CASSA AgriTec

Helping You Grow

Nature's Biological Protection

PIC Plant Defence Formula

Bacillus Thuringiensis & WHS Seaweed

Organic Biological Formulation

(Active Ingredient: Bacillus Thuringiensis and Seaweed)

APPLICATION SHEET

CAUTION

KEEP OUT REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE USE

STORAGE AND DISPOSAL

Store product in original tightly sealed container in a safe, well ventilated cool area. DO NOT store for prolonged periods in direct sunlight. The method of disposal of the container depends on the container type. Please read the storage and disposal instructions featured on the product label that is attached to the container.

SAFETY DIRECTIONS

When using the product or hand-held equipment wear a face-mask, cotton overalls buttoned to the neck and wrist (worn over normal clothing) and elbow length PVC gloves. Wash hands, arms, face with soap and water after use and before eating, drinking or smoking. Ensure gloves and contaminated clothing are washed after each day's use.

FIRST AID

Keep out of reach of children. If poisoning occurs contact the Poisons Information Centre on Phone 131126 (Australia) or Phone 0800 764 766 (New Zealand) or contact a Doctor.

SAFETY DATA SHEET

Additional Information is listed in the Material Safety Data Sheet.

EXCLUSION OF LIABILITY

This product must be used strictly as directed, and in accordance with all instructions appearing on the label and in other reference material such as the Application Sheet and Safety Data Sheet. CASSA Bio Tec Pty Ltd, as so far as it is lawfully able to do so, accepts no liability or responsibility for loss or damage arising from failure to follow such directions and instructions.

IMPORTANT NOTE: READ THIS DOCUMENT THOROUGHLY BEFORE OPENING OR USE OF PRODUCT.

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PIC PLANT DEFENCE FORMULA

(PEST INSECT CONTROL)

Bacillus Thuringiensis & WHS Seaweed

Organic Biological Formulation

Active Ingredients: Bacillus Thuringiensis (subspecies: Kurstaki solids spores) & Seaweed

PIC PLANT DEFENCE ACTIVE INGREDIENTS	
Bacillus Thuringiensis (subspecies: Kurstaki solids spores), Seaweed	95%*
Other Ingredients	5%
TOTAL	100%

* Minimum of IU 32000 per mg of product.
The percentage active ingredient does not indicate product performance and potency.

GENERAL INFORMATION

Cassa AgriTec's PIC Plant Defence Formula is a broad spectrum, preventative defence product for the nonchemical support of plant health in pest, insect and disease defence and resistance. By combining natures organic biological micro-nutrients our PIC Plant Defence Formula provides the plant with the building blocks to build the optimal environmental conditions for the plant to thrive and control pest insects. Our naturally occurring organic biological micro-organisms assist the plant to naturally control pest insects by non-toxic organic biological mechanisms without the need to apply toxic chemicals.

CASSA AgriTec's PIC Plant Defence Formula is an organic biological formula contains the naturally occurring micro-organisms Bacillus thuringiensis combined with over 20 species of wild harvested seaweeds and kelps with over 60 trace elements, vital component of our WHS Liquid Seaweed Fertilisers are hormones. Seaweed contains four primary hormones types; Auxins, Cytokinins, Betaines and Gibbelerins. These hormones, although only required in very small proportions, are essential to plant health and vitality.

CASSA AgriTec's Bacillus thuringiensis, seaweeds and kelps are extracted at low temperatures by an in-house proprietary enzymatic process to retain the integrity without denaturing the integral trace elements and micro-nutrients. Our unique broad-spectrum formula provides a chemical free, cost-effective control solution that produces healthier plants and produce, this unique formula is non-toxic and works across a range of climates.

Cassa AgriTec's PIC Plant Defence Formula is compatible with many IPM programs as it offers high quality, cost-effective, broad spectrum support for the plant to self-control pest insects across more than 200 crops, including vegetables, fruits, nuts, vines, cotton, oil palm and corn. Unlike chemical alternatives PIC Plant Defence Formula provides distinct modes of biological actions, providing protection and support for insect and pest programs which employ tank mix or rotation for resistance management. These natural biological agents contained in our PIC Plant Defence Formula have never demonstrated cross-resistance with any chemical insecticide. Our organic biological formulation is non-toxic to pollinators and other beneficial insects which means it won't kill off beneficial fauna.

