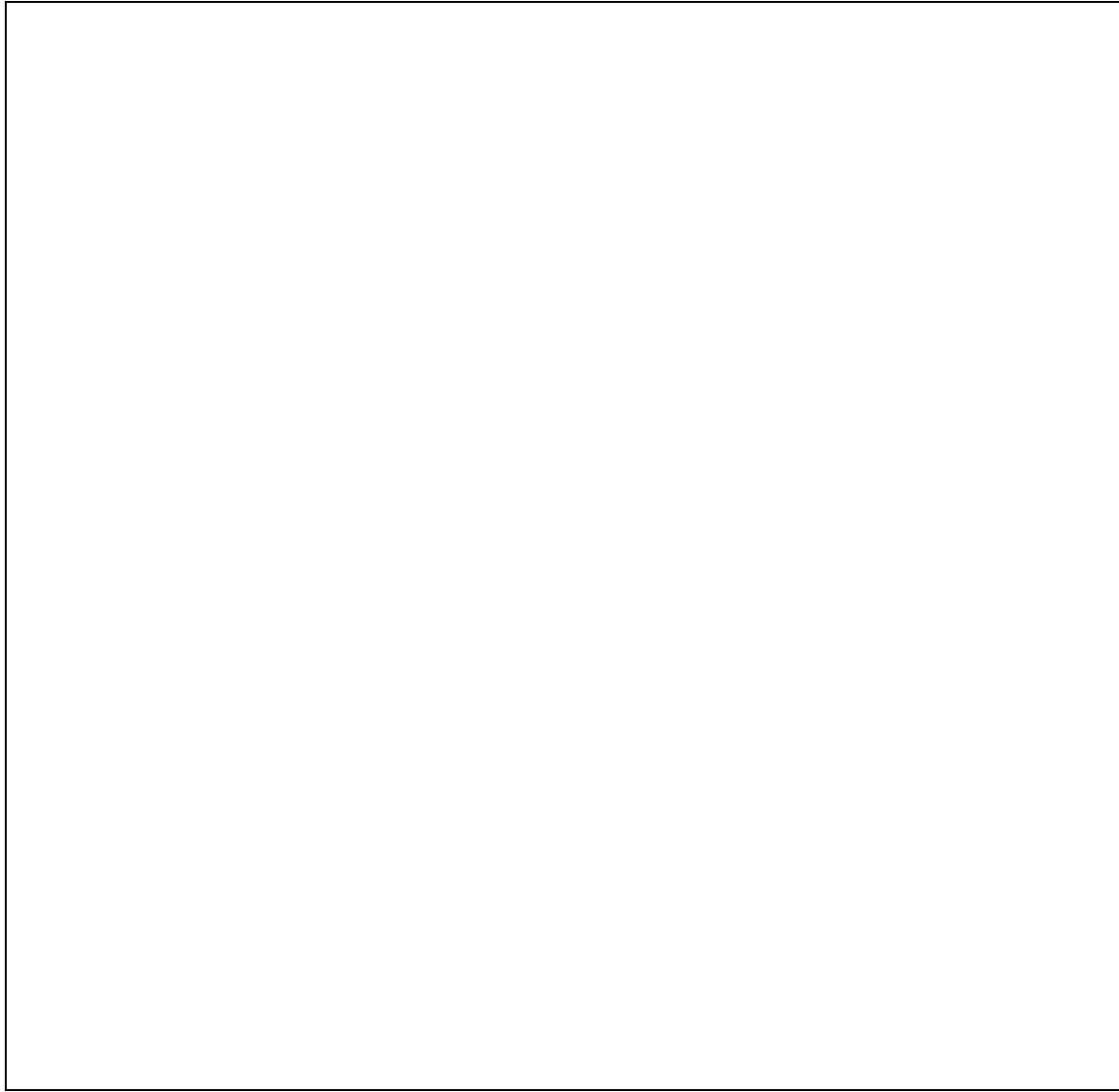
12.10. Outdoor Nurseries and Landscape

CROPS	OUTDOOR NURSERIES AND LANDSCAPE (CONIFEROUS EVERGREENS AND ORNAMENTAL GRASSES ONLY)
PESTS	Brown marmorated stink bug suppression
PRODUCT RATE	280 g/ha
SPRAY VOLUME	Adequate water volume to achieve thorough and uniform coverage without excessive runoff (to drip).
REMARKS	<p>Foliar application only.</p> <p>Maximum 1 application per year</p> <p>Apply before pests cause significant damage to the host plant.</p> <p>For use in residential or landscape settings, do not allow re-entry into treated areas until residues have dried.</p> <p>Before making large scale applications to any crop, a representative subset of material should be treated to determine plant safety under the cultural conditions. Growing conditions and cultural practices vary and may influence phytotoxicity.</p> <p>It is strongly recommended that evaluations be conducted on a sample set of plant material to observe for phytotoxicity prior to treating an entire crop.</p> <p><u>Pollinator Precautions:</u></p> <p>This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming crops or weeds if bees are foraging in/or adjacent to the treatment area. If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. After an ACTARA 25WG Insecticide application, wait at least 5 days before placing the beehives in the treated field.</p>

12.11.

12.11.1.

12.11.2.



13.0 RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, please note that ACTARA 25WG Insecticide contains a Group 4 insecticide (neonicotinoid class of chemistry). Any insect population may contain individuals naturally resistant to ACTARA 25WG Insecticide and other Group 4 insecticides. The resistant individuals may dominate the insect population if this group of insecticides is 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. Because resistance development cannot be predicted, the use of this product should conform to sound resistance management strategies established for the crop and use area.

To delay insecticide resistance:

Where possible, rotate the use of ACTARA 25WG Insecticide or other Group 4 insecticides with different groups that control the same pests in a field.

Use tank mixtures with miticides/insecticides from a different group that is effective on the target pest when such use is permitted.

Insecticide use should be based on an integrated pest management 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 company representatives at 1-87-SYNGENTA (1-877-964-3682) or at www.syngenta.ca.

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