Your guide to insecticide selection.

When every dollar counts.
In the complex world of food production, UAP is helping to meet the challenges of higher crop yields and healthier production practices. UAP is pleased to bring a wide range of proven crop production products to the agricultural and horticultural marketplace across Canada.

UAP carries over 35 insecticides for control of insect pests in many different crops. In field crops like cereals, corn, soybean, and canola, UAP has an insecticide to control major pests such as grasshoppers, lygus bug and bertha armyworm. In vegetable crops like lettuce, Brussels sprouts and potatoes, look to UAP for control of pests like aphids, Colorado potato beetle and leafminers. In fruit crops like apples, strawberries, cranberries and cherries, UAP carries insecticides for control of apple maggot, fruit flies and mites, to name a few.

With over 100 trusted products in Canada, UAP covers virtually every cropping challenge. Look to UAP for herbicides, fungicides, insecticides, adjuvants, inoculants, fumigants, growth regulators, rodenticides and specialty micronutrient fertilizers. For products that deliver high value to your farm’s bottom line, call your nearest crop input dealer and ask for one of UAP’s proven crop production products.
Alias® SC

Alias 240SC is an additional entry in the imidacloprid insecticide market, providing greater freedom of choice. Alias offers fruit and vegetable growers control over a wide range of insects.

**ACTIVE INGREDIENT:** Imidacloprid 240 g/L

**INSECTICIDE GROUP:** Group 4

**MODE OF ACTION:** Systemic action

**CROPS:** Potato, tomato (field grown – Ontario, Quebec, Prince Edward Island and Atlantic Canada only), field lettuce (British Columbia, Ontario, Quebec, PEI and Nova Scotia only), apple, cherry (sweet and sour, British Columbia and Ontario only), highbush blueberry (BC, Ontario and Quebec only), Brussels sprouts and eggplant.

**TARGET PESTS:** Colorado potato beetle, aphids (including green peach, buckthorn, foxglove and potato), potato leafhopper, potato flea beetle, lettuce aphid, green apple aphid, rosy apple aphid, mullein bug, tentiform leafminer, white apple leafhopper, western cherry fruit fly, black cherry fruit fly, blueberry aphid, cabbage aphids, Japanese beetle larvae and European chafer larvae.

**APPLICATION TIMING:** Alias SC can be used as a soil applied insecticide, seed treatment, transplant plug drench, or in a foliar application, depending on the crop. Refer to label for specific crop registrations.

**PREHARVEST INTERVAL:**
- Potato: 7 days
- Tomato: 7 days
- Lettuce: Transplant tray plug drench and soil drench - 21 days, Foliar applications - 7 days
- Apple: 7 days
- Cherry (sweet and sour): 10 days
- Highbush blueberry (BC only): 14 days
- Eggplant: Transplant soil application – 70 days, Foliar application – 7 days
- Highbush blueberry (Ontario and Quebec): 14 days

**RESTRICTED ENTRY INTERVAL:** Do not re-enter treated areas for 24 hours after foliar applications.

**RESIDUAL CONTROL:** If replanting area with a crop listed on the label you may plant as soon as is practical following the last application. Cereal grains (wheat, oats and barley) plant back interval of 30 days. Pea and bean (fababean, soybean, adzuki bean, mung bean, lima bean, scarlet runner, dry common bean and snap bean) plant back interval of 9 months. Rotation to all other food and feed crops will require 12 months.
Bioprotec CAF & Bioprotec 3P

Bioprotec is a biological insecticide available in two formulations, Bioprotec CAF liquid and Bioprotec 3P dry flowable formulation. A key tool for growers using organic growing methods for the control of Lepidoptera larvae.

**ACTIVE INGREDIENT:** *Bacillus thuringiensis ssp kurstaki*, a bacteria that produces crystals toxic to the insect being controlled. Bioprotec CAF – 11,400 IU/L equivalent to 12.7 BIU/L. Bioprotec 3P – 25,000 IU/mg equivalent to 25.0 BIU/kg.

**INSECTICIDE GROUP:** Group 11

**MODE OF ACTION:** Stomach contact and ingestion. The insects stop feeding within a few hours of ingesting the product and death generally occurs within 2 to 5 days after ingestion.

**CROPS:** Cole crops, tomatoes, sweet corn, beans, sweet pepper, orchard crops, cranberries, raspberries, forage crops, rangeland and other field and greenhouse crops (see label for more detail).