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MIXING

Fill spray or mixing tank ¾ full of water. Turn on agitation and pour PIC Plant Defence into water while maintaining continuous agitation. Add other spray material (where required) and add balance of water. Agitate as necessary to maintain suspension. Do not allow diluted sprays to remain in the tank for more than 48 hours. PIC Plant Defence is formulated to provide desirable coverage and adherence to leaf surfaces. Additional adjuvants, spreaders, or stickers may be added to improve product performance, especially under heavy dew or rainy conditions. Combinations with commonly used insecticides, fungicides, or other spray tank adjuvants are generally not deleterious to PIC Plant Defence formula if the mix is used promptly. Before mixing in the spray tank, it is advisable to test physical compatibility by mixing all the components in a small container in proportionate quantities.

GROUND APPLICATION

Unless otherwise stated, use the application rate amount of PIC Plant Defence Formula in a minimum of 100 litres of water per hectare depending on type of crop and requirements of state regulations. If lower volumes are used, proper application equipment must be used to insure adequate coverage. Thorough and uniform crop coverage is required for adequate insect control.

AERIAL APPLICATION

Use application rate amount of PIC Plant Defence Formula in at least 20 litres of water per hectare. Applications at higher water volumes have demonstrated improved control of targeted pests. Apply early morning or evening when air is calm.

SPRAY DRIFT

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

PEST INSECTS

When used as directed the **PIC Plant Defence** will create an environment where plants can control the following pest insects:

Alfalfa caterpillar	Bertha armyworm	Cotton leaf perforator
Almond moth	Blueberry leafrollers	Cotton leafworm
Armyworm	Blueberry spanworm	Cutworm
Artichoke plume moth	Bollworm	Diamondback moth
Bagworm	California oak moth	Douglas-fir tussock moth
Banana moth	Cherry fruit worm	Elm spanworm
Banana skipper	Citrus cutworm	European corn borer
European grapevine moth	Codling moth	Saltmarsh caterpillar
European pepper moth	Loopers	Sod webworm
Fall cankerworm	Mimosa webworm	Southwestern corn borer
Fall webworm	Naval orange worm	Spotted cutworm
Fruit tree leafroller	Obliquebanded leafroller	Spring cankerworm
Grape leaf folder	Omnivorous leaftier	Spruce budworm
Grape berry moth	Orange tortrix	Tent caterpillar
Grapeleaf skeletonizer	Orangedog	Tobacco budworm
Green cloverworm	Oriental fruit moth	Tobacco hornworm
Green fruitworm	Pandemis leafroller	Tomato pinworm
Gypsy moth	Peach twig borer	Tropical sod webworm
Helicoverpa spp.	Pecan nut casebearer	Tufted apple bud moth
Heliothis spp.	Redbanded leafroller	Variegated leafroller
Hornworms	Redhumped caterpillar	Velvetbean caterpillar
Imported cabbageworm	Rindworm complex	Western tussock moth
Jack pine budworm	Velvetbean caterpillar	Light brown apple moth

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APPLICATION TIMING, RATES, CROPS, AND INSECTS

Sprays should target small larvae, from newly-hatched to 2nd instar. High application rates may be required to control larger larvae. Continue applying as part of a normal spray program until pest is adequately controlled. Apply when caterpillars are actively feeding. To be effective, BACILLIUS THURINGIENSIS and WHS SEAWEED spray must be deposited at the larval feeding site. BACILLIUS THURINGIENSIS and WHS SEAWEED can be applied by ground or air in water sufficient to insure thorough and even coverage. Thorough and uniform crop coverage is required for adequate insect control. Applications at higher water volumes have demonstrated improved control of targeted pests. Early morning or evening applications, when air is calm, are generally best for aerial applications.

For Light Brown Apple Moth Apply when newly hatched larvae appear and before leaves are rolled or webbing is significant.
For Banana Moth Drench bark to newly emergent shoots following pruning or apply to susceptible plant tissues when Banana Moth larvae are active.
For European Grapevine Moth Apply at blackhead egg stage or when larvae are newly hatched before leaves are rolled, or larvae have entered fruit.
For European Pepper Moth Begin applications at egg lay and continue at 3-5 day intervals throughout larval feeding period.

RATE SELECTION CONSIDERATION

Application rates are typically given as a range:

- Lower rate ranges may be desired when tank mixing with contact insecticides labelled for worm control or under conditions of light worm infestations or when uniformly small worms are present.

