

July 2022

**SuffOil-X®**  
**SPRAY OIL EMULSION**

Insecticide, Acaricide, Fungicide

A highly refined horticultural spray oil for use against listed insect and mite pests on Crop Group 1 (Root and Tuber Vegetables), Crop Group 4-13 (Leafy Vegetables) (field and greenhouse), Crop Group 5-13 (Brassica Head and Stem Vegetables) (field and greenhouse), Crop Group 8-09 (Fruiting Vegetables) (field and greenhouse), Crop Group 9 (Cucurbit Vegetables) (field and greenhouse), Crop Group 13-07 (Berries and Small Fruits), Crop Group 14-11 (Tree Nuts), Crop Group 22 (Stalk, Stem, and Petiole Vegetables), Crop Group 25 (Herbs) (field and greenhouse), Crop Group 26 (Spices), ornamentals (outdoor and greenhouse), Asian Water Spinach (field and greenhouse), kohlrabi (greenhouse), apple, apricot, cherry, globe artichokes, grape, hops, nectarine, onion, peach, peanuts, pear, plum, potato and prune; and suppression of powdery mildew on Crop Group 8-09 (Fruiting Vegetables) (field and greenhouse), Crop Group 9 (Cucurbit Vegetables) (field and greenhouse), Crop Group 13-07 (Berries and Small Fruits), *Cannabis* (marihuana) produced commercially indoors, apple, grape, hops, pear and strawberries (greenhouse).

**COMMERCIAL**

ACTIVE INGREDIENT: Mineral Oil..... 80%

REGISTRATION NO. 33099 PEST CONTROL PRODUCTS ACT

**CAUTION**

Warning, contains the allergen milk

**READ THE LABEL BEFORE USING**

KEEP OUT OF REACH OF CHILDREN

Net Contents: 9.46 L – 946.35 L

Distributed by: BioWorks, Inc., 100 Rawson Road, Suite 205, Victor, NY 14564

Telephone: 1-800-877-9443

## PRECAUTIONS

### KEEP OUT OF REACH OF CHILDREN.

Avoid contact with eyes, skin, or clothing. Avoid inhalation of spray mist. Wash hands after use. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Handle with caution and apply and use only as recommended and at recommended rates. Wear chemical-resistant gloves, a long-sleeved shirt, long pants, and shoes and socks during mixing, loading, application, clean-up and repair. Do not apply to areas occupied by unprotected humans or domestic animals and do not allow to drift to such areas. Apply only when the potential for drift beyond the area to be treated is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment, and sprayer settings. Do not contaminate foodstuffs or feed and do not store with such consumables. Do not contaminate streams, ponds or lakes or any irrigation water or water used for livestock or domestic purposes.

Do not enter or allow others to enter treated areas during the restricted-entry interval (REI) of 12 hours. Workers entering a treated site prior to the end of the 12-hour REI are required to wear the PPE listed for mixers, loaders, and applicators (chemical-resistant gloves, long-sleeved shirt, long pants, shoes and socks).

### ENVIRONMENTAL PRECAUTIONS

TOXIC to aquatic organisms. Observe BUFFER ZONES specified under DIRECTIONS FOR USE.

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.

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

### FIRST AID

**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 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.

**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**

This product contains a petroleum distillate. Treat symptomatically.

**NOTE TO PHYSICIAN:** Contains petroleum distillates – do not induce vomiting since vomiting may cause aspiration pneumonia. Aspiration may occur after swallowing or vomiting and results in serious, and sometimes delayed, lung injury.

## **STORAGE**

Store this product away from food or feed.

## **DISPOSAL**

### **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.

### **For returnable containers**

DO NOT reuse this container for any purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

### **For containers that can be refilled for the user by the distributor/dealer**

For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.

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.

## **DIRECTIONS FOR USE**

As an insecticide and acaricide, this product coats plant surfaces deterring pest feeding and acts as a suffocant. As a fungicide this product interferes with the attachment of the pathogen to the host and acts as a suffocant. These modes of action require total spray coverage.

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.

DO NOT allow effluent or runoff from greenhouses containing this product to enter lakes, streams, ponds or other waters.

DO NOT apply by air.

### **Use Precautions:**

All horticultural oils interfere with or slow plant transpiration and respiration during the period of evaporation. DO NOT APPLY DURING PERIODS OF DROUGHT, WHEN PLANTS EXHIBIT MOISTURE STRESS, WHEN TEMPERATURE IS EXCESSIVELY HIGH, OR JUST PRIOR TO OR DURING FREEZING WEATHER.

DO NOT use in combination with or immediately before or after spraying with fungicides such as captan, folpet, karathane, oxythiquinox or any product containing sulphur. Also do not use with carbaryl or dimethoate. Do not use with any product whose label recommends the use of no oils. Do not use in combination with NPK foliar fertilizer applications.

DO NOT APPLY THIS PRODUCT THROUGH ANY TYPE OF IRRIGATION SYSTEM (I.E., VIA CHEMIGATION). DO NOT APPLY BY AERIAL APPLICATION EQUIPMENT.

### **Use Directions:**

Use enough spray solution to completely penetrate the leaf canopy and cover all plant surfaces until wet without significant runoff. A minimum of 50 litres of spray solution per hectare is recommended. Apply a maximum of 1000 litres of spray solution per hectare.

**Since not all varieties of the listed crops have been tested for tolerance to SuffOil-X, this product should be tested on a small scale to confirm tolerance prior to widespread use.**

To avoid phytotoxicity, do not apply on overcast, humid days and after rain. Spray when relative humidity is less than 90%. The goal is to have the oil dry and evaporate in 1-2 hours. Spray early in the day before temperatures reach above 33°-35°C or late in the day when temperature cools. Temperature not to exceed 33°-35°C **at the time of spray**. Ensure soil moisture is adequate and plants are not drought stressed. Apply horticultural oils only when the temperature is above 4°C and there is no danger of freezing.

SuffOil-X can be applied up to the day of harvest.

See APPLICATION INSTRUCTIONS tables for instructions on listed pests and crops. Use this product only on the types of plants identified in the APPLICATION INSTRUCTIONS tables.

### **Mixing Instructions:**

Ensure spray tank is clean. Add sufficient water to the mixing tank to allow proper agitation. Add the correct amount of SuffOil-X to tank. Maintain agitation until solution is used. If other pesticides are to be added, do so after SuffOil-X has been thoroughly mixed.