**TARGET PESTS:** European corn borer, cabbage looper, imported cabbage worm, diamond back moth, leafrollers, hornworms, Essex skipper, fruit worms, spanworms, oblique banded leafrollers and tomato fruit worms

**APPLICATION TIMING:** Apply at first signs of infestation when larvae are small, repeat according to economic thresholds. Thorough coverage is essential.

**PRE-HARVEST INTERVAL:** Bioprotec can be applied up to the day of harvest.

Always read and follow label directions
DDVP 20 EC

DDVP 20EC is an insecticide used in greenhouses and in or around livestock buildings.

**ACTIVE INGREDIENT:** Dichlorvos 20%

**INSECTICIDE GROUP:** 1B

**MODE OF ACTION:** Inhibits an enzyme, interrupting the transmission of nerve impulses.

**TARGET CROPS:** Greenhouse grown ornamentals, cucumbers and tomatoes. Also used as a surface spray in and around livestock buildings and as a fly control on livestock.

**TARGET PESTS:** In greenhouse crops – aphids and white fly. In livestock buildings – flies, gnats, mosquitoes, fleas, ants and several other insects listed on the label.

**RESTRICTED RE-ENTRY:** Thoroughly ventilate greenhouses before re-entering the greenhouse the day after treatment. Ventilate livestock building before allowing livestock to return to the building.

**PRE-HARVEST INTERVAL:** 7 days for tomatoes and cucumbers.

**APPLICATION TIMING:** On first sign of insects or insect damage.

Always read and follow label directions.
Diazinon® 50W

Diazinon 50W is a broad-spectrum insecticide/miticide for use on a large range of crops. As an organophosphate insecticide, Diazinon 50W controls insects through contact and ingestion, providing a good level of residual control.

**ACTIVE INGREDIENT:** Diazinon 50%

**INSECTICIDE GROUP:** Group 1B; Organophosphate

**MODE OF ACTION:** Contact and stomach. Acts as a cholinesterase inhibitor.

**CROPS:** Beans, cane fruit, cole crops, cranberry, curcurbits, grape, mushroom, ornamentals, potato, strawberry, treefruit, tobacco and vegetables (see label for complete list).

**TARGET PESTS:** Aphid, apple maggot, black headed fireworm, cabbageworm, codling moth, diamondback moth, flea beetle, grasshopper, green fruit worm, leafminer, mealybug, mite, pavement ant, pear psylla, scales, seed corn maggot, stink bugs and thrips. See label for other species controlled.

**APPLICATION TIMING:** When insects reach economic thresholds. Also used as dormant spray in some crops. Consult label for specific recommendations and repeat application guidelines.

**PREHARVEST INTERVAL:** 1 to 21 days depending on the crop.

**RESTRICTED ENTRY INTERVAL:** Re-enter once the leaf surface is dry.

**RESIDUAL CONTROL:** 7 to 10 days depending on the crop, insect and infestation level.

Always read and follow label directions
Dibrom®

Dibrom is a broad spectrum insecticide used in a large number of crops, animal health and in mosquito control situations. In greenhouses, fogging with Dibrom is also an effective way to manage insect pests. Dibrom uses stomach and contact activity to control insects and has residual control as well.

Dibrom also has the ability to control grasshoppers in pastures while cattle are present.

**ACTIVE INGREDIENT:** Naled 864 g/L

**INSECTICIDE GROUP:** Group 1B; Organophosphate

**MODE OF ACTION:** Contact and stomach ingestion

**CROPS:** Dry, field and lima beans, peas for processing, vegetables, potato, alfalfa, clovers, vetch, hops, sugar beets, strawberry, ornamentals, greenhouse crops, mosquito and fly control in farm buildings, rangeland and pastures. See label for complete listing.

**TARGET PESTS:** Caterpillar type larvae such as loopers and leafhoppers, lygus bug, aphids, flea beetle, Colorado potato beetle, flies, mite, grasshopper, mosquito and others (see label).

**APPLICATION TIMING:** Begin at first sign of insects, repeat as necessary. Apply as a contact spray or thorough coverage spray. Consult local specialists or Crop Protection Guides for economic threshold levels of specific insects.