- Medium rate ranges may be desired when multiple worm life stages are present, continuous egg hatches are occurring or young or light armyworm infestations exist.

- Upper rate ranges may be desired for heavy worm infestations, mature (larger) worms or for moderate to heavy infestations of armyworm, bollworm, or other difficult to control worm species. Unless otherwise stated, use the application rate amount of BACILLIUS THURINGIENSIS and WHS SEAWEED in a minimum of 100 litres of water per hectare depending on type of crop and requirement of state regulations. Lower volumes may be used, but proper application equipment must be used to insure adequate coverage. Thorough and uniform crop coverage is required for adequate insect control

CROPS	RATES (Litres/Hectares)
FIELD CROPS	
Root and Tuber Vegetables (Crop Group 1) **Sugar Beets** Apply as necessary to maintain control	**0.75 - 1.5**
Legume Vegetables (Succulent or Dried) (Crop Group 6) **Including Beans, Peas, Lentils, Soybeans** Apply as necessary to maintain control.	**0.75 - 1.5**
Foliage of Legume Vegetables (Crop Group 7) **Including Plant Parts of Any Legume Vegetable Included in the Legume Vegetables that Will be Used as Animal Feed** Apply as necessary to maintain control.	**0.75 - 1.5**
Cereal Grains – Except Barley, Corn, Oats, Rye, Wheat (Crop Group 15) **Including Rice, Sorghum** Apply as necessary to maintain control.	**0.75 - 1.5**
Cereal Grains – Barley, Oats, Rye, Wheat (Crop Group 15) Apply as necessary to maintain control.	**0.75 - 1.5**
Cereal Grains Corn (Crop Group 15) **Including Field Corn (Fresh, Sweet, Dried), Pop Corn, Seed Corn** Make initial application when economically damaging populations exist. Repeat as necessary to maintain control. Applications must be made to earlyinstars prior to entering the ear or plant.	**0.75 - 1.5**

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CROPS	RATES (Litres/Hectares)
FIELD CROPS	
Forage, Fodder and Straw of Cereal Grains – Except Barley, Corn, Oats, Rye, Wheat (Crop Group 16) Including Forage, Fodder, Stover, and Straw of Rice and SorghumApply as necessary to maintain control.	**0.75 - 1.5**
Forage, Fodder and Straw of Cereal Grains – Barley, Oats, Rye, Wheat(Crop Group 16) Apply as necessary to maintain control	**0.75 - 1.5**
Forage, Fodder and Straw of Cereal Grains – Corn(Crop Group 16) Make initial application when economically damaging populations exist. Repeat as necessary to maintain control. Applications must be made to earlyinstars prior to entering the ear or plant.	**0.75 - 1.5**
Grass, Forage, Fodder, and Hay Group (Crop Group 17) **Including Sudan Grass and other Forage, Fodder, Stover, and Hay ofany Grass Gramineae/Poaceae family (either green or cured) exceptsugarcane and those included in the cereal grains group** Under conditions of rapid plant growth and rapidly increasing armyworm populations (10 worms or greater per 180° sweep) use the highest rate. Against heterogenous worm populations, where 4th and 5th instars are present and continuous egg laying is occurring, applications may provide variable control. Under these conditions, the addition of a contact insecticide in combination with BACILLIUS THURINGIENSIS and WHS SEAWEED is recommended. The addition of a spreader sticker to BACILLIUS THURINGIENSIS and WHS SEAWEED may provideimproved performance.	**0.75 - 1.5**
Nongrass Animal Feeds (Forage, Fodder, Straw, and Hay) (Crop Group 18) **Including Alfalfa (Hay and Seed), Hay Crops, and Other Non-grass Forage, Fodder, and Straw Crops** Under conditions of rapid plant growth and rapidly increasing armyworm populations (10 worms or greater per 180° sweep) use the highest rate. Against heterogenous worm populations, where 4th and 5th instars are present and continuous egg laying is occurring, applications may provide variable control. Under these conditions, the addition of a contact insecticidein combination with BACILLIUS THURINGIENSIS and WHS SEAWEED is recommended. The addition of a spreader sticker to BACILLIUS THURINGIENSIS and WHS SEAWEED may provideimproved performance.	**0.75 - 1.5**
Oilseed – Except Cottonseed, Jojoba, Safflower, Sunflower (Crop Group 20) **Including Canola, Evening Primrose, Rapeseed, Cultivars, Varieties,and/or Hybrids of these** Apply as necessary to maintain control.	**0.75 - 1.5**
Oilseed – Safflower, Sunflower (Crop Group 20) **Including Cultivars, Varieties, and/or Hybrids of these** Apply as necessary to maintain control.	**0.75 - 1.5**
Oilseed – Jojoba (Crop Group 20) **Including Cultivars, Varieties, and/or Hybrids of these** Apply in a minimum of 100 litres of water per hectare by ground equipment or a minimum of 200 litres of water by aerial equipment. Thorough coverage of foliage is essential and dictates the minimum spray volumes necessary.	**0.75 - 1.5**

