### **AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions for Use section for information about the standard.

### **NON-AGRICULTURAL USE** REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Keep unprotected persons out of treated areas until sprays have dried.

### **NOTICE TO BUYER**

To the extent consistent with applicable law, seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning the use of this product other than as indicated on the label. User assumes all risks of use, storage or handling not in strict accordance with accompanying directions.



### **TEAR CORNER**

# R Dec 29, 2023 New York State Department of Environmental Conservation Division of Materials Management

ACCEPTED FOR REGISTRATION

# BIOLOGICAL INSECTICIDE DOC 1D# 590939

### DRY FLOWABLE

### ✓ For Organic Production

**Active Ingredient:** Bacillus thuringiensis, subsp. aizawai, Strain ABTS-1857. fermentation solids, spores and insecticidal toxins .............. 54.0%\* 

The percent active ingredient does not indicate product performance and potency measurements are not federally standardized.

### **KEEP OUT OF REACH OF CHILDREN**

## CAUTION

FIRST AID		
If in eyes	<ul> <li>Hold eye open, and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>	
If on skin or clothing	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>	
If inhaled	<ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>	

### **HOT LINE NUMBER**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-892-0099 for emergency medical treatment and/or transport emergency information. For all other information call 1-800-6-VALENT (682-5368).

### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS (AND DOMESTIC ANIMALS)

Harmful if inhaled or absorbed through the skin. Causes moderate eye irritation. Avoid breathing dust. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

### **VALENT BIOSCIENCES**



Valent BioSciences LLC 1910 Innovation Way, Suite 100 Libertyville, IL 60048 U.S.A. 1-800-323-9597

EPA Reg. No. 73049-40 EPA Est. No. 33762-IA-001 List No. 12048-04-01

### **NET CONTENTS: 1 POUND (454 GRAMS)**

© 2022 23-0664/R12

### **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. Refer to supplemental labeling (package enclosure) for crops, rates, Personal Protective Equipment (PPE) and general directions.

## STORAGE AND DISPOSAL

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

Pesticide Storage: Reclose containers of unused XenTari Biological Insecticide Dry Flowable (hereafter referred to as XenTari). Store in a dry place inaccessible to children and out of sunlight.

**Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**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, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

approved particulate filtering facepiece respirator with any N, R. or P filter: OR a NIOSH-approved elastomeric particulate respirator with any N. R. or P filter: OR a NIOSH-approved powered air-purifying respirator with an HE filter. (Repeated exposures to high concentrations of microbial proteins can cause allergic sensitization ) Follow manufacturer's instructions for cleaning/maintaining

PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Mixer/loaders and applicators wear a minimum of a NIOSH-

#### ENGINEERING CONTROLS

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR] 170.607 (d) and (e)1, the handler PPE requirements may be reduced or modified as specified in the WPS.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown

### User Safety Recommendations

Users should:

04-9453/R14

List No. 12048-04

ACTIVE INGREDIENT:

EPA Reg. No. 73049-40

If in

eyes

skin or

inhaled

CAUTION

clothing before reuse.

 Waterproof gloves Shoes plus socks

EPA Est. No. 33762-IA-001

XenTari®

✓ FOR ORGANIC PRODUCTION

 Other Ingredients.
 46.0%

 Total
 100.0%

\*Potency: 35,000 Diamondback Moth Units per mg of product or 15,9

The percent active ingredient does not indicate product performance

FIRST AID

5 minutes, then continue rinsing eve.

Take off contaminated clothing.

by mouth-to-mouth, if possible.

HOT LINE NUMBER

Have the product container or label with you when calling a

poison control center or doctor, or going for treatment. You

may also contact 1-800-892-0099 for emergency medical

treatment and/or transport emergency information. For all

Harmful if inhaled or absorbed through the skin. Causes mod-

erate eve irritation. Avoid breathing dust. Avoid contact with

eves, skin or clothing. Wash thoroughly with soap and water

after handling and before eating, drinking, chewing gum, using

tobacco, or using the toilet. Remove and wash contaminated

other information call 1-800-6-VALENT (682-5368).