**PREHARVEST INTERVAL:** 1 to 5 days depending on crop (see label). Do not apply to food or forage crops within 4 days of harvest or grazing. When used in pastures for the control of grasshoppers, animals may be present during treatment.

**RESTRICTED ENTRY INTERVAL:** When using in greenhouse, leave closed for at least 3 hours and ventilate before workers re-enter. Outdoor/field crops once dry on crop.

**RESIDUAL CONTROL:** 3 to 21 days depending on insect controlled and method of use (see label).
Imidan® 50WP

Imidan 50WP gives quick knockdown of target pests and good residual control. It is effective in IPM programs and has minimal disruption to beneficial insects. Packaged in water soluble sachets that can be dropped into the spray tank unopened, reducing mixer/loader exposure to the product.

**ACTIVE INGREDIENT:** Phosmet 50%

**INSECTICIDE GROUP:** 1B

**MODE OF ACTION:** Non-systemic, contact, organophosphorous insecticide.

**TARGET CROPS:** Alfalfa, apples, blueberries, carrots, celery, cherry, cranberry, pears, peaches, plum, potatoes, shade trees and ornamentals (see label for specific species).

**TARGET PESTS:** Alfalfa weevil, alfalfa blotch leafminers, European red mite, codling moth, leaf rollers, plum curculio, apple maggot, tarnished plant bug, blueberry maggot, spanworms, carrot weevils and several others listed on the label.

**TIMING:** Apply at first sign of infestation but not during the bloom period. For oblique leafrollers apply within 7 to 10 days of first moth trapping.

**PRE-HARVEST INTERVAL:** 1 to 20 days depending on crop, see label for details

**RE-ENTRY TIME:** Re-enter once product residue has thoroughly dried on the plant.

**SURFACTANT:** Use LI 700 with Imidan to extend pesticide stability.

Photo: United States Department of Agriculture
Lagon has become one of Canada's leading insecticides due to its reliable performance under a wide range of environmental conditions, the wide variety of crops it can be used in and the broad-spectrum of insects controlled. When growers find it tough to control insects in their crops, they can count on Lagon to control the problem every time.

**ACTIVE INGREDIENT:**
Dimethoate 480 g/L

**INSECTICIDE GROUP:** Group 1B insecticide/acaricide; Organophosphate

**MODE OF ACTION:** Combines multi-site activity. Contact, residual and plant systemic activity to provide reliable pest control without causing crop injury. It is especially effective against piercing and sucking insects.

**CROPS:** Alfalfa, barley, canary seed, canola, Christmas trees, cole crops, flax, leafy vegetables, oats, outdoor ornamentals, pea, peppers, potato, safflower, soybean, tomato, tree fruit and small fruit crops, wheat, forage crops, pasture and restricted aerial use in forest. (See label for specific crops).

**TARGET PESTS:** Aphid, apple maggot, bean beetle, blueberry maggot, flies, grasshopper, leafhopper, leafminer, lygus beetle, plant bugs, tarnish plant bugs, thrips, two spotted spider mite and wheat midge. (See label for specific insects).

**APPLICATION TIMING:** When insects are present or first sign of visible damage. See provincial spray guides for economic insect threshold pressure levels. Works well in warm growing conditions.

**PREHARVEST INTERVAL:** Do not graze or harvest for forage for 2 to 7 days after treatment. May vary by crop. Other crops 2 to 45 days. See label for specific times.

**RESTRICTED ENTRY INTERVAL:** 48 hours

**RESIDUAL CONTROL:** 7 to 10 days in crops. Up to 6 weeks control of houseflies in livestock barns.

---

photo: D.W. Goerzen, Biologist Saskatchewan Alfalfa Seed Producers Association

Always read and follow label directions
Malathion 85E

Malathion is an economical and effective insecticide for control of a wide range of insect pests in a wide range of field, fruit and horticultural crops.

**ACTIVE INGREDIENT:** Malathion 85%

**INSECTICIDE GROUP:** Group 1B; Organophosphate

**MODE OF ACTION:** Malathion is a contact organophosphate insecticide. To ensure adequate coverage, a good water volume is required. Best results are achieved with temperatures over 20º C.

**CROPS:**

Field crops: Alfalfa, canary grass (seed), clover, grain and forage corn, flax, wheat, oats, rye, barley, lentil, mustard, canola, sugar beets, sweet clover, tobacco and wild rice.