### **Application Instructions:**

### TREE FRUITS and HOPS (Summer Spray)

CROP	PEST	Litres of SuffOil-X Per 1000 Litres of Water	INSTRUCTIONS
Apricot, Cherry, Nectarine, Peach, Plum, Prune	Suppression of spider mites. Deter feeding by aphids.	13	Begin applications when pests appear. Apply every 10-14 days depending on level of pest pressure. Do not apply to trees lacking moisture. Oil may remove waxy bloom. Do not apply more than 8 applications per year.
Apple	Suppression of spider mites and powdery mildew ( <i>Podosphaera leucotricha</i> ). Deter feeding by aphids.	13	<b>Aphids and spider mites:</b> apply when mites first appear. Apply every 10-14 days depending upon the level of pest pressure. <b>Powdery mildew:</b> apply at tight cluster and continue every 10-14 days. Avoid application during bloom.
Pear	Suppression of spider mites and powdery mildew ( <i>Podosphaera leucotricha</i> ). Deter feeding by aphids.	13	Use the shorter spray interval when disease conditions are severe. Do not use within 14 days before or after captan fungicide. Do not apply more than 8 applications per year.
Hops	Suppression of spider mites and powdery mildew ( <i>Podosphaera macularis</i> ). Deter feeding by aphids.	13	<b>Aphids and spider mites:</b> apply when mites first appear. Apply every 10-14 days depending upon the level of pest pressure. <b>Powdery mildew:</b> begin when conditions are favourable for disease development and/or when first symptoms appear. Apply at 10-14 day intervals. Do not apply more than 8 applications per year.

### SMALL FRUITS (Summer Spray)

CROP	PEST	Litres of SuffOil-X Per 1000 Litres of Water	INSTRUCTIONS
Crop Group 13-07 (Berries and Small Fruits)*	Suppression of spider mites and powdery mildew ( <i>Podosphaera</i> spp.). Deter feeding by aphids.	13	<b>Aphids and spider mites:</b> apply when mites first appear. Apply every 7-14 days depending upon the level of pest pressure. Do not apply more than 8 applications per year.
Grape	Suppression of mites and control of powdery mildew ( <i>Erysiphe necator</i> ).	13	<b>Mites:</b> Begin applications when mites first appear. Apply every 10-14 days depending upon the level of pest pressure. <b>Powdery Mildew:</b> Make the first application pre-bloom and continue every 10-21 days depending on the level of disease pressure. Use the shorter spray interval when disease conditions are severe. Since oil will remove the bloom on grapes, do not spray table grapes within 2 weeks of harvest. Do not spray a tank mix of copper and SuffOil-X when fruit is present. Do not spray SuffOil-X within two weeks before or after a captan fungicide application. Do not apply more than 8 applications per year.

\* Amur river grape, aronia berry, bayberry, bearberry, bilberry, blackberry (includes 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, as well as cultivars, varieties and/or hybrids of these), highbush blueberry, lowbush blueberry, buffalo currant, buffaloberry, Chilean guava, chokecherry, cloudberry, cranberry, black currant, red currant, elderberry, European barberry, gooseberry, grape, highbush cranberry, edible honeysuckle, huckleberry, jostaberry, Juneberry (Saskatoon berry), fuzzy kiwifruit, hardy kiwifruit, lingonberry, maypop, mountain pepper berries, mulberry, muntries, native currant, partridgeberry, pincherry, raspberry (red and black), salal, schisandra berry, sea buckthorn, serviceberry, strawberry, wild raspberry, as well as cultivars, varieties and/or hybrids of these commodities.

## STRAWBERRY (GREENHOUSE)

CROP	PEST	Litres of SuffOil-X Per 1000 Litres of Water	INSTRUCTIONS
Strawberries (Greenhouse)	Suppression of spider mites and powdery mildew ( <i>Podosphaera macularis</i> syn. <i>Sphaerotheca aphans</i> ). Deter feeding by aphids.	13	<b>Aphids and spider mites:</b> apply when mites first appear. Apply every 10-14 days depending upon the level of pest pressure. <b>Powdery mildew:</b> begin when conditions are favourable for disease development and/or when first symptoms appear. Apply at 10-14 day intervals. Within the stated range, use shorter application intervals under higher disease pressures. Do not apply more than 8 applications per year

**Crop safety:** Greenhouse strawberry varieties may vary in their tolerance to mineral oil, including to SuffOil-X. Since not all strawberry varieties have been tested for tolerance to SuffOil-X, the first use of SuffOil-X should be limited to a small area of each variety to confirm tolerance prior to widespread use. Follow all directions in the 'Use Precautions' section.

## TREE NUTS

CROP	PEST	Litres of SuffOil-X Per 1000 Litres of Water	INSTRUCTIONS
Crop Group 14-11 (Tree Nuts) <sup>a</sup>	Suppression of spider mites. Deter feeding by aphids.	13	Begin applications when pests appear. Apply every 10-14 days depending on level of pest pressure. Do not apply to trees lacking moisture. Oil may remove waxy bloom. Do not apply more than 8 applications per year.

<sup>a</sup> Almond; Beechnut; Bur Oak; Butternut; Chestnut; Chinquapin; Ginkgo; Hazelnut (Filbert); Heartnut; Hickory nut; Japanese horse-chestnut; Monkey puzzle nut; Pecan; Pine nut; Walnut, black; Walnut, European; Yellowhorn; as well as cultivars, varieties and/or hybrids of these commodities.

## FIELD GROWN VEGETABLES (Summer Spray)

CROP	PEST	Litres of SuffOil-X Per 1000 Litres of Water	INSTRUCTIONS
Crop Group 8-09 (Fruiting Vegetables) <sup>a</sup>	Suppression of spider mites and powdery mildew ( <i>Leveillula taurica</i> ). Deter feeding by aphids.	13	<b>Aphids and spider mites:</b> begin applications when pests appear. Apply at 7-14-day intervals. <b>Powdery mildew:</b> begin when conditions are

Crop Group 9 (Cucurbit Vegetables) <sup>b</sup>	Suppression of spider mites and powdery mildew ( <i>Sphaerotheca fuliginea</i> ). Deter feeding by aphids.	13	favourable for disease development and/or when first symptoms appear. Apply at 7-14- day intervals.  Do not apply more than 8 applications per year.
Crop Group 1 (Root and Tuber) <sup>h</sup>	Suppression of spider mites. Deter feeding by aphids.	13	Begin applications when pests appear. Apply at 7-14-day intervals.  Do not apply more than 8 applications per year.
Onion			
Crop Subgroup 4-13 (Leafy Vegetables) <sup>c</sup>			
Crop Group 5-13 (Brassica Head and Stem Vegetables) <sup>d</sup>			
Crop Group 25 (Herbs) <sup>e</sup>			
Crop Group 26 (Spices) <sup>f</sup>			
Asian Water Spinach			
Crop Group 22 (Stalk, Stem, and Leaf Petioles) <sup>g</sup>			
Globe Artichokes			
Peanuts	Suppression of spider mites.	13	Begin applications when pests appear. Apply at 7-14-day intervals.  Do not apply more than 8 applications per year.