HAZARDS TO HUMANS (AND DOMESTIC ANIMALS)

. Hold eye open, and rinse slowly and gently with

Remove contact lenses if present after the first

Call a poison control center or doctor for treat-

Rinse skin immediately with plenty of water for

Call a poison control center or doctor for treat-

If person is not breathing, call 911 or an ambu-

lance, then give artificial respiration, preferably

Call a poison control center or doctor for further

Bacillus thuringiensis, subsp. aizawai, Strain ABTS-1857,

billion Diamondback Moth Units per pound of product.

and potency measurements are not federally standardized

water for 15-20 minutes.

Move person to fresh air.

ment advice.

15-20 minutes.

treatment advice.

PRECAUTIONARY STATEMENTS

Personal Protective Equipment (PPE)

Long-sleeved shirt and long pants

Applicators and other handlers must wear:

ment advice.

fermentation solids, spores and insecticidal toxins . . . . . .

DRY FLOWABLE

- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove clothing/PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### ENVIRONMENTAL HAZARDS

This product is toxic to aquatic invertebrates. For terrestrial uses: Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate

This product is toxic to the green lacewing and the predatory mite (Galendromus (= Metaseiulus) occidentalis).

This product must not be applied aerially within 1/4 mile of any habitats of threatened or endangered lepidoptera. No manual application can be made within 300 feet of any threatened or endangered lepidoptera.

#### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

#### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170, This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during

PPE required for early entry to treated areas (that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or

#### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricul-

have dried.

See Chemigation section for Chemigation use directions.

Days to Harvest: There are no restrictions on applying XenTari up to the time of harvest. Individual state regulations may vary and should be consulted for allowable pre-harvest application

Sites: XenTari may be used for any labeled pest in both field

XenTari is an insecticide for use against listed caterpillars (lar-

damaged

· Larvae must be actively feeding on treated, exposed plant

surfaces. Thorough spray coverage is needed to provide a uniform deposit of XenTari at the site of larval feeding. Use overhead and drop nozzles to obtain good spray coverage on both sides of foliage. Use sufficient spray volume to insure uniform deposition on all plant surfaces.

 Under heavy pest population pressure, use the higher labeled application rates, shorten the spray interval, and/or raise spray volume to improve spray coverage.

Repeat applications at an interval sufficient to maintain control, usually 3 to 14 days depending on plant growth rate, moth activity, rainfall after treating, and other factors. If attempting to control a pest with a single spray, make the treatment when egg hatch is essentially complete, but before crop damage occurs.

· A spreader-sticker which has been approved for use on growing crops, should be added for hard-to-wet crops such as cabbage, or to improve weather-fastness of the spray deposits.

. XenTari may be tank mixed with other labeled insecticides to enhance control. Observe the most restrictive of the labeling limitations and precautions of all products used in mixtures. Do not mix XenTari with any product containing a label prohibition against such mixing. Do not exceed label dosage rates. Before tank mixing XenTari with other labeled products, including spreader stickers, check for tank mix compatibility.

After ingesting a lethal dose of XenTari, larvae stop feeding within the hour, and will die within several hours to 3 days. Mortality varies with larval size (instar), lepidopteran species, and dose

Avoiding spray drift at the application site is the responsibil-

Gallon of Water If Application Rate is (wt) 1/4 lb XenTari/acre (crop) or 100 gals water 1/2 tsp (0.04 oz) 1/2 lb XenTari/acre (crop) or 100 gals water 1 tsp (0.08 oz) 1 lb XenTari/acre (crop) or 100 gals water 2 tsns (0.16 oz) 2 lbs XenTari/acre (crop) or 100 gals water 4 tsps (0.32 oz)

coverage of infested plant parts. The volume of water needed per acre will depend on crop development, relative humidity, spray equipment, and local experience. Usually selection of moderate to high spray volume will provide the best results in most equipment. For ground use, apply a minimum of 10 gallons per acre. For air use, apply at least 2 gallons of water per acre, except in arid areas, where 5 to 10 gallons of water are required. Begin the season with low water volume and increase as the plant canopy increases to ensure complete coverage. Add water to the mix tank and provide moderate agitation. With agitating, add the required amount of XenTari. Continue agitation, and add other spray materials, if any, Add remaining water, if any, and agitate until fully mixed. Maintain the suspension with moderate agitation while loading and spraying. Do not mix more XenTari than can be used in a 3-day period.

ity of the applicator. The interaction of many equipment-andweather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all of these factors when making decisions For Smaller Spray Volumes:

Sprinkler Irrigation Systems Hee This Amount Maintain continuous agitation in the mix tank during the mixing of XenTari Per and application to insure a uniform suspension.