Vegetable crops: Asparagus, beans, broccoli, Brussels sprouts, cabbage, cauliflower, kale, kohlrabi, beet, carrot, celery, collards, swiss chard, watercress, cucumber, squash, pumpkin, dandelion, eggplant, endive, garlic, horseradish, leek, shallot, field lettuce, greenhouse lettuce, melon, mushroom beds, onion, parsley, parsnip, pea, pepper, potato, radish, rutabaga, turnip, spinach and tomato.

Fruits: Apple, crab apple, apricot, blackberry, boysenberry, dewberry, loganberry, cherry, cranberry, grape, peach, pear, plum, prune plum, raspberry and strawberry.

**TARGET PESTS:**

Field crops: Alfalfa weevil larvae, alfalfa blotch leafminer, aphid, armyworm, cereal leaf beetle, earworm, diamondback moth larvae, English grain aphid, European corn borer, flea beetle, grasshopper, greenbug, leafhopper, lygus bug, spider mite, adult spittlebug, sweet clover weevil, tobacco hornworm, winter grain mite and wild riceworm.

Always read and follow label directions
Vegetable crops: Asparagus beetle, aphid, cabbage looper, imported cabbageworm, cucumber beetle, leafhopper, leafminer, Mexican bean beetle, spider mite, thrips and tomato russet mite.

Fruits: Aphid, bud moth, blackheaded fireworm, cranberry fruitworm, leaf roller, mealybug, meadow spittlebug, mite, codling moth, ornamental fruit moth, plum curculio, orange tortrix, pear psylla, pear slug, rose chafer, sap beetle, scale insect, spider mite, tent caterpillar, thrips and adult bud weevil.

APPLICATION TIMING: Apply when insect numbers exceed economic thresholds. Consult label and agronomic consultants for specific recommendations for crops and insects.

PREHARVEST INTERVAL: 1 to 20 days, depending on crop

RESTRICTED ENTRY INTERVAL: Re-enter once product is dry on crop

RESIDUAL CONTROL: None
Orthene® 75SP

When it comes to controlling key insect pests in high-value vegetable, ornamental and tobacco crops, you just can't beat the powerful one-two punch of Orthene 75SP insecticide. Once applied Orthene works in two ways to control insect pests. First, it provides excellent contact control of foliar-feeding insects. Secondly, it is rapidly absorbed into plant tissue, controlling insects as they feed for two to three weeks after application.

ACTIVE INGREDIENT: Acephate 75%

INSECTICIDE GROUP: 1B

MODE OF ACTION: Contact control of foliar-feeding insects and systemic control of insects feeding for two to three weeks.

CROPS: Cabbage, brussels sprouts, cauliflower, head lettuce, celery, corn (sweet and seed), potato, Saskatoon berries (soil injection method), sweet peppers, tobacco, cranberries, tomato (transplant water application), trees and ornamentals (see label for species), roses, Christmas tree plantations, woodlots, tree nurseries, shelterbelts, right of ways and municipal parks (excluding National and Provincial parks).

TARGET INSECTS: Cabbage loopers, imported cabbage worm, diamondback moths, aphids (green peach, potato and wooly apple), tarnish plant bug, European corn borer, potato flea beetle, potato leaf hopper, pepper maggot, tomato hornworm, flea beetles and several others as described on the product label.

APPLICATION TIMING: Apply when insects reach economic thresholds unless otherwise listed on the label.

PRE-HARVEST INTERVAL: 7 days to 11 months, see label for crop specifics

RESTRICTED RE-ENTRY: 3 days for Saskatoon berries. Other crops do not re-enter until the spray deposit has dried.

RESIDUAL CONTROL: 2 to 3 weeks

Always read and follow label directions
Pounce®

Pounce is a broad spectrum insecticide with low mammalian toxicity. Pounce has good residual activity to help minimize the need for repeat applications. It controls insects through a combination of stomach and contact activity, which improves control effectiveness.

**ACTIVE INGREDIENT:** Permethrin 384 g/L

**INSECTICIDE GROUP:** Group 3; Synthetic Pyrethroid insecticide

**MODE OF ACTION:** Pounce has stomach and contact activity with no systemic or fumigant effects.

**CROPS:** Wide range of crops, (see label for specifics).

- **Field crops:** including cereals, canola, corn, flax, lentil, pea, potato and sunflower.
- **Vegetables:** Including cole crops, sweet corn, cucumber (greenhouse) and peppers.
- **Fruit:** Including apple, blueberries, pear, peach, grape, nectarine and plum.
- **Other crops and uses:** Including mushroom, tobacco, farm buildings, ornamental and greenhouse use.