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CROPS	RATES (Litres/Hectares)
FIELD CROPS	
Oilseed – Cottonseed **(Crop Group 20)** **Including Cultivars, Varieties, and/or Hybrids of these** **Early and Mid-Season** Repeat as necessary throughout season to maintain control. If egg laying frequency indicates future moderate to heavy worm populations, time application spray to coincide with the 2nd instar larvae. During periods of high temperatures, worms will progress through 1st and 3rd instars very rapidly andearly application timing is necessary for control. To be effective, BACILLIUS THURINGIENSIS and WHS SEAWEED spray must be deposited at the larvalfeeding site. When plant cover is dense and worms are feeding in the lower ⅔ portion of the plant, aerial application of BACILLIUS THURINGIENSIS and WHS SEAWEED may notprovide adequate control. For the suppression of light to moderate infestations, apply at first sign of egg-laying or newly-hatched worms (1st instar larvae).	**0.75 - 1.5**
Cotton **Early and Mid-Season** Repeat as necessary throughout season to maintain control. If egg laying frequency indicates future moderate to heavy worm populations, time application spray to coincide with the 2nd instar larvae. During periods of high temperatures, worms will progress through 1st and 3rd instars very rapidly andearly application timing is necessary for control. To be effective, BACILLIUS THURINGIENSIS and WHS SEAWEED spray must be deposited at the larvalfeeding site. When plant cover is dense and worms are feeding in the lower ⅔ portion of the plant, aerial application of BACILLIUS THURINGIENSIS and WHS SEAWEED may notprovide adequate control. For the suppression of light to moderate infestations, apply at first sign of egg-laying or newly-hatched worms (1st instar larvae).	**0.75 - 1.5**
Hemp (Outdoor and Greenhouse) Begin treatment as soon as possible after egg hatching. Apply as necessary to maintain control.	**0.75 - 1.5**
Hops **Apply as necessary to maintain control.** Begin treatment as soon as possible after hatching and before larvae are protected by leaf folds.	**0.75 - 1.5**
Mint Apply as necessary to maintain control.	**0.75 - 1.5**
Peanuts Apply as necessary to maintain control.	**0.75 - 1.5**
Tobacco Apply as necessary to maintain control.	**0.75 - 1.5**
FRUIT, NUT & VINE CROPS	
Cucurbit Vegetables **(Crop Group 9)** **Including Cantaloupe, Crenshaw, Honeydew, Honey Balls, Muskmelon,Watermelon, and Cultivars, Varieties and/or hybrids of these** Apply at first sign of hatch before larvae enter fruit. Repeat as necessary tomaintain control.	**0.75 - 1.5**

