

## BT THURICIDE

### Application Sheet

#### ACTIVE INGREDIENT

Bacillus thuringiensis, subspecies kurstaki solids spores.....	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 measurements are not federally standardized.

## KEEP AWAY FROM CHILDREN CAUTION

#### GENERAL INFORMATION

BT THURICIDE is a biological insecticide for the control of lepidopterous larvae (see Application Rates section). BT THURICIDE attacks the larval gut and must be ingested by the insect to be effective. BT THURICIDE may be applied up to and on the day of harvest.

For most consistent control, apply at first sign of newly hatched worms (1st and 2nd instar larvae). Instructions for specific crops are located in the ADDITIONAL INSTRUCTION sections under APPLICATION RATES.

Reapply as necessary under a pest management program that includes close scouting.

If rapid knockdown of heavy worm or non-lepidopterous populations is necessary, include an effective contact insecticide in combination with BT THURICIDE.

For heavy worm infestations, use the higher BT THURICIDE rate. During situations of dense foliage and/or rapid growth, increasing water carrier volumes will provide better crop coverage and improve BT THURICIDE performance.

Tank mix instructions are for use only in region where the tank mix product and application site are registered. Read and follow the most restrictive of the labeling limitations and precautions of all products used in mixtures.

## Mixing

Fill spray or mixing tank  $\frac{3}{4}$  full of water. Turn on agitation and pour BT THURICIDE into water while maintaining continuous agitation. Add other spray material (if any) 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. BT THURICIDE 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 BT THURICIDE 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 BT THURICIDE in a minimum of 20 gallons of water per acre 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 BT THURICIDE in at least 3 gallons of water per acre. 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.

## INSECTS CONTROLLED

When used as directed, BT THURICIDE will control the following insects:

- Alfalfa caterpillar
- Almond moth
- Armyworm
- Artichoke plume moth
- Bagworm
- Banana moth
- Banana skipper
- Bertha armyworm
- Blueberry leafrollers
- Blueberry spanworm
- Bollworm
- California oak moth
- Cherry fruitworm
- Citrus cutworm
- Codling moth
- Cotton leafperforator
- Cotton leafworm
- Cutworm
- Diamondback moth
- Douglas-fir tussock moth
- Elm spanworm
- European corn borer

- |                           |                            |                           |
|---------------------------|----------------------------|---------------------------|
| ● European grapevine moth | ● moth                     | ● Saltmarsh caterpillar   |
| ● European pepper moth    | ● Loopers                  | ● Sod webworm             |
| ● Fall cankerworm         | ● Mimosa webworm           | ● Southwestern corn borer |
| ● Fall webworm            | ● Naval orangeworm         | ● Spotted cutworm         |
| ● Filbert webworm         | ● Obliquebanded leafroller | ● Spring cankerworm       |
| ● Fruittree leafroller    | ● Omnivorous leafroller    | ● Spruce budworm          |
| ● Grape leafroller        | ● Omnivorous leaftier      | ● Tent caterpillar        |
| ● Grape berry moth        | ● Orange tortrix           | ● Tobacco budworm         |
| ● Grapeleaf skeletonizer  | ● Orangedog                | ● Tobacco hornworm        |
| ● Green cloverworm        | ● Oriental fruit moth      | ● Tomato pinworm          |
| ● Green fruitworm         | ● Pandemis leafroller      | ● Tropical sod webworm    |
| ● Gypsy moth              | ● Peach twig borer         | ● Tufted apple bud moth   |
| ● Helicoverpa spp.        | ● Pecan nut casebearer     | ● Variegated leafroller   |
| ● Heliothis spp.          | ● Redbanded leafroller     | ● Velvetbean caterpillar  |
| ● Hornworms               | ● Redhumped caterpillar    | ● Western tussock moth    |
| ● Imported cabbageworm    | ● Rindworm complex         |                           |
| ● Jack pine budworm       | ● Roughskinned cutworm     |                           |

## APPLICATION TIMING, RATES, CROPS, AND PESTS

Sprays should target small larvae, from newly-hatched to 2nd instar. High label 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, BT THURICIDE spray must be deposited at the larval feeding site. BT THURICIDE 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 CONSIDERATIONS

Application rates are typically given as a range:

- Lower rate ranges may be desired when tank mixing with contact insecticides labeled 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 BT THURICIDE in a minimum of 20 gallons of water per acre 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.