**TARGET PESTS:** Many common insect pests of fruit, vegetable, greenhouse and ornamental crops: armyworm, caterpillar type larvae, cutworms (various species), European corn borer, flea beetle, mushroom flies, potato leafhopper, whitefly. Please see label for complete listing.

**APPLICATION TIMING:** Application timing depends on target insect. Various use patterns include pre-plant soil applied, post-plant soil applied, broadcast spray when insects or insect damage first appears. See label for specific recommendations regarding insect, application timing and days to harvest restrictions. Effectiveness could be reduced above 25°C.

**PREHARVEST INTERVAL:** 1 to 21 days depending on crop and use. Cover crops or crops treated with Pounce should not be used as green feed for animals.

**RESTRICTED ENTRY INTERVAL:** Re-enter once product is dried on the surface. When controlling cutworm in a soil-applied application, do not disturb soil for 5 days.

**RESIDUAL CONTROL:** 5 to 10 days

Always read and follow label directions
Pryifos® 15G

Pryifos 15G is a granular insecticide used in certain vegetable crops as an in-furrow treatment or band treatment at planting time.

**ACTIVE INGREDIENT:** Chlorpyrifos 15%

**INSECTICIDE GROUP:** 1B

**MODE OF ACTION:** Interruption of the transmission of nerve impulses.

**TARGET CROPS:** Corn (field and sweet), onion, broccoli, Brussels sprouts, cabbage, cauliflower and rutabagas.

**TARGET PESTS:** Corn rootworm, suppression of cutworm, onion maggot larvae and cabbage maggot.

**RESTRICTED RE-ENTRY:** Cauliflower 10 days, for all other labeled crops 1 day (24 hours) after application.

**APPLICATION TIMING:** In–furrow at planting time or as a band application at planting.

**PRE-HARVEST INTERVAL:** Up to 70 days (corn), this is a pre-plant product with one application per year. Plant back interval for rotation crops is 30 days.

---

Always read and follow label directions
Pyrinex™

Pyrinex 480 EC is a broad-spectrum insecticide that provides reliable control (through three modes of action) of a wide range of insects on many different cereal, oilseed, fruit, vegetable and specialty crops. Application can be done with either ground or aerial equipment. Pyrinex performs under a wide range of environmental conditions – outperforming other insecticides under environmental conditions where effectiveness is often reduced.

**ACTIVE INGREDIENT:** Chlorpyrifos 480 g/L

**INSECTICIDE GROUP:** Group 1B, Organophosphate

**MODE OF ACTION:** Contact, stomach poison and vapor action. Acts as a cholinesterase inhibitor.

**CROPS:** Cereals, canola, flax, lentil, strawberry, sugar beet, sunflower, tobacco and several vegetable crops (see label for a complete list of registered crops).

**TARGET PESTS:** Cutworm, armyworm, bertha armyworm, alfalfa loopers, diamondback moth larvae, grasshopper, lygus bug, wheat midge, brown wheat mite and many other insects (see label).

**APPLICATION TIMING:** Depending on insect species, Pyrinex may be pre-plant soil-applied or foliar applied after planting. Best results will be realized when application is made in early evening. See label for specific crop recommendations.

**PREHARVEST INTERVAL:** 7 to 90 days. See label for specific crop recommendations.

**RESTRICTED ENTRY INTERVAL:** The worker restricted entry interval (REI) is 24 hours for all crops except cauliflower (10 days).

**RESIDUAL CONTROL:** Does not have any systemic activity and has short residual duration when exposed to UV light and slight moisture. Residual effect is extended in the absence of UV light.

16 Always read and follow label directions
Rimon® 10EC

Rimon 10 EC insecticide provides growers with a safe highly effective choice for insect control. Rimon makes an excellent resistance management tool because it prevents chitin deposition, unlike conventional insecticides that attack the nervous system of insects. It is easy to use and has low mammalian toxicity.