Greater accuracy in calibration and distribution will be achieved by injecting a larger volume for a more dilute solution per unit

connect an irrigation system (including greenhouse systems)

First prepare a suspension of XenTari in a mix tank. Fill tank

with 1/2 to 3/4 of the desired amount of water. Start mechani-

cal or hydraulic agitation. Add the required amount of XenTari,

and then the remaining volume of water. Then set the sprin-

kler to deliver a minimum of 0.1 to 0.3 inch of water per acre.

Start sprinkler and uniformly inject the suspension of XenTari

into the irrigation water line so as to deliver the desired rate

per acre. The suspension of XenTari should be injected with

a positive displacement pump into the main line ahead of a

right angle turn to insure adequate mixing. Any questions on

calibration should be directed to your State Extension Service

NOTE: When treatment with XenTari has been completed, fur-

ther field irrigation over the treated area should be avoided for

24 to 48 hours to prevent washing the material off the crop.

**Precautions For Applications Through** 

Specialists, to equipment manufacturers or other experts.

used for pesticide applications to a public water system.

Spray Preparation

Crop injury, lack of effectiveness, or illegal residues in the crop can result from nonuniform distribution of treated water. 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 adiustments should the need arise. Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also 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 is either automatically or manually

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

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.

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.

Do not apply when wind speed favors drift beyond the area intended for treatment, when system connections or fittings leak when nozzles do not provide uniform distribution or when lines containing the product must be dismantled and drained.

Imported Cabbageworm

Diamondback Moth4

Green Cloverworm\*

Saltmarsh Caterpillar

Cross-striped Cabbageworm

Pests

Loopers

Webworm

Armyworms<sup>1</sup>

Cutworms\*

Heliothis

Loopers

Sovbean Looper

Armvworms<sup>1</sup>

Podworms13

Loopers

Soybean Looper

Armyworms'

Podworms13

Loopers

Hornworm

Armyworms1

Melonworms'

Armyworms1

Loopers

Green Cloverworm\*

Velvetbean Caterpillar\*

Variegated Cutworm\*

Saltmarsh Caterpillar\*

Rindworm complex\*

Green Cloverworm\*

Velvetbean Caterpillar\*

#### APPLICATION INSTRUCTIONS/RATES FOR XENTARI (continued) **Crop or Crop Group**

Vegetable, brassica (cole) leafy (Crop group 5) Including: Broccoli; broccoli, Chinèse (gai lon); broccoli raab (rapini); Brussels Omnivorous Leafroller sprouts; cabbage; cabbage, Chinese (bok choy); cabbage, Chinese (napa); cabbage, Hornworms\* Chinese mustard (gai choy); cauliflower; cavalo broccolo; collards; kale; kohlrabi; mizuna; mustard greens; mustard spinach; rape greens.

Legume vegetables (succulent or dried) (Crop group 6) Including: Bean (Lupinus spp.) (includes grain lupin, sweet lupin, white lupin, and

white sweet lupin); bean (*Phaseolus* spp.) (includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean); bean (Vigna spp.) (includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean); broad bean (fava); chickpea (garbanzo); quar; jackbean; lablab bean; lentil; Pea (Pisum spp.) (includes dwarf pea, ediblepod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea);

Foliage of legume vegetables (Crop group 7)

Including foliage of: Any cultivar of bean (Phaseolus spp.) and field pea (Pisum spp.) and sovbean (Glycine max).

pigeon pea; soybean; soybean (immature seed); sword bean.

Vegetable, fruiting, except cucurbits (Crop group 8-10) Including: African eggplant; bush tomato; bell pepper; cocona; currant tomato;

eggplant; garden huckleberry; goji berry; groundcherry; martynia; naranjilla; okra; Tomato Fruitworm pea eggplant; pepino; nonbell pepper; roselle; scarlet eggplant; sunberry; tomatillo; tomato; tree tomato; cultivars, varieties, and/or hybrids of these.