## APPLICATION RATES

CROPS	RATES kg/ha
<b>FIELD CROPS</b>	
<b>Root and Tuber Vegetables (Crop Group 1) Sugar Beets</b> Apply as necessary to maintain control	<b>0.75-1.5</b>
<b>Legume Vegetables (Succulent or Dried) (Crop Group 6) Including Beans, Peas, Lentils, Soybeans</b> Apply as necessary to maintain control.	<b>0.75-1.5</b>
<b>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</b> Apply as necessary to maintain control.	<b>0.75-1.5</b>
<b>Cereal Grains – Except Barley, Corn, Oats, Rye, Wheat (Crop Group 15) Including Rice, Sorghum</b> Apply as necessary to maintain control.	<b>0.75-1.5</b>
<b>Cereal Grains – Barley, Oats, Rye, Wheat (Crop Group 15)</b> Apply as necessary to maintain control.	<b>0.75-1.5</b>
<b>Cereal Grains – Corn (Crop Group 15) Including Field Corn (Fresh, Sweet, Dried), Pop Corn, Seed Corn</b> Make initial application when economically damaging populations exist. Repeat as necessary to maintain control. Applications must be made to early instars prior to entering the ear or plant.	<b>0.75-1.5</b>

CROPS	RATES kg/ha
<b>FIELD CROPS</b>	
<b>Forage, Fodder and Straw of Cereal Grains – Except Barley, Corn, Oats, Rye, Wheat (Crop Group 16)</b> Including Forage, Fodder, Stover, and Straw of Rice and Sorghum Apply as necessary to maintain control.	<b>0.75-1.5</b>
<b>Forage, Fodder and Straw of Cereal Grains – Barley, Oats, Rye, Wheat (Crop Group 16)</b> Apply as necessary to maintain control	<b>0.75-1.5</b>
<b>Forage, Fodder and Straw of Cereal Grains – Corn (Crop Group 16)</b> Make initial application when economically damaging populations exist. Repeat as necessary to maintain control. Applications must be made to early instars prior to entering the ear or plant.	<b>0.75-1.5</b>
<b>Grass, Forage, Fodder, and Hay Group (Crop Group 17)</b> <b>Including Sudan Grass and other Forage, Fodder, Stover, and Hay of any Grass Gramineae/Poaceae family (either green or cured) except sugarcane and those included in the cereal grains group</b> 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 BT THURICIDE is recommended.  The addition of a spreader sticker to BT THURICIDE may provide improved performance.	<b>0.75-1.5</b>
<b>Nongrass Animal Feeds (Forage, Fodder, Straw, and Hay) (Crop Group 18)</b> <b>Including Alfalfa (Hay and Seed), Hay Crops, and Other Nongrass Forage, Fodder, and Straw Crops</b> 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 BT THURICIDE is recommended. The addition of a spreader sticker to BT THURICIDE may provide improved performance.	<b>0.75-1.5</b>
<b>Oilseed – Except Cottonseed, Jojoba, Safflower, Sunflower (Crop Group 20)</b> <b>Including Canola, Evening Primrose, Rapeseed, Cultivars, Varieties, and/or Hybrids of These</b> Apply as necessary to maintain control.	<b>0.75-1.5</b>
<b>Oilseed – Safflower, Sunflower (Crop Group 20)</b> <b>Including Cultivars, Varieties, and/or Hybrids of These</b> Apply as necessary to maintain control.	<b>0.75-1.5</b>
<b>Oilseed – Jojoba (Crop Group 20)</b> <b>Including Cultivars, Varieties, and/or Hybrids of These</b> Apply in a minimum of 50 gallons of water per acre by ground equipment or a minimum of 10 gallons of water by aerial equipment. Thorough coverage of foliage is essential and dictates the minimum spray volumes necessary.	<b>0.75-1.5</b>

CROPS	RATES kg/ha
<b>FIELD CROPS</b>	
<p><b>Oilseed – Cottonseed (Crop Group 20)</b> Including Cultivars, Varieties, and/or Hybrids of These</p> <p><b>Early and Mid-Season</b> 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 and early application timing is necessary for control. To be effective, BT THURICIDE spray must be deposited at the larval feeding site. When plant cover is dense and worms are feeding in the lower ⅓ portion of the plant, aerial application of BT THURICIDE may not provide adequate control. For the suppression of light to moderate infestations, apply at first sign of egg-laying or newly-hatched worms (1st instar larvae).</p>	<b>0.75-1.5</b>
<p><b>Cotton</b></p> <p><b>Early and Mid-Season</b> 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 and early application timing is necessary for control. To be effective, BT THURICIDE spray must be deposited at the larval feeding site. When plant cover is dense and worms are feeding in the lower ⅓ portion of the plant, aerial application of BT THURICIDE may not provide adequate control. For the suppression of light to moderate infestations, apply at first sign of egg-laying or newly-hatched worms (1st instar larvae).</p>	<b>0.75-1.5</b>
<p><b>Hemp (Outdoor and Greenhouse)</b> Begin treatment as soon as possible after egg hatching. Apply as necessary to maintain control.</p>	<b>0.75-1.5</b>
<p><b>Hops</b> <b>Apply as necessary to maintain control.</b> Begin treatment as soon as possible after hatching and before larvae are protected by leaf folds.</p>	<b>0.75-1.5</b>
<p><b>Mint</b> Apply as necessary to maintain control.</p>	<b>0.75-1.5</b>
<p><b>Peanuts</b> Apply as necessary to maintain control.</p>	<b>0.75-1.5</b>
<p><b>Tobacco</b> Apply as necessary to maintain control.</p>	<b>0.75-1.5</b>
<b>FRUIT, NUT &amp; VINE CROPS</b>	
<p><b>Cucurbit Vegetables (Crop Group 9)</b> 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 to maintain control.</p>	<b>0.75-1.5</b>