**ACTIVE INGREDIENT:** Novaluron 10%

**INSECTICIDE GROUP:** Group 15

**MODE OF ACTION:** Rimon is an insect growth regulator (IGR) that must be absorbed by eggs or ingested by insect larvae to be fully effective. The primary mode of action is by disrupting cuticle formation and deposition occurring when insects change from one developmental stage to another resulting in death at molting. Due to this mode of action, Rimon has no effect on adult stages of insects that have completed all the successive molts through larval or nymphal stages of development. This unique mode of action makes Rimon an excellent resistance management rotational product.

**CROPS:** Apple and potato

**TARGET PESTS:**
- **Apple:** Codling moth and oriental fruit moth
- **Potato:** Colorado potato beetle and European Corn borer

Always read and follow label directions
APPLICATION TIMING:

Codling Moth: Application timing on Rimon application is based on the Biofix, the first sustained adult catch in pheromone traps. The first application for codling moth should be made at 100DD following Biofix for Eastern Canada and made 161DD following Biofix for Western Canada. This is normally around petal fall.

Oriental Fruit Moth: Rimon must be applied before egg hatch of each generation to prevent fruit and twig damage. For heavy infestations and continuous moth flight and egg laying, use the highest rates and maintain coverage. Always read and follow all label precautions and directions.

Colorado potato beetle - Rimon applications should be made when the majority of the population is at egg hatch to second instar. Reapplication on a 10 to 14 day interval will be required to protect new growth or monitoring indicates that it is necessary.

European corn borer - Rimon applications should be made at peak egg hatch. Scout for European corn borer to monitor egg-laying and egg hatch to determine optimal first application timing. Reapplication on a 10 to 14 day interval will be required to protect new growth or monitoring indicates that it is necessary.

Subsequent applications should be made at 10 to 14 day intervals up to a total of four applications per season.

PREHARVEST INTERVAL: 14 days

RESTRICTED ENTRY INTERVAL: 12 hours

RESIDUAL CONTROL: Rimon is rainfast, and when applied according to label instructions, provides 14 days of fruit protection.

Always read and follow label directions
Silencer insecticide controls a wide variety of insect pests on oilseeds, cereals, pasture, potato and a wide range of vegetable and fruit crops. As a Group 3 insecticide, Silencer is a valuable tool in managing insecticide resistance.

**ACTIVE INGREDIENT:** Lambda-cyhalothrin

**INSECTICIDE GROUP:** Group 3; synthetic pyrethroid insecticide.

**MODE OF ACTION:** Silencer is a fast-acting stomach and contact insecticide effective against a wide range of foliar pests.

**CROPS:** Oilseeds, cereals, corn, chickpea, faba bean, lentil, pea, soybean, pasture, tree fruit, strawberry, tobacco, potato, tomato, cole crops, head lettuce, leeks, chokecherry, legume vegetables (crop group 6), bulb vegetables (crop group 3), greenhouse lettuce and ferns of asparagus.

**TARGET PESTS:**
In field crops and pasture: Flea beetle, lygus bug, cabbage seedpod, weevil, diamondback moth larvae, Bertha armyworm, cabbage looper, grasshoppers, alfalfa weevil, tarnished plant bug, pea aphid, potato leafhopper, sunflower beetle, European corn borer, corn earworm, fall armyworm, cutworms, potato flea beetle, tuber flea beetle and Colorado potato beetle. (consult label for complete list of registered crops and insects)

In fruit and vegetable crops: Apple aphid, apple brown bug, apple leaf midge, codling moth, fruit tree leafroller, oblique banded leafroller, pale apple leafroller, spotted tentiform leafminer, white apple leafhopper, winter moth, plum curculio, tarnished plant bug, woolly apple aphid, plum curculio, cherry maggot, green peach aphid, oriental fruit moth, tarnished plant bug, pear psylla (nymphs and adults) and codling moth.

**APPLICATION TIMING:** Best results will be obtained with Silencer when applied against the early development stages of the pest. Timing varies depending on insect. Consult label for specific recommendations.

**PREHARVEST INTERVAL:** Varies by crop from 1 to 28 days before harvest.

**RESTRICTED ENTRY INTERVAL:** Do not enter treated area until 24 hours after treatment.

**RESIDUAL CONTROL:** It does not have any fumigant or systemic activity.

Always read and follow label directions
Both Thionex EC and Thionex 50W control a large number of insects in a wide range of fruit, vegetable, ornamental and field crops. Thionex is compatible with most insecticides and fungicides except Bordeaux mixture, hydrated lime, calcium arsenate or zinc sulphate.