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CROPS	RATES (Litres/Hectares)
FRUIT, NUT & VINE CROPS	
Citrus Fruit **(Crop Group 10-10)** **Including Grapefruits, Lemons, Limes, Orange, Tangelo, Tangerine,Cultivars, Varieties and/or hybrids of these** Use 200-2500 litres of water per acre when using ground equipment and 50 litres of water minimum per acre by air. (Amorbia [Mexican leafroller] is suppressed only.)	**0.75 - 1.5**
Pome Fruits **(Crop Group 11)** **Including Apples, Pears, and Cultivars, Varieties and/or hybrids of these** Apply when newly hatched larvae appear and before leaves are rolled. Continue applying as a part of the normal cover spray program until pest isadequately controlled. Apply when caterpillars are actively feeding (2^{nd}-4^{th} instars).	**0.75 - 1.5**
Stone Fruits **(Crop Group 12)** **Including Apricots, Cherries, Nectarines, Peaches, Plums, Pluots, Prunes, and Cultivars, Varieties, and/or Hybrids of these** For leafrollers, start treating as soon as possible after hatching and before larvae are protected by leaf folds. Apply when caterpillars are actively feeding (2nd-4th instar). Application timing is very important for good casebearer suppression. Consult your local university or extension agent for information concerning specific modeling that predicts egg lay, typical application dates, and scouting techniques for your area. BACILLIUS THURINGIENSIS and WHS SEAWEED must be present at egghatch for best control. Make application when the majority of eggs are in the pink stage. For best control make two applications 7 days apart. If only one application is made, a minimum of 1.5 litres per hectare should be applied.	**0.75 - 1.5**
Berry and Small Fruit – Except Grapes, Strawberries **(Crop Group 13-07)** **Including Blueberries, Blackberries, Boysenberries, Caneberries, Currants, Dewberries, Kiwi, Loganberries, Raspberry, and Cultivars,Varieties, and/or Hybrids of these** Apply by ground or aerial equipment using enough water to provide adequate coverage. Begin treatment as soon as possible after hatching. For leafrollers, apply before larvae are protected by leaf folds.	**0.75 - 1.5**
Berry and Small Fruit – Grapes **(Crop Group 13-07)** **Including Cultivars, Varieties, and/or Hybrids of these** Apply by ground equipment in up to 900 litres total spray per acre to obtain thorough coverage of leaf surfaces. Start treating as soon as possible after hatching and before larvae are protected by leaf folds.	**0.75 - 1.5**
Berry and Small Fruit – Strawberries **(Crop Group 13-07)** **Including Cultivars, Varieties, and/or Hybrids of these** Apply as necessary to maintain control. Use 50 litres water minimum per hectare when using ground equipment and 50 litres water minimum per hectare by aircraft. In a tank mix with contact insecticides, rates as low as 0.75 litre per ha may be used for the control of armyworm.	**0.75 - 1.5**

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CROPS	RATES (Litres/Hectares)
FRUIT, NUT & VINE CROPS	
Tree Nuts **(Crop Group 14)** **Including Almonds, Filberts (Hazelnuts), Pecans, Pistachios, Walnuts,and Cultivars, Varieties, and/or Hybrids of these** For leafrollers, start treating as soon as possible after hatching and before larvae are protected by leaf folds. Apply when caterpillars are actively feeding (2nd-4th instar). Application timing is very important for good casebearer suppression. Consult your local university or extension agent for information concerning specific modeling that predicts egg lay, typical application dates, and scouting techniques for your area. BACILLIUS THURINGIENSIS and WHS SEAWEED must be present at egghatch for best control. Make application when the majority of eggs are in the pink stage. For best control make two applications 7 days apart. If only one application is made, a minimum of 1.5 kg per hectare should be applied.	**0.75 - 1.5**
Tropical and Subtropical Fruit, Edible Peel – Except Guava, Olives **(Crop Group 23)** **Including Persimmons, and Cultivars, Varieties, and Hybrids of these Commodities** For leafrollers, start treating as soon as possible after hatching and before larvae are protected by leaf folds. Apply when caterpillars are actively feeding (2nd-4th instar). Application timing is very important for good casebearer suppression. Consult your local university or extension agent for information concerning specific modeling that predicts egg lay, typical application dates, and scouting techniques for your area. BACILLIUS THURINGIENSIS and WHS SEAWEED must be present at egghatch for best control. Make application when the majority of eggs are in the pink stage. For best control make two applications 7 days apart. If only one application is made, a minimum of 1.5 kg per hectare should be applied.	**0.75 - 1.5**
Tropical and Subtropical Fruit, Edible Peel – Guava **(Crop Group 23)** **Including Cultivars, Varieties, and Hybrids of these Commodities** Apply as necessary to maintain control. Begin treatment as soon as possible after hatching and before larvae are protected by leaf folds.	**0.75 - 1.5**
Tropical and Subtropical Fruit, Edible Peel – Olives **(Crop Group 23)** **Including Cultivars, Varieties, and Hybrids of these Commodities** Apply as necessary to maintain control.	**0.75 - 1.5**
Tropical and Subtropical Fruit, Inedible Peel – Avocados **(Crop Group 24)** **Including Cultivars, Varieties, and Hybrids of these Commodities** Apply as necessary to maintain control. Begin treatment as soon as possibleafter hatching and before larvae are protected by leaf folds. (Amorbia [Mexican leafroller] is suppressed only).	**0.75 - 1.5**
Tropical and Subtropical Fruit, Inedible Peel – Bananas **(Crop Group 24)** **Including Cultivars, Varieties, and Hybrids of these Commodities** Hawaii only. Use calibrated ground equipment with adequate water to apply to point of run-off.	**0.75 - 1.5**