CROPS	RATES kg/ha
<b>FRUIT, NUT &amp; VINE CROPS</b>	
<p><b>Citrus Fruit</b> <b>(Crop Group 10-10)</b> <b>Including Grapfruits, Lemons, Limes, Orange, Tangelo, Tangerine, Cultivars, Varieties and/or hybrids of These</b> Use 50-600 gallons of water per acre when using ground equipment and 10 gallons of water minimum per acre by air. (Amorbia [Mexican leafroller] is suppressed only.)</p>	<b>0.75-1.5</b>
<p><b>Pome Fruits</b> <b>(Crop Group 11)</b> <b>Including Apples, Pears, and Cultivars, Varieties and/or hybrids of These</b> Apply when newly hatched larvae appear and before leaves are rolled. Continue applying as a part of the normal cover spray program until pest is adequately controlled. Apply when caterpillars are actively feeding (2nd-4th instars).</p>	<b>0.75-1.5</b>
<p><b>Stone Fruits</b> <b>(Crop Group 12)</b> <b>Including Apricots, Cherries, Nectarines, Peaches, Plums, Pluots, Prunes, and Cultivars, Varieties, and/or Hybrids of These</b> 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. BT THURICIDE must be present at egg hatch 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 ha should be applied.</p>	<b>0.75-1.5</b>
<p><b>Berry and Small Fruit – Except Grapes, Strawberries</b> <b>(Crop Group 13-07)</b> <b>Including Blueberries, Blackberries, Boysenberries, Caneberries, Currants, Dewberries, Kiwi, Loganberries, Raspberry, and Cultivars, Varieties, and/or Hybrids of These</b> 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</p>	<b>0.75-1.5</b>
<p><b>Berry and Small Fruit – Grapes</b> <b>(Crop Group 13-07)</b> <b>Including Cultivars, Varieties, and/or Hybrids of These</b> Apply by ground equipment in up to 200 gallons 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.</p>	<b>0.75-1.5</b>
<p><b>Berry and Small Fruit – Strawberries</b> <b>(Crop Group 13-07)</b> <b>Including Cultivars, Varieties, and/or Hybrids of These</b> Apply as necessary to maintain control. Use 20 gallons water minimum per acre when using ground equipment and 5 gallons water minimum per acre by aircraft. In a tank mix with contact insecticides, rates as low as 0.75 kg per ha may be used for the control of armyworm.</p>	<b>0.75-1.5</b>

CROPS	RATES kg/ha
<b>FRUIT, NUT &amp; VINE CROPS</b>	
<p><b>Tree Nuts (Crop Group 14) Including Almonds, Filberts (Hazelnuts), Pecans, Pistachios, Walnuts, and Cultivars, Varieties, and/or Hybrids of These</b></p> <p>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).</p> <p>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. BT THURICIDE must be present at egg hatch 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 ha should be applied.</p>	<b>0.75-1.5</b>
<p><b>Tropical and Subtropical Fruit, Edible Peel – Except Guava, Olives (Crop Group 23) Including Persimmons, and Cultivars, Varieties, and Hybrids of These Commodities</b></p> <p>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).</p> <p>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. BT THURICIDE must be present at egg hatch 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 ha should be applied.</p>	<b>0.75-1.5</b>
<p><b>Tropical and Subtropical Fruit, Edible Peel – Guava (Crop Group 23) Including Cultivars, Varieties, and Hybrids of These Commodities</b></p> <p>Apply as necessary to maintain control. Begin treatment as soon as possible after hatching and before larvae are protected by leaf folds.</p>	<b>0.75-1.5</b>
<p><b>Tropical and Subtropical Fruit, Edible Peel – Olives (Crop Group 23) Including Cultivars, Varieties, and Hybrids of These Commodities</b></p> <p>Apply as necessary to maintain control.</p>	<b>0.75-1.5</b>
<p><b>Tropical and Subtropical Fruit, Inedible Peel – Avocados (Crop Group 24) Including Cultivars, Varieties, and Hybrids of These Commodities</b></p> <p>Apply as necessary to maintain control. Begin treatment as soon as possible after hatching and before larvae are protected by leaf folds. (Amorbia [Mexican leafroller] is suppressed only).</p>	<b>0.75-1.5</b>
<p><b>Tropical and Subtropical Fruit, Inedible Peel – Bananas (Crop Group 24) Including Cultivars, Varieties, and Hybrids of These Commodities</b></p> <p>Hawaii only. Use calibrated ground equipment with adequate water to apply to point of runoff.</p>	<b>0.75-1.5</b>