<sup>a</sup> Eggplant, African eggplant, pea eggplant, scarlet eggplant, garden huckleberry, goji berry, groundcherry, martynia, okra, pepino, bell pepper, non-bell pepper, sunberry, tomatillo, tomato, currant tomato, as well as cultivars, varieties and hybrids of these commodities.

<sup>b</sup> Chinese waxgourd (Chinese preserving melon), citron melon, cucumber, gherkin, edible gourd (includes hyotan, cucuzza, hechima, Chinese okra), Momordica (includes balsam apple, balsam pear, bitter melon, Chinese cucumber), muskmelon (includes true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon and snake melon), pumpkin, summer squash (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini), winter squash (includes butternut squash, calabaza, hubbard squash, *Cucurbita mixta*, *C. pepo*, acorn squash, spaghetti squash), watermelon (includes hybrids and/or varieties of *Citrullus lanatus*).

<sup>c</sup> Amaranth, Chinese; Amaranth, leafy; Arugula; Aster, Indian; Blackjack; Broccoli raab; Broccoli, Chinese; Cabbage, Abyssinian; Cabbage, seakale; Cat's Whiskers; Cham-chwi; Cham-na-mul; Chervil (fresh leaves); Chinese cabbage, bok choy; Chipilin, Chrysanthemum, garland; Cilantro (fresh leaves); Collards, Corn salad (incl. Lamb's lettuce, Italian corn salad); Cosmos; Cress, garden; Cress, upland, Dandelion; Dang-gwi; Dillweed (fresh leaves); Dock; Dol-nam-mul; Ebolo; Endive; Escarole; Fameflower; Feather cockscomb; Good King Henry; Hannover salad; Huazontle; Jute leaves; Kale; Lettuce, bitter; Lettuce, head; Lettuce, leaf (Romaine); Maca; Mizuna; Mustard Greens; Orach; Parsley (fresh leaves); Plantain, buckhorn; Primrose, English; Purslane, garden; Purslane, winter; Radicchio (Red Chicory); Radish Leaves; Rape greens; Rocket, wild; Sheperd's purse; Spinach; Spinach, Malabar; Spinach, New Zealand; Spinach, tree; Swiss chard; Tanier spinach; Turnip greens; Violet, Chinese; Watercress; Cultivars, varieties and/or hybrids of these.

<sup>d</sup> Broccoli, Brussels sprouts, cabbage, Chinese cabbage (napa), cauliflower, as well as cultivars, varieties, and hybrids of these commodities.

<sup>e</sup> Agrimony (fresh leaves) Agrimony (dried leaves); Angelica (fresh leaves); Angelica (dried leaves); Angelica, fragrant (fresh leaves); Angelica, fragrant (dried leaves); Applemint (fresh leaves); Applemint (dried leaves); Avarum (fresh leaves); Avarum (dried leaves); Balm (fresh leaves); Balm (dried leaves); Balloon pea (fresh leaves); Balloon pea (dried leaves); Barrenwort (dried leaves); Basil (fresh leaves); Basil (dried leaves); Basil, American (fresh leaves); Basil, American (dried leaves); Basil, Greek (fresh leaves); Basil, Greek (dried leaves); Basil, holy (fresh leaves); Basil, holy (dried leaves); Basil, lemon (fresh leaves); Basil, lemon (dried leaves); Basil, Russian (fresh leaves); Basil, Russian (dried leaves); Bay (fresh leaves); Bay (dried leaves); Bisongrass (fresh leaves); Bisongrass (dried leaves); Blue mallow (fresh leaves); Boneset (fresh leaves); Boneset (dried leaves); Borage (fresh leaves); Borage (dried leaves); Borage, Indian (fresh leaves); Borage, Indian (dried leaves); Burnet (fresh leaves); Burnet (dried leaves); Burnet, garden (fresh leaves); Burnet, garden (dried leaves); Burnet, salad (fresh leaves); Burnet, salad (dried leaves); Butterbur (dried leaves); Calamint (fresh leaves); Calamint (dried leaves); Calamint, large-flower (fresh leaves); Calamint, large-flower (dried leaves); Calamint, lesser (fresh leaves); Calamint, lesser (dried leaves); Calendula (fresh leaves); Calendula (dried leaves); Caltrop (fresh leaves); Caltrop (dried leaves); Camomile, Chamomile (fresh leaves); Camomile, Chamomile (dried leaves); Camomile, Chamomile (German, fresh leaves); Camomile, Chamomile (German, dried leaves); Camomile, Chamomile (Roman, fresh leaves); Camomile, Chamomile (Roman, dried leaves); Caraway (fresh leaves); Caraway (dried leaves); Cat's claw (dried leaves); Catnip (fresh leaves); Catnip (dried leaves); Catnip, Japanese (fresh leaves); Catnip, Japanese (dried leaves); Celandine, greater (fresh leaves); Celandine, lesser (fresh leaves); Centaury (fresh leaves); Centaury (dried leaves); Chaste tree (fresh leaves); Chaste tree (dried leaves); Chervil (dried leaves); Chinese chastetree (dried leaves); Chinese foxglove (dried leaves); Chive (dried leaves); Chive, Chinese (dried leaves); Cicely, sweet (fresh leaves); Cicely, sweet (dried leaves); Cilantro (dried leaves); Clary (fresh leaves); Clary (dried leaves); Coriander, Bolivian (fresh leaves); Coriander, Bolivian (dried leaves); Coriander, Vietnamese (fresh leaves); Coriander, Vietnamese (dried leaves); Costmary (fresh leaves); Costmary (dried leaves); Creat (dried leaves); Culantro (fresh leaves); Culantro (dried leaves); Curry leaf (fresh leaves); Curry leaf (dried leaves); Curryplan (fresh leaves); Cut leaf (fresh leaves); Cut leaf (fresh leaves); Dillweed (dried leaves); Dokudami (fresh leaves); Echinacea (dried leaves); Epazote (fresh leaves); Epazote (dried leaves); Eucommia (dried leaves); Evening primrose (fresh leaves); Evening primrose (dried leaves); Fennel, common (fresh leaves); Fennel, common (dried leaves); Fennel, Florence (dried leaves); Fennel, Spanish (fresh leaves); Fennel, Spanish (dried leaves); Fenugreek (fresh leaves); Fenugreek (dried leaves); Feverfew (fresh leaves); Feverfew (dried leaves); Field pennycress (fresh leaves); Flowers, edible, fresh, multiple species; Flowers, edible, dried, multiple species; Fumitory (fresh leaves); Fumitory (dried leaves); Galbanum (dried leaves); Gambir (fresh leaves); Geranium (fresh leaves); Geranium (dried leaves); Geranium, lemon (fresh leaves); Geranium, lemon (dried leaves); Geranium, rose (fresh leaves); Geranium, rose (dried leaves); Germander, golden (fresh leaves); Germander, golden (dried leaves); Gotu kola (dried leaves); Gumweed (fresh leaves); Gumweed (dried leaves); Gymnema (dried leaves); Gypsywort (fresh leaves); Gypsywort (dried leaves); Heal-all (fresh leaves); Heal-all (dried leaves); Honewort (fresh leaves); Honeybush (dried leaves); Horehound (fresh leaves); Horehound (dried leaves); Horsemint (fresh leaves); Horsemint (dried leaves); Hyssop (fresh leaves); Hyssop (dried leaves); Hyssop, anise (fresh leaves); Hyssop, anise (dried leaves); Jasmine (fresh leaves); Jasmine (dried leaves); Labrador tea (fresh leaves); Labrador tea (dried leaves); Lavender (fresh leaves); Lavender (dried leaves); Lemongrass (fresh leaves); Lemongrass (dried leaves); Lemon verbena (fresh leaves); Lemon verbena (dried leaves); Lovage (fresh leaves); Lovage (dried leaves); Love-in-a-mist (fresh leaves); Love-in-a-mist (dried leaves); Mamaki (dried leaves); Marigold (fresh leaves); Marigold (dried leaves); Marigold, African (fresh leaves); Marigold, African (dried leaves); Marigold, Aztec (fresh leaves); Marigold, Aztec (dried leaves); Marigold, French (fresh leaves); Marigold, French (dried leaves); Marigold, Irish lace (fresh leaves); Marigold, Irish lace (dried leaves); Marigold, licorice (fresh leaves); Marigold, licorice (dried leaves); Marigold, Mexican mint (fresh leaves); Marigold, Mexican mint (dried leaves); Marigold, signet (fresh leaves); Marigold, signet (dried leaves); Marjoram, (fresh leaves); Marjoram (dried leaves); Marjoram, pot (fresh leaves); Marjoram, pot (dried leaves); Marjoram, sweet (fresh leaves); Marjoram, sweet (dried leaves); Marshmallow (fresh leaves); Marshmallow (dried leaves); Meadowsweet (fresh leaves); Meadowsweet (dried leaves); Mint (fresh leaves); Mint (dried leaves); Mint corn, (fresh leaves); Mint corn (dried leaves); Mint, Korean (fresh leaves); Mint, Korean (dried leaves); Monarda (fresh leaves); Monarda (dried leaves); Motherwort (fresh leaves); Motherwort (dried leaves); Mountainmint (fresh leaves); Mountainmint (dried leaves); Mountainmint, clustered (fresh leaves); Mountainmint, clustered (dried leaves); Mountainmint, hoary (fresh leaves); Mountainmint, hoary (dried leaves); Mountainmint, Virginia (fresh leaves); Mountainmint, Virginia (dried leaves); Mountainmint, whorled (fresh leaves); Mountainmint, whorled (dried leaves); Mugwort (fresh leaves); Mugwort (dried leaves); Mulberry,