**ACTIVE INGREDIENT:**
Thionex EC – Endosulfan 400g/L
Thionex 50W – Endosulfan 50W

**MODE OF ACTION:** Non-systemic, organochloride insecticide/acaricide with both contact and stomach action.

**INSECTICIDE GROUP:** 2A

**TARGET CROPS:**
Thionex 50W: Tree fruit, grape, strawberry, potato, pepper, eggplant, greenhouse tomatoes and cucumber, cucurbits, cole crops, celery, spinach, head lettuce and ornamentals.

Thionex EC: Strawberry, beans, sugarbeet, cole crops, rutabaga, cucurbits, eggplant, pepper, pea (canning, seed), corn (sweet and field), greenhouse tomatoes and cucumber, alfalfa, clover, sunflower and ornamentals. See specific label for details.

**TARGET PESTS:** Aphids, tarnished plant bug, mites, pear psylla, codling moth, leafhoppers, cyclamen mites, flea beetles, Colorado potato beetle, sunflower beetle, meadow spittlebug and other listed on the product labels.

**TIMING:** Apply when insects first appear and repeat as required to maintain control unless otherwise stated on the labels.

**PRE-HARVEST INTERVAL:** 2 to 60 days, see labels for details.
LI 700® Surfactant

LI 700 is a soy-oil derived, non-ionic penetrating surfactant, which reduces off-target spray drift and reduces spray water pH. Unique formulation technology and quality ingredients separate LI 700 from the rest of the pack.

FORMULATION:
Constituents ineffective as spray adjuvant – 20%

BENEFITS:
• Surfactant properties of LI 700 improve spray droplet deposition, adhesion and coverage of spray material on leaf surfaces
• Penetrant properties of LI 700 maximize the effectiveness of systemic herbicides, insecticides, fungicides, miticides, PGRs and foliar applied nutrients
• Acidification properties of LI 700 prevent degradation of pesticide caused by high pH water
• Drift reduction properties of LI 700 lower potential for off-target spray and improve deposition of active ingredient chemistry
• Soy-oil derived components in LI 700 provide excellent crop safety and replace petroleum-based components with farm-grown components
• LI 700 is a low-foaming surfactant and will not cause foam problems in the spray tank

APPLICATION INFORMATION*
When used as a Surfactant: 2.5 - 5 L/1000 L (0.25 - 0.5% v/v)
When used as a Penetrant: 5 L/1000 L (0.5% v/v)
When used as an Acidifying Agent: 300 - 625 mL/1000 L (0.03-0.0625% v/v)
When used as a Drift Reduction Agent: 5 L/1000 L (0.5% v/v)

TARGET CHEMISTRIES: Insecticides, glyphosate, weak acid herbicides, defoliants.

Examples of the impact of high pH water on pesticide activity

<table>
<thead>
<tr>
<th>Insecticide</th>
<th>Half-life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trumpet</td>
<td>45 minutes at pH 9</td>
</tr>
<tr>
<td>Sevin</td>
<td>3.2 hours at pH 9</td>
</tr>
<tr>
<td>Lagon</td>
<td>48 minutes at pH 9</td>
</tr>
<tr>
<td>Imidan</td>
<td>4 hours at pH 8.3 (1 minute at pH 10)</td>
</tr>
</tbody>
</table>
Rotating crop protection products is a key practice to prevent the build-up of weed, insect or disease resistance. Different products have different risks for developing resistance, and scientists recommend using high-risk products more sparingly. Group 1 and 2 herbicides, have a high risk for the development of herbicide resistant populations and may develop resistance more quickly with as little as 10 or fewer applications. UAP reminds farmers to rotate their crop protection products to ensure they continue to be effective.

Look to UAP to deliver flexibility, freedom and choice in your crop protection decisions. In the complex world of food production, UAP is helping to meet the challenges of higher crop yields and healthier production practices. UAP is pleased to bring a wide range of proven crop production products to the agricultural and horticultural marketplace across Canada.

Call your nearest crop input dealer today for UAP products. Always read and follow label directions.

www.uap.ca
Western Canada: 1-800-561-5444
Ontario & the Maritimes: 1-800-265-5444
Quebec: 1-800-361-9369

All products mentioned are registered trademarks of their respective companies. 8001 10.08