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CROPS	RATES (Litres/Hectares)
FRUIT, NUT & VINE CROPS	
Tropical and Subtropical Fruit, Inedible Peel – Except Avocados, Bananas, Lychee, Papaya, Sugar Apple **(Crop Group 24)** **Including Pomegranates, and Cultivars, Varieties, and Hybrids of these Commodities** For leafrollers, start treating as soon as possible after hatching and before larvae are protected by leaf folds. Apply when caterpillars are actively feeding (2^{nd} – 4^{th} instar). Application timing is very important for good casebearer suppression. Consult your local university or extension agent for information concerning specific modeling that predicts egg lay, typical application dates, and scouting techniques for your area. BACILLIUS THURINGIENSIS and WHS SEAWEED must be present at egghatch for best control. Make application when the majority of eggs are in the pink stage. For best control make two applications 7 days apart. If only one application is made, a minimum of 500g. should be applied.	**0.75 - 1.5**
Tropical and Subtropical Fruit, Inedible Peel – Lychee, Papaya, SugarApple **(Crop Group 24)** **Including Cultivars, Varieties, and Hybrids of these Commodities** Apply as necessary to maintain control. Begin treatment as soon as possible after hatching and before larvae are protected by leaf folds.	**0.75 - 1.5**
Coffee Apply as necessary to maintain control.	**0.75 - 1.5**
VEGETABLE CROPS	
Root and Tuber Vegetables – Except Artichokes **(Crop Group 1)** **Including Beets (Table, Garden, Sugar), Carrots, Celeriac, ChineseRadish (Daikon), Horseradish, Parsnips, Potatoes, Radishes, Rutabaga, Salsify, Sweet Potatoes, Turnip Root, Yams** Apply as necessary to maintain control.	**0.75 - 1.5**
Root and Tuber Vegetables – Artichokes **(Crop Group 1)** Apply in a minimum of 500 litres of water per acre with a spray interval of 10 days or less.	**0.75 - 1.5**
Leaves of Root and Tuber Vegetables **(Crop Group 2)** **Including Beets (Table, Garden, Sugar), Carrots, Celeriac, Parsnips, Radishes, Rutabaga, Salsify, Sweet Potatoes, Turnip, Yams** Apply as necessary to maintain control.	**0.75 - 1.5**
Bulb Vegetables **(Crop Group 3-07)** **Including Chives, Onions (Dry Bulb, Green) Garlic, Leeks, andCultivars, Varieties, and/or Hybrids of These** Apply as necessary to maintain control.	**0.75 - 1.5**
Brassica Head and Stem Vegetables **(Crop Group 5-16)** **Including Broccoli, Brussels Sprouts, Cabbage, Cauliflower, ChineseCabbage (Napa), and Cultivars, Varieties, and Hybrids of these commodities.** Apply as necessary to maintain control.	**0.75 - 1.5**

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CROPS	RATES (Litres/Hectares)
VEGETABLE CROPS	
Leafy Vegetables (Crop Group 4-16) **Including Arugula (Roquette), Chinese Broccoli (Gai Lon), Broccoli Raab (Rapini), Chinese Cabbage (Napa, Gai Choi), Collards, Greens (Dandelion, Turnip, Mustard, Beet, China), Kale, Lettuce (Endive, Escarole, Romaine, Head Lettuce, Escarole, Butter Crunch, Leaf, etc.),Mizuna, Parsley, Rape Greens, Spinach, Swiss Chard, Watercress, andCultivars, Varieties, and Hybrids of these Commodities** Apply as necessary to maintain control.	**0.75 - 1.5**
Legume Vegetables, Succulent or Dried (Crop Group 6) **Including Beans (Green, Lima, Mung), Chickpeas (Garbanzo Beans),Peas** Apply as necessary to maintain control.	**0.75 -1.5**
Foliage of Legume Vegetables (Crop Group 7) **Including Plant Parts of Any Legume Vegetable Included in the Legume Vegetables that Will be Used as Animal Feed** Apply as necessary to maintain control.	**0.75 - 1.5**
Fruiting Vegetables (Crop Group 8-10) **Including Eggplants, Okra, Peppers, Tomatoes, and Cultivars, Varieties and/or Hybrids of these** Apply as necessary to maintain control.	**0.75 - 1.5**
Cucurbit Vegetables (Crop Group 9) **Including Cucumbers, Pumpkins, Squash (Summer, Winter, Zucchini)** Apply as necessary to maintain control.	**0.75 - 1.5**
Cereal Grains – Corn (Fresh, Sweet) (Crop Group 15) Apply as necessary to maintain control.	**0.75 - 1.5**
Herbs and Spices (Crop Group 19) **Including Basil, Chive, Cilantro (Coriander, Chinese Parsley), Dill,Marjoram, Mustard Seed, Oregano, Parsley (Dried), Pepper, Sage,Tarragon, Thyme** Apply as necessary to maintain control.	**0.75 - 1.5**
Stalk, Stem, and Leaf Petiole Vegetables (Crop Group 22) **Including Asparagus, Cardoon, Celery, Kohlrabi, and Cultivars, Varieties, and Hybrids of these Commodities** Apply as necessary to maintain control.	**0.75 - 1.5**
Globe Artichokes Apply in a minimum of 250 Litres of water per hectare with a spray interval of 10 days or less.	**0.75 - 1.5**