white (dried leaves); Mullein (fresh leaves); Mullein (dried leaves); Nasturtium (fresh leaves); Nasturtium (dried leaves); Nasturtium, bush (fresh leaves); Nasturtium, bush (dried leaves); Nasturtium, garden (fresh leaves); Nasturtium, garden (dried leaves); Nettle (fresh leaves); Nettle (dried leaves); Oregano (fresh leaves); Oregano (dried leaves); Oregano, Mexican (fresh leaves); Oregano, Mexican (dried leaves); Oregano, Puerto Rico (fresh leaves); Oregano, Puerto Rico (dried leaves); Oswego tea (fresh leaves); Oswego tea (dried leaves); Pandan leaf (fresh leaves); Pandan leaf (dried leaves); Pansy (fresh leaves); Pansy (dried leaves); Paracress (fresh leaves); Paracress (dried leaves); Parsley (dried leaves); Pennyroyal (fresh leaves); Pennyroyal (dried leaves); Peppermint (fresh leaves); Peppermint (dried leaves); Perilla (fresh leaves); Perilla (dried leaves); Rooibos (dried leaves); Rose (fresh leaves); Rose (dried leaves); Rosemary (fresh leaves); Rosemary (dried leaves); Sage (fresh leaves); Sage (dried leaves); Sage, Greek (fresh leaves); Sage, Greek (dried leaves); Sage, Spanish (fresh leaves); Sage, Spanish (dried leaves); Savory, summer (fresh leaves); Savory, summer (dried leaves); Savory, winter (fresh leaves); Savory, winter (dried leaves); Sorrel (fresh leaves); Sorrel, (dried leaves); Sorrel, French (fresh leaves); Sorrel, French (dried leaves); Sorrel, garden (fresh leaves); Sorrel, garden (dried leaves); Southernwood (fresh leaves); Southernwood (dried leaves); Spearmint (fresh leaves); Spearmint (dried leaves); Spearmint, Scotch (fresh leaves); Spearmint, Scotch (dried leaves); Spotted beebalm (fresh leaves); Spotted beebalm (dried leaves); Squaw vine (dried leaves); St. John's Wort (dried leaves); Stevia (dried leaves); Swamp leaf (fresh leaves); Tansy (fresh leaves); Tansy (dried leaves); Tarragon (fresh leaves); Tarragon (dried leaves); Thyme (fresh leaves); Thyme (dried leaves); Thyme, creeping (fresh leaves); Thyme, creeping (dried leaves); Thyme, lemon (fresh leaves); Thyme, lemon (dried leaves); Thyme, mastic (fresh leaves); Thyme, mastic (dried leaves); Toon, Chinese (fresh leaves); Toon, Chinese (dried leaves); Vasaka (dried leaves); Veronica (fresh leaves); Violet (fresh leaves); Violet (dried leaves); Watermint (fresh leaves); Watermint (dried leaves); Waterpepper (fresh leaves); Wild bergamot (fresh leaves); Wild bergamot (dried leaves); Wintergreen (fresh leaves); Wintergreen (dried leaves); Wood betony (dried leaves); Woodruff (fresh leaves); Woodruff (dried leaves); Wormwood (fresh leaves); Wormwood (dried leaves); Wormwood, Roman (fresh leaves); Wormwood, Roman (dried leaves); Yarrow (fresh leaves); Yarrow (dried leaves); Yellow gentian (fresh leaves); Yellow gentian (dried leaves); Yerba santa (fresh leaves); Yerba santa (dried leaves); Yomogi (fresh leaves); Yomogi (dried leaves); Also included are cultivars, varieties, and hybrids of these commodities.