CROPS	RATES kg/ha
<b>FRUIT, NUT &amp; VINE CROPS</b>	
<p><b>Tropical and Subtropical Fruit, Inedible Peel – Except Avocados, Bananas, Lychee, Papaya, Sugar Apple (Crop Group 24)</b>  <b>Including Pomegranates, and Cultivars, Varieties, and Hybrids of These Commodities</b>            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).</p> <p>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. BT THURICIDE must be present at egg hatch 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 1lb. should be applied.</p>	<b>0.75-1.5</b>
<p><b>Tropical and Subtropical Fruit, Inedible Peel – Lychee, Papaya, Sugar Apple (Crop Group 24)</b>  <b>Including Cultivars, Varieties, and Hybrids of These Commodities</b>            Apply as necessary to maintain control. Begin treatment as soon as possible after hatching and before larvae are protected by leaf folds.</p>	<b>0.75-1.5</b>
<p><b>Coffee</b>            Apply as necessary to maintain control.</p>	<b>0.75-1.5</b>
<b>VEGETABLE CROPS</b>	
<p><b>Root and Tuber Vegetables – Except Artichokes (Crop Group 1)</b>  <b>Including Beets (Table, Garden, Sugar), Carrots, Celeriac, Chinese Radish (Daikon), Horseradish, Parsnips, Potatoes, Radishes, Rutabaga, Salsify, Sweet Potatoes, Turnip Root, Yams</b>            Apply as necessary to maintain control.</p>	<b>0.75-1.5</b>
<p><b>Root and Tuber Vegetables – Artichokes (Crop Group 1)</b>            Apply in a minimum of 100 gal. of water per acre with a spray interval of 10 days or less.</p>	<b>0.75-1.5</b>
<p><b>Leaves of Root and Tuber Vegetables (Crop Group 2)</b>  <b>Including Beets (Table, Garden, Sugar), Carrots, Celeriac, Parsnips, Radishes, Rutabaga, Salsify, Sweet Potatoes, Turnip, Yams</b>            Apply as necessary to maintain control.</p>	<b>0.75-1.5</b>
<p><b>Bulb Vegetables (Crop Group 3-07)</b>  <b>Including Chives, Onions (Dry Bulb, Green) Garlic, Leeks, and Cultivars, Varieties, and/or Hybrids of These</b>            Apply as necessary to maintain control.</p>	<b>0.75-1.5</b>
<p><b>Brassica Head and Stem Vegetables (Crop Group 5-16)</b>  <b>Including Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Chinese Cabbage (Napa), and Cultivars, Varieties, and Hybrids of these commodities.</b>            Apply as necessary to maintain control.</p>	<b>0.75-1.5</b>