CROPS	RATES (Litres/Hectares)
NON-FOOD CROPS	
Flowers and Ornamentals (Outdoor and Greenhouse) BACILLIUS THURINGIENSIS and WHS SEAWEED may also be used on flowers and ornamentals outdoorsand in the greenhouse at a rate of 0.75-1.5 litres per hectare for control of listed insects on this label. * Assumes Application to spray run-off	**0.75 - 1.5**
Shade Trees and Ornamentals (including Roses) Apply when leaf expansion reaches 40% to 50% as infestation warrants. If eggs hatch over a long period of time, or if re-infestation occurs, spray about14 days after first application. Apply when most larvae are 3rd – 4th instar. Also consider the opening of the bud cap to ensure foliage exposure. Apply after eggs have hatched and early instar larvae are feeding on exposed foliage.	**0.75 - 1.5**
Turf and Grass Seed Production Repeat as necessary throughout season to maintain control.	**0.75 - 1.5**
STORED SOYBEANS AND GRAINS* **(INDIAN MEAL MOTH, ALMOND MOTH)**	
To control and prevent Indian Meal Moth and Almond Moth infestations ofstored soybeans and grains, prepare a spray mixture which includes 5 litres of water for every 1.5 oz. by weight of BACILLIUS THURINGIENSIS and WHS SEAWEED. The spray mixturemay be applied either by treating the top 4 inches of grain as it is being augered into storage (applying 300 mls of mixture per 25 kg in the grainstream), or by treating the surface of grain after it is in the bin. To ensure thorough coverage when making applications to the grain surface after it is in the bin, apply spray mixture in three (3) applications. Mix the grain with a scoop or rake to a depth of four (4) inches after each application. Stored grain may be treated anytime, but for best results, treat grain at the time it is placed into storage or shortly thereafter, or in the early spring priorto egg-laying. Full season control is normally experienced. Re-treat only if re-infestation occurs. For the protection of bagged grain, apply spray mixture to entire grain mass, and mix thoroughly prior to bagging. BACILLIUS THURINGIENSIS and WHS SEAWEED at 200 grams by weight per 35 litres of water will treat approximately 500 kg. Treated grain may be used at any time after treatment. ***Barley, Corn (Field, Sweet, Pop, Seed), Jojoba, Oats, Rice, Rye, Sorghum, Wheat, Wild Rice.**	**0.75 - 1.5**

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CHEMIGATION APPLICATIONS

This product alone or in combination with other tank mixtures which are registered for sprinkler irrigation may be applied through irrigation systems.

- Dilute the product in water following the label mixing directions. It may be premixed in a supply tank with water, fertilizer, or other appropriate tank-mixed agrichemicals. Agitation is necessary. Apply the Insecticide continuously for the duration of the water application.

- Apply this product only through sprinkler systems such as centre pivot, lateral move, end tow, side (wheel) roll, traveller, solid set, or hand move.

- Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal Insecticide residues in the crop can result from nonuniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.