<sup>f</sup> Ajowan, seed; Allspice; Ambrette seed; Amia; Angelica, seed; Angostura bark; Anise seed; Anise pepper; Anise, star; Annatto seed; Asafoetida; Ashwagandha, fruit; Balsam, Peruvian; Batavia-cassia, bark; Batavia-cassia, fruit; Belleric myrobalan; Betel vine; Black bread weed; Blue mallee; Boldo, leaves; Buchi; Calamus-root; Candlebush; Canella bark; Caper buds; Caraway, fruit; Caraway, black; Cardamom, black; Cardamom, Ethiopian; Cardamom, green; Cardamom, Nepal; Cardamon-amomum; Cascada buckthorn, bark; Cassia bark; Cassia fruit; Cassia, Chinese, fruit; Cassia, Chinese, bark; Cat's claw, roots; Catechu, bark; Celery seed; Chervil, seed; Chaste treeberry, berry; Chinese chastetree, roots; Chinese hawthorn; Chinese nutmeg tree; Chinese-pepper; Chinese prickly-ash; Cinnamon, bark; Cinnamon, fruit; Cinnamon, Saigon, bark; Cinnamon, Saigon, fruit; Clove buds; Copaiba; Coptis; Coriander, fruit; Coriander, seed; Cubeb, seed; Culantro, seed; Cumin; Cumin, black; Daharian angelica, leaves; Daharian angelica, seed; Damiana leaf; Dill, seed; Dorrigo pepper, berry; Dorrigo pepper, leaf; pimedium; Eucalyptus; Eucommia, bark; Felty germander; Fennel, common, fruit; Fennel, common, seed; Fennel, Florence, fruit; Fennel, Florence, seed; Fennel flower, seed; Fenugreek, seed; Fingerroot; Frankincense; Frankincense, Indian; Galbanum; Gambooge; Grains of Paradise; Grains of Selim; Guarana; Guaiac; Guggul; Gum arabic; Gum ghatti; Gum karaya; Gum tragacanth; Gymnema, dried leaves; Haw, black; Honewort, seed; Imperatoria; Iva; Jalap; Juniper berry; Kaffir lime, leaf; Kewra; Kokam; Linden, dried leaves; Lovage, seed; Mace; Magnolia-bark; Mahaleb; Malabar cardamom; Malabathrum; Malabar-tamarind; Mastic; Micromeria, white; Milk thistle; Mioga; Miracle fruit; Mustard seed; Mustard, black; Mustard, brown; Mustard, white; Myrrh; Myrrh, bisabol; Myrtle, dried leaves; Myrtle, anise; Myrtle, lemon; Nasturtium, pods; Nasturtium, bush, pods; Nasturtium, garden, pods; Nutmeg; Pepper, black; Pepper, white; Pepper; Pepper, Indian long; Pepper, leaf; Pepper, long; Pepper, Javanese Long; Pepper, Sichuan; Pepperbush, berry; Pepperbush, leaf; Peppertree; Peppertree, Brazilian; Peppertree, Peruvian; Perilla leaf; Perilla seed; Pine, maritime; Pipsissewa, leaves; Poppy seed; Pygeum; Quassia, bark; Quebracho bark; Quinine; Qing hua jiao; Quillaja; Rue; Saffron crocus; Sassafras, leaves; Saunders, red; Simaruba, bark; Slippery elm; Sumac, fragrant; Sumac, smooth leaf; Tasmanian pepper berry; Tasmanian pepper leaf; Tsao-Ko; Vanilla; Wattleseed; White willow; Willow; Yellow gentian, roots; Cultivars, varieties, and hybrids of these commodities.

<sup>g</sup> Asparagus; Bamboo, shoots; Cardoon; Celery; Celery, Chinese; Fennel, Florence (fresh leaves and stalk); Fern, edible; Fuki; Kale, sea; Kohlrabi; Palm hearts; Prickly pear; Prickly pear, Texas; Rhubarb; Udo; Zuiki; as well as cultivars, varieties, and hybrids of these commodities.

<sup>h</sup> Arrowroot; Artichoke, Chinese; Artichoke, Jerusalem; Beet, garden; Beet, sugar; Burdock, edible; Canna, edible; Carrot; Celeriac (celery root); Chervil, turnip-rooted; Chicory; Chufa; Dasheen (taro); Ginseng; Horseradish; Parsley, turnip-rooted; Parsnip; Potato; Radish; Radish, oriental (daikon); Rutabaga; Salsify (oyster plant); Salsify, black Salsify, Spanish; Skirret; Sweet Potato; Turnip; Yam, true.

### GREENHOUSE GROWN VEGETABLES (Foliar Spray)

CROP	PEST	Litres of SuffOil-X Per 1000 Litres of Water	INSTRUCTIONS
Greenhouse Grown Crop Group 8-09 (Fruiting Vegetables) <sup>a</sup>	Control of thrips, suppression of mites and powdery mildew ( <i>Leveillula taurica</i> ). Deter feeding by aphids.	10-20	<b>Aphids, mites, thrips and whiteflies:</b> begin applications when pests appear. Apply at 7-14 day intervals. <b>Powdery mildew:</b> begin when conditions are favourable for disease development and/or when first symptoms appear. Apply at 7-14 day intervals.
	Control of whiteflies	20	
Greenhouse Grown Crop Group 9 (Cucurbit Vegetables) <sup>b</sup>	Control of thrips, suppression of mites and powdery mildew ( <i>Sphaerotheca fuliginea</i> ). Deter feeding by aphids.	10-20	Do not apply more than 8 applications per crop cycle.
	Control of whiteflies	20	
Greenhouse Grown Crop Group 4-13A (Leafy Greens) <sup>c</sup>	Suppression of spider mites. Deter feeding by aphids.	13	Begin applications when pests appear. Apply at 7-14 day intervals. Do not apply more than 8 applications per year.
Greenhouse Grown Crop Subgroup 4-13B (Brassica Leafy Greens) <sup>d</sup> ,	Suppression of mites and thrips. Deter feeding by aphids.	10-20	Begin applications when pests appear. Apply at 7-14 day intervals. Do not apply more than 8 applications per crop cycle.
Greenhouse Grown Crop Group 5-13 (Brassica Head and Stem Vegetables) <sup>e</sup> , Greenhouse Grown Kohlrabi, Greenhouse Grown Lettuce	Control of whiteflies	20	
Greenhouse Grown Crop Group 25 (Herbs) <sup>f</sup>	Suppression of spider mites. Deter feeding by aphids.	13	Begin applications when pests appear. Apply at 7-14 day intervals. Do not apply more than 8 applications per year.
Greenhouse Grown Asian Water Spinach	Suppression of spider mites. Deter feeding by aphids.	13	Begin applications when pests appear. Apply at 7-14 day intervals. Do not apply more than 8 applications per year.