CROPS	RATES kg/ha
<b>VEGETABLE CROPS</b>	
<b>Leafy Vegetables (Crop Group 4-16)</b> <b>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, and Cultivars, Varieties, and Hybrids of these Commodities</b> Apply as necessary to maintain control.	<b>0.75-1.5</b>
<b>Legume Vegetables, Succulent or Dried (Crop Group 6)</b> <b>Including Beans (Green, Lima, Mung), Chickpeas (Garbanzo Beans), Peas</b> Apply as necessary to maintain control	<b>0.75-1.5</b>
<b>Foliage of Legume Vegetables (Crop Group 7)</b> <b>Including Plant Parts of Any Legume Vegetable Included in the Legume Vegetables that Will be Used as Animal Feed</b> Apply as necessary to maintain control.	<b>0.75-1.5</b>
<b>Fruiting Vegetables (Crop Group 8-10)</b> <b>Including Eggplants, Okra, Peppers, Tomatoes, and Cultivars, Varieties and/or Hybrids of These</b> Apply as necessary to maintain control.	<b>0.75-1.5</b>
<b>Cucurbit Vegetables (Crop Group 9)</b> <b>Including Cucumbers, Pumpkins, Squash (Summer, Winter, Zucchini)</b> Apply as necessary to maintain control.	<b>0.75-1.5</b>
<b>Cereal Grains – Corn (Fresh, Sweet) (Crop Group 15)</b> Apply as necessary to maintain control.	<b>0.75-1.5</b>
<b>Herbs and Spices (Crop Group 19)</b> <b>Including Basil, Chive, Cilantro (Coriander, Chinese Parsely), Dill, Marjoram, Mustard Seed, Oregano, Parsley (Dried), Pepper, Sage, Tarragon, Thyme</b> Apply as necessary to maintain control.	<b>0.75-1.5</b>
<b>Stalk, Stem, and Leaf Petiole Vegetables (Crop Group 22)</b> <b>Including Asparagus, Cardoon, Celery, Kohlrabi, and Cultivars, Varieties, and Hybrids of These Commodities</b> Apply as necessary to maintain control.	<b>0.75-1.5</b>
<b>Globe Artichokes</b> <b>Apply in a minimum of 100 gal. of water per acre with a spray interval of 10 days or less.</b>	<b>0.75-1.5</b>

CROPS	RATES kg/ha
<b>NONFOOD CROPS</b>	
<p><b>Flowers and Ornamentals (Outdoor and Greenhouse)</b>            BT THURICIDE may also be used on flowers and ornamentals outdoors and in the greenhouse at a rate of 0.75-1.5 kg per ha for control of listed insects on this label.            * Assumes Application to spray runoff</p>	<b>0.75-1.5</b>
<p><b>Shade Trees and Ornamentals (including Roses)</b>            Apply when leaf expansion reaches 40% to 50% as infestation warrants. If eggs hatch over a long period of time, or if reinfestation occurs, spray about 14 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.</p>	<b>0.75-1.5</b>
<p><b>Turf and Grass Seed Production</b>            Repeat as necessary throughout season to maintain control.</p>	<b>0.75-1.5</b>
<b>STORED SOYBEANS AND GRAINS* (Indian Meal Moth, Almond Moth)</b>	
<p>To control and prevent Indian Meal Moth and Almond Moth infestations of stored soybeans and grains, prepare a spray mixture which includes 1 gallon of water for every 1.5 oz. by weight of BT THURICIDE. The spray mixture may be applied either by treating the top 4 inches of grain as it is being augered into storage (applying 0.6 pint of mixture per bushel in the grain stream), or by treating the surface of grain after it is in the bin.</p> <p>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 prior to egg-laying. Full season control is normally experienced. Re-treat only if reinfestation occurs.</p> <p>For the protection of bagged grain, apply spray mixture to entire grain mass, and mix thoroughly prior to bagging. BT THURICIDE at 6 oz. by weight per 10 gallons of water will treat approximately 100 bushels. Treated grain may be used at any time after treatment.</p>	<b>0.75-1.5</b>

\*Barley, Corn (Field, Sweet, Pop, Seed), Jojoba, Oats, Rice, Rye, Sorghum, Wheat, Wild Rice.

## 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 pesticide continuously for the duration of the water application.

Apply this product only through sprinkler systems such as center pivot, lateral move, end tow, side (wheel) roll, traveler, solid set, or hand move. Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide 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 pesticide application to a public water system unless the pesticide 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 pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.
- 3) The pesticide 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 interlocking controls to automatically shut off the pesticide 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 pesticide 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 pesticides and capable of being fitted with a system interlock.
- 7) Do not apply when wind speed favors 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 pesticide introduction. As an option to the RPZ, the water from the public water

system should be discharged into a reservoir tank prior to pesticide 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 pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.
- 4) The pesticide injection pipeline must contain a functional, normally closed, solenoidoperated 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 pesticide 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 pesticide 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 pesticides and capable of being fitted with a system interlock.
- 7) Do not apply when wind speed favors drift beyond the area intended for treatment.

## **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 pesticide 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 Center 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.

### PESTICIDE STORAGE

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

### PESTICIDE DISPOSAL

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

### CONTAINER HANDLING

Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration. Do not burn, unless allowed by state and local ordinances. If burned, stay out of smoke. If outer box is contaminated, dispose of it in the same manner as required for the bag

## WARRANTY

Tangsons Biotech warrants that the material contained herein conforms to the description on the label and is reasonably fit for the purpose referred to in the



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directions for use. Timing and method of application, weather, watering practices, nature of soil, the disease 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.