- Do not connect an irrigation system (including greenhouse systems) used for Insecticide application to a public water system unless the Insecticide label- prescribed safety devices for public water system are in place. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

OPERATING INSTRUCTIONS

SPRINKLER IRRIGATION

1. The system must contain a functional check-valve, vacuum relief valve, and low pressure drain appropriately located on the irrigated pipeline to prevent water source contamination from backflow.
2. The Insecticide injection pipeline must contain a functional, automatic, quick- closing check-valve to prevent the flow of fluid back toward the injection pump.
3. The Insecticide injection pipeline must also contain a functional, normally closed, solenoid-operating valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional inter-locking controls to automatically shut off the Insecticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where Insecticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with Insecticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favours drift beyond the area intended for treatment.

CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

1. Public water system means a system for the provision to the public of piped water of human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water in the water supply line upstream from the point of Insecticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to Insecticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. The Insecticide injection pipeline must contain a functional, automatic, quick- closing check-valve to prevent the flow of fluid back toward the injection pump.
4. The Insecticide injection pipeline must contain a functional, normally closed, solenoid operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the Insecticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where Insecticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with Insecticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favours drift beyond the area intended for treatment.

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CALIBRATION AND APPLICATION

The following calibration and application techniques are provided for user reference, but do not constitute a warranty of fitness for application through sprinkler irrigation equipment. Users should check with state and local regulatory agencies for potential use restrictions before applying any agricultural Insecticide through sprinkler irrigation equipment.

CENTER PIVOT IRRIGATION EQUIPMENT

(Use only with drive systems which provide uniform water distribution.)

1. Determine the size of the area to be treated.
2. Determine the time required to apply 1/4-1/2 inch of water over the area to be treated when the system and injection equipment are operated at normal pressures recommended by the equipment manufacturer. Run the system at 80- 95% of the manufacturer's rated capacity.
3. Using water, determine the injection pump output when operated at normal line pressure.
4. Do not use the end gun for applications of this product through Centre Pivot Irrigation Equipment.
5. Determine the amount of this product required to treat the area covered by the irrigation system. (Refer to table for use rates.)
6. Add the required amount of this product all at once to sufficient water in the injection solution tank to meet the injection time requirements. (See Mixing Instructions section of this label.)
7. Maintain constant agitation in the injection solution tank during the injection period.
8. Inject this product at the end of the irrigation cycle in 1/4-1/2 inch of water or as a separate application to maximize the effectiveness of the insecticide.
9. Continue to operate the system until the product solution has cleared the last sprinkler head.

SOLID SET, HAND MOVE, AND MOVING WHEEL IRRIGATION EQUIPMENT

1. Determine the acreage covered by the sprinklers.
2. Fill the injection solution tank with water and adjust flow rate to use the contents over a 20 to 30-minute interval.
3. Determine the amount of this product required to treat the area covered by the irrigation system.
4. Add the required amount of this product into the same quantity of water used to calibrate the injection period. (See Mixing Instructions section of this label.)
5. Operate the system at the same pressure and time interval established during the calibration.
6. Maintain constant agitation in the injection solution tank during the injection period.
7. Inject this product at the end of the irrigation cycle in 1/4-1/2 inch of water or as a separate application to maximize the effectiveness of the insecticide.
8. Stop injection equipment after the treatment is completed. Continue to operate the system until the product solution has cleared the last sprinkler head.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

PIC PLANT DEFENCE FORMULA STORAGE

Store in a cool, dry place, out of direct sunlight, and away from heat sources for up to 18 months. Keep from overheating.

PIC PLANT DEFENCE FORMULA DISPOSAL

To avoid waste, use all material in this container by application according to label directions. If waste cannot be avoided, offer remaining product to a waste disposal facility or Insecticide disposal program (often such programs are run by state or local governments or by industry).

CONTAINER HANDLING

Non-refillable container. Do not re-use or refill this container. Completely empty drum into application equipment. Then offer for recycling if available or dispose of empty drum in a sanitary landfill. Do not burn.

WARRANTY

CASSA AgriTec (A Division of Cassa Bio Tec Pty Ltd) warrants that the material contained herein conforms to the description on the label and is reasonably fit for the purpose referred to in the Directions for use. Timing and method of application, weather, watering practices, nature of soil, the disease or pest problem, condition of the crop, incompatibility with other influencing factors in the use of this product are beyond the control of the seller. To the extent consistent with applicable law, buyer assumes all risks of use, storage, or handling of this material not in strict accordance with directions given herein.

NO OTHER EXPRESS OR IMPLIED WARRANTY OF THE FITNESS OR MERCHANTABILITY IS MADE.

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