<sup>a</sup>. African eggplant, bush tomato, cocona, currant tomato, eggplant, garden huckleberry, goji berry, groundcherry, martynia, naranjilla, okra, pea eggplant, pepino, bell pepper, non-bell pepper, roselle, scarlet eggplant, sunberry, tomatillo, tomato, tree tomato, as well as cultivars, varieties and/or hybrids of these commodities.

<sup>b</sup>. Chayote (fruit), Chinese waxgourd (Chinese preserving melon), citron melon, cucumber, gherkin, edible gourd (includes cucuzza, hechima, hyotan, Chinese okra), Momordica (includes balsam apple, balsam

pear, bitter melon, Chinese cucumber), muskmelon (includes true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, snake melon), pumpkin, summer squash (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini), winter squash (includes acorn squash, butternut squash, calabaza, *Cucurbita mixta*, *C. pepo*, hubbard squash, spaghetti squash), watermelon (includes hybrids and/or varieties of *Citrullus lanatus*).

c. Amaranth, Chinese; Amaranth, leafy; Aster, Indian; Blackjack; Cat's Whiskers; Cham-chwi; Cham-namul; Chervil, fresh leaves; Chipilin; Chrysanthemum, garland; Cilantro, fresh leaves; Corn salad; Cosmos; Dandelion; Dang-gwi; Dillweed, fresh leaves; Dock; Dol-nammul; Ebolo; Endive; Escarole; Fameflower; Feather cockscomb; Good King Henry; Huauzontle; Jute leaves; Lettuce, bitter; Lettuce, head; Lettuce, leaf (Romaine); Orach; Parsley, fresh leaves; Plantain, buckhorn; Primrose, English; Purslane, garden; Purslane, winter; Radicchio (Red Chicory); Spinach; Spinach, Malabar; Spinach, New Zealand; Spinach, tree (Giant Lambsquarter); Swiss chard; Tanier spinach; Violet, Chinese, varieties and/or hybrids of these.

d. Arugula; Broccoli raab; Broccoli, Chinese; Cabbage, Abyssinian; Cabbage, seakale; Chinese cabbage, bok choy; Collards; Cress, garden; Cress, upland; Hanover salad; Kale; Maca; Mizuna; Mustard greens; Radish, leaves; Rape greens; Rocket, wild; Shepherd's purse; Turnip greens; Watercress as well as cultivars, varieties and hybrids of these commodities

e. Broccoli, Brussels sprouts, cabbage, Chinese cabbage (napa), cauliflower, as well as cultivars, varieties and/or hybrids of these commodities.

f. Agrimony (fresh leaves) Agrimony (dried leaves); Angelica (fresh leaves); Angelica (dried leaves); Angelica, fragrant (fresh leaves); Angelica, fragrant (dried leaves); Applemint (fresh leaves); Applemint (dried leaves); Avarum (fresh leaves); Avarum (dried leaves); Balm (fresh leaves); Balm (dried leaves); Balloon pea (fresh leaves); Balloon pea (dried leaves); Barrenwort (dried leaves); Basil (fresh leaves); Basil (dried leaves); Basil, American (fresh leaves); Basil, American (dried leaves); Basil, Greek (fresh leaves); Basil, Greek (dried leaves); Basil, holy (fresh leaves); Basil, holy (dried leaves); Basil, lemon (fresh leaves); Basil, lemon (dried leaves); Basil, Russian (fresh leaves); Basil, Russian (dried leaves); Bay (fresh leaves); Bay (dried leaves); Bisongrass (fresh leaves); Bisongrass (dried leaves); Blue mallow (fresh leaves); Boneset (fresh leaves); Boneset (dried leaves); Borage (fresh leaves); Borage (dried leaves); Borage, Indian (fresh leaves); Borage, Indian (dried leaves); Burnet (fresh leaves); Burnet (dried leaves); Burnet, garden (fresh leaves); Burnet, garden (dried leaves); Burnet, salad (fresh leaves); Burnet, salad (dried leaves); Butterbur (dried leaves); Calamint (fresh leaves); Calamint (dried leaves); Calamint, large-flower (fresh leaves); Calamint, large-flower (dried leaves); Calamint, lesser (fresh leaves); Calamint, lesser (dried leaves); Calendula (fresh leaves); Calendula (dried leaves); Caltrop (fresh leaves); Caltrop (dried leaves); Camomile, Chamomile (fresh leaves); Camomile, Chamomile (dried leaves); Camomile, Chamomile (German, fresh leaves); Camomile, Chamomile (German, dried leaves); Camomile, Chamomile (Roman, fresh leaves); Camomile, Chamomile (Roman, dried leaves); Caraway (fresh leaves); Caraway (dried leaves); Cat's claw (dried leaves); Catnip (fresh leaves); Catnip (dried leaves); Catnip, Japanese (fresh leaves); Catnip, Japanese (dried leaves); Celandine, greater (fresh leaves); Celandine, lesser (fresh leaves); Centaury (fresh leaves); Centaury (dried leaves); Chaste tree (fresh leaves); Chaste tree (dried leaves); Chervil (dried leaves); Chinese chastetree (dried leaves); Chinese foxglove (dried leaves); Chive (dried leaves); Chive, Chinese (dried leaves); Cicely, sweet (fresh leaves); Cicely, sweet (dried leaves); Cilantro (dried leaves); Clary (fresh leaves); Clary (dried leaves); Coriander, Bolivian (fresh leaves); Coriander, Bolivian (dried leaves); Coriander, Vietnamese (fresh leaves); Coriander, Vietnamese (dried leaves); Costmary (fresh leaves); Costmary (dried leaves); Creat (dried leaves); Culantro (fresh leaves); Culantro (dried leaves); Curry leaf (fresh leaves); Curry leaf (dried leaves); Curryplan (fresh leaves); Cut leaf (fresh leaves); Cut leaf (fresh leaves); Dillweed (dried leaves); Dokudami (fresh leaves); Echinacea (dried leaves); Epazote (fresh leaves); Epazote (dried leaves); Eucommia (dried leaves); Evening primrose (fresh leaves); Evening primrose (dried leaves); Fennel, common (fresh leaves); Fennel, common (dried leaves); Fennel, Florence (dried leaves); Fennel, Spanish (fresh leaves); Fennel, Spanish (dried leaves); Fenugreek (fresh leaves); Fenugreek (dried leaves); Feverfew (fresh leaves); Feverfew (dried leaves); Field pennycress (fresh leaves); Flowers, edible, fresh, multiple species; Flowers, edible, dried, multiple species; Fumitory (fresh leaves); Fumitory (dried leaves); Galbanum (dried leaves); Gambir (fresh leaves); Geranium (fresh leaves); Geranium (dried leaves); Geranium, lemon (fresh leaves); Geranium, lemon (dried leaves); Geranium, rose (fresh leaves); Geranium, rose (dried leaves); Germander, golden (fresh leaves); Germander, golden (dried leaves); Gotu kola (dried leaves); Gumweed (fresh leaves); Gumweed (dried leaves); Gymnema (dried leaves); Gypsywort (fresh leaves); Gypsywort (dried leaves); Heal-all (fresh leaves); Heal-all (dried leaves); Honewort (fresh leaves); Honeybush (dried leaves); Horehound (fresh leaves); Horehound (dried leaves); Horsemint (fresh leaves); Horsemint (dried leaves); Hyssop (fresh leaves); Hyssop (dried leaves); Hyssop, anise (fresh leaves); Hyssop, anise (dried leaves); Jasmine (fresh leaves); Jasmine (dried leaves);

Labrador tea (fresh leaves); Labrador tea (dried leaves); Lavender (fresh leaves); Lavender (dried leaves); Lemongrass (fresh leaves); Lemongrass (dried leaves); Lemon verbena (fresh leaves); Lemon verbena (dried leaves); Lovage (fresh leaves); Lovage (dried leaves); Love-in-a-mist (fresh leaves); Love-in-a-mist (dried leaves); Mamaki (dried leaves); Marigold (fresh leaves); Marigold (dried leaves); Marigold, African (fresh leaves); Marigold, African (dried leaves); Marigold, Aztec (fresh leaves); Marigold, Aztec (dried leaves); Marigold, French (fresh leaves); Marigold, French (dried leaves); Marigold, Irish lace (fresh leaves); Marigold, Irish lace (dried leaves); Marigold, licorice (fresh leaves); Marigold, licorice (dried leaves); Marigold, Mexican mint (fresh leaves); Marigold, Mexican mint (dried leaves); Marigold, signet (fresh leaves); Marigold, signet (dried leaves); Marjoram, (fresh leaves); Marjoram (dried leaves); Marjoram, pot (fresh leaves); Marjoram, pot (dried leaves); Marjoram, sweet (fresh leaves); Marjoram, sweet (dried leaves); Marshmallow (fresh leaves); Marshmallow (dried leaves); Meadowsweet (fresh leaves); Meadowsweet (dried leaves); Mint (fresh leaves); Mint (dried leaves); Mint corn, (fresh leaves); Mint corn (dried leaves); Mint, Korean (fresh leaves); Mint, Korean (dried leaves); Monarda (fresh leaves); Monarda (dried leaves); Motherwort (fresh leaves); Motherwort (dried leaves); Mountainmint (fresh leaves); Mountainmint (dried leaves); Mountainmint, clustered (fresh leaves); Mountainmint, clustered (dried leaves); Mountainmint, hoary (fresh leaves); Mountainmint, hoary (dried leaves); Mountainmint, Virginia (fresh leaves); Mountainmint, Virginia (dried leaves); Mountainmint, whorled (fresh leaves); Mountainmint, whorled (dried leaves); Mugwort (fresh leaves); Mugwort (dried leaves); Mulberry, white (dried leaves); Mullein (fresh leaves); Mullein (dried leaves); Nasturtium (fresh leaves); Nasturtium (dried leaves); Nasturtium, bush (fresh leaves); Nasturtium, bush (dried leaves); Nasturtium, garden (fresh leaves); Nasturtium, garden (dried leaves); Nettle (fresh leaves); Nettle (dried leaves); Oregano (fresh leaves); Oregano (dried leaves); Oregano, Mexican (fresh leaves); Oregano, Mexican (dried leaves); Oregano, Puerto Rico (fresh leaves); Oregano, Puerto Rico (dried leaves); Oswego tea (fresh leaves); Oswego tea (dried leaves); Pandan leaf (fresh leaves); Pandan leaf (dried leaves); Pansy (fresh leaves); Pansy (dried leaves); Paracress (fresh leaves); Paracress (dried leaves); Parsley (dried leaves); Pennyroyal (fresh leaves); Pennyroyal (dried leaves); Peppermint (fresh leaves); Peppermint (dried leaves); Perilla (fresh leaves); Perilla (dried leaves); Rooibos (dried leaves); Rose (fresh leaves); Rose (dried leaves); Rosemary (fresh leaves); Rosemary (dried leaves); Sage (fresh leaves); Sage (dried leaves); Sage, Greek (fresh leaves); Sage, Greek (dried leaves); Sage, Spanish (fresh leaves); Sage, Spanish (dried leaves); Savory, summer (fresh leaves); Savory, summer (dried leaves); Savory, winter (fresh leaves); Savory, winter (dried leaves); Sorrel (fresh leaves); Sorrel, (dried leaves); Sorrel, French (fresh leaves); Sorrel, French (dried leaves); Sorrel, garden (fresh leaves); Sorrel, garden (dried leaves); Southernwood (fresh leaves); Southernwood (dried leaves); Spearmint (fresh leaves); Spearmint (dried leaves); Spearmint, Scotch (fresh leaves); Spearmint, Scotch (dried leaves); Spotted beebalm (fresh leaves); Spotted beebalm (dried leaves); Squaw vine (dried leaves); St. John's Wort (dried leaves); Stevia (dried leaves); Swamp leaf (fresh leaves); Tansy (fresh leaves); Tansy (dried leaves); Tarragon (fresh leaves); Tarragon (dried leaves); Thyme (fresh leaves); Thyme (dried leaves); Thyme, creeping (fresh leaves); Thyme, creeping (dried leaves); Thyme, lemon (fresh leaves); Thyme, lemon (dried leaves); Thyme, mastic (fresh leaves); Thyme, mastic (dried leaves); Toon, Chinese (fresh leaves); Toon, Chinese (dried leaves); Vasaka (dried leaves); Veronica (fresh leaves); Violet (fresh leaves); Violet (dried leaves); Watermint (fresh leaves); Watermint (dried leaves); Waterpepper (fresh leaves); Wild bergamot (fresh leaves); Wild bergamot (dried leaves); Wintergreen (fresh leaves); Wintergreen (dried leaves); Wood betony (dried leaves); Woodruff (fresh leaves); Woodruff (dried leaves); Wormwood (fresh leaves); Wormwood (dried leaves); Wormwood, Roman (fresh leaves); Wormwood, Roman (dried leaves); Yarrow (fresh leaves); Yarrow (dried leaves); Yellow gentian (fresh leaves); Yellow gentian (dried leaves); Yerba santa (fresh leaves); Yerba santa (dried leaves); Yomogi (fresh leaves); Yomogi (dried leaves); Also included are cultivars, varieties, and hybrids of these commodities.

### ***Cannabis* (marihuana) produced commercially indoors**

Crop	Pest	Litres of SuffOil-X Per 1000 Litres of Water	INSTRUCTIONS
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Cannabis (marihuana) produced commercially indoors	Suppression of powdery mildew ( <i>Erysiphe cichoracearum</i> , <i>Podosphaera macularis</i> ). Control of spider mites, scales and thrips. Deter feeding by aphids.	10-20	Maximum 6 applications during lifespan of plant (lifespan is 12-14 weeks from cutting to harvest). Only use lower application rate (1%) during budding/flowering. Re-application interval is 14 days. For powdery mildew, begin applications when conditions are favourable for disease. Do not apply on new seedlings or clones less than 2 weeks old without having determined sensitivity (phytotoxicity).
	Control of whiteflies	20	

## ORNAMENTALS

**CAUTION: Non-dormant foliar spray or cutting/plant dip applications of mineral oil may cause plant injury, foliar damage, permanent discolouration of foliage, or death to some varieties of plants. Follow all CAUTIONS and USE PRECAUTIONS on this label. To minimize the risk of plant injury and foliar damage, test product by applying to a small area of the plant to be treated or test on a small number of plants of each variety to be treated, and observe for 24 hours for injury or damage.**

### OUTDOOR ORNAMENTALS (Summer Spray)

CROP	PEST	Litres of SuffOil-X Per 1000 Litres of Water	INSTRUCTIONS
Ornamentals including Flowers, Foliage Plants, Bedding Plants, Shade Trees, Shrubs, Christmas Trees	Control of spider mites and scales. Deter feeding by aphids.	10-20	Apply when monitoring indicates the need, at an interval of 7-14 days. Do not apply more than 8 applications per crop cycle. Oil might remove the glaucous (blue) bloom from such evergreens as Colorado blue spruce and Koster spruce.
	Control of whiteflies	20	
Lilac	Suppression of powdery mildew ( <i>Erysiphe syringae</i> )	10 – 20	Apply when monitoring indicates the need, at an interval of 7-14 days. Do not apply more than 8 applications per crop cycle.

### GREENHOUSE ORNAMENTALS (Foliar Spray)

CROP	PEST	Litres of SuffOil-X Per 1000 Litres of Water	INSTRUCTIONS
Greenhouse Ornamentals including Azalea, Camellia, Chrysanthemum, Coleus, Gardenia, Hibiscus, Iris, Jasmine, Laurel, Lily, Marigold, Poinsettia, Rose	Control of broad mites, , spider mites, scales and thrips. Deter feeding by aphids.	10-20	Apply when monitoring indicates the need.
	Control of whiteflies and mealybugs	20	

### GREENHOUSE ORNAMENTALS (Cutting or potted plug foliar dip)

CROP	PEST	millilitres of SuffOil-X Per 1 Litre of Water	INSTRUCTIONS
Greenhouse	Suppression of	1-5	One application only, prior to planting.

Ornamentals	thrips		Cuttings should remain fully submerged for 5 to 10 seconds to wet all surfaces.
	Control of whiteflies	1-2.5	
When used as a cutting dip on poinsettia, do not exceed the rate of 1.0 mL/L. <b>One dip application only, prior to planting.</b>			

**TIMING THE TREATMENT:** You must determine the precise timing to fit local growth and climatic conditions. PRE-HARVEST INTERVAL (PHI): The PHI is 12 hours.

### **SPRAY DRIFT MANAGEMENT**

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature and relative humidity) and method of application (e.g., ground and airblast) can influence pesticide drift. The applicator and grower must evaluate all factors and make appropriate adjustments when applying this product.

**WIND SPEED:** Do not apply at wind speeds greater than 24 kph at the application site.

**TEMPERATURE INVERSIONS:** If applying at wind speeds less than 8 kph, the applicator must determine if a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions.

**DROPLET SIZE:** Apply as a fine or coarser spray (ASABE standard 572), and the minimum volume mean diameter (VMD) for spinning atomizer nozzles.

**GROUND-BASED APPLICATIONS:** Apply using a nozzle height of no more than 1.25 meters above the ground or crop canopy. Do not apply at wind speeds greater than 24 kph at the application site. Apply as a fine or coarser spray (ASABE standard 572), and the minimum volume mean diameter (VMD) for spinner atomizer nozzles.

**AIRBLAST APPLICATIONS:** For airblast applications, turn off outward pointing nozzles at row ends and when spraying outer row. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

### **BUFFER ZONES:**

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

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 label for those tank mix partners.

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.

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.

Method of application	Crop	Buffer Zones (metres) Required for the Protection of:				
		Freshwater Habitat of Depths:		Estuarine/Marine Habitats of Depths:		
		Less than 1 m	Greater than 1 m	Less than 1 m	Greater than 1 m	
Field sprayer	lettuce, onion, potato, kohlrabi, berries & small fruits (CG 13-07), cucurbit vegetables (CG 9), fruiting vegetables (CG 8-09), Leafy Vegetables (CG 4-13), Brassica head and stem vegetables (CG 5-13), outdoor ornamentals (only outdoor flowers; lilac; foliage and bedding plants), peanuts, root and tuber vegetables (CG 1), herbs and spices (CG 25 and 26), stalk, stem and leaf petiole vegetable (CG 22), Asian water spinach, and globe artichokes	2	1	1	1	
Airblast	Ornamental plants, shade trees and shrubs, and Christmas trees	5	3	1	1	
	Prunes	4	2	1	1	
	Grapes, hops, tree nuts	Early growth stage	15	10	1	1
		Late growth stage	10	4	1	1
	Pome fruit, stone fruit	Early growth stage	15	10	1	1
		Late growth stage	10	4	1	1

\*For field sprayer application, buffer zones can be reduced with the use of drift reducing spray shields. When using a spray boom fitted with a full shield (shroud, curtain) that extends to the crop canopy, the labelled buffer zone can be reduced by 70%. When using a spray boom where individual nozzles are fitted with cone-shaped shields that are no more than 30 cm above the crop canopy, the labelled buffer zone can be reduced by 30%.

## 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.