Vegetable, cucurbit (Crop group 9) Including: Chavote (fruit): Chinese waxgourd (Chinese preserving melon): citron melon; cucumber; gherkin; gourd, edible (includes hyotan, cucuzza, hechima, Chinese okra); Momordica spp. (includes balsam apple, balsam pear, bitter melon, Chinese cucumber); muskmelon (includes cantaloupe); pumpkin; squash, summer;

squash, winter (includes butternut squash, calabaza, hubbard squash, acorn

Fruit, citrus (Crop group 10-10)

1/2 - 1-1/2

1/2 - 1-1/2

(continued)

1/2 - 2

squash, spaghetti squash); watermelon.

Including: Australian desert lime: Australian finger lime: Australian round lime: Brown River finger lime: calamondin: citron: citrus hybrids: grapefruit: Japanese summer grapefruit: kumguat: lemon: lime: Mediterranean mandarin: Mount White lime: New Guinea wild lime: orange, sour; orange, sweet; pummelo; Russell River lime: Satsuma mandarin: sweet lime: tachibana orange: Tahiti lime: tangelo: tangerine (mandarin); tangor; trifoliate orange; uniq fruit; cultivars, varieties, and/ or hybrids of these

Cutworms 1/2 - 21/2 - 2 Armyworms1 Fruittree Leafroller' 1/2 - 2 Orangedog\* 1/2 - 2 Citrus Cutworm3\* 1/2 - 2

Pound/Acre

1/2 - 1-1/2

1/2 - 1-1/2

1/2 - 1-1/2

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1/2 - 2

1/2 - 2

(continued)

### KEEP OUT OF REACH OF CHILDREN

Do not apply this product in a way that will contact workers or

other persons, either directly or through drift. Only protected handlers may be in the area during application.

the restricted entry interval (REI) of 4 hours.

water) is: coveralls, waterproof gloves and shoes plus socks.

tural plants on farms, forests, nurseries, or greenhouses.

Keep unprotected persons out of treated areas until sprays

#### USE INSTRUCTIONS

and greenhouse use.

vae) of lepidopterous insects. Close scouting and early attention to infestations is highly recommended. Larvae must eat deposits of XenTari to be affected. Always follow these directions:

Treat when larvae are young (early instars) before the crop is

CHEMIGATION USE DIRECTIONS consumed. Following ingestion, larvae become sluggish, discol-Apply this product only through sprinkler, including center pivor. then shrivel, blacken and die. Smaller larvae die more quickly. ot, lateral move, end tow, side (wheel) roll, traveler, big gun, XenTari may be applied in conventional ground or aerial equipsolid set, or hand move, irrigation systems. Do not apply this ment with quantities of water sufficient to provide uniform product through any other type of irrigation system. Do not APPLICATION INSTRUCTIONS/RATES FOR XENTARI (One 1 pound bag treats 0.5 acres at application rate of 2 lb/A to 2 acres at application rate of 1/2 lb/A) (One 5 pound bag treats 2.5 acres at application rate of 2 lb/A to 10 acres at application rate of 1/2 lb/A) Crop or Crop Group Pests Pound/Acre Vegetable, root and tuber (Crop group 1) Loopers 1/2 - 1-1/2 Including: Arracacha; arrowroot; artichoke, Chinese; artichoke, Jerusalem; beet, Omnivorous Leafroller 1/2 - 1-1/2 garden; beet, sugar; burdock, edible; canna, edible; carrot; cassava, bitter and Hornworms\* 1/2 - 1-1/2 sweet; celeriac; chayote (root); chervil, turnip-rooted; chicory; chufa; dasheen Imported Cabbageworm 1/2 - 1-1/2 (taro); ginger; ginseng; horseradish; leren; parsley, turnip-rooted; parsnip; potato; Diamondback Moth4 1/2 - 1-1/2 radish; radish, oriental; rutabaga; salsify; salsify, black; salsify, Spanish; skirret; Green Cloverworm\* 1/2 - 1-1/2 sweet potato; tanier; turmeric; turnip; yam bean; yam, true. 1/2 - 1-1/2 Webworm Saltmarsh Caterpillar' 1/2 - 1-1/2 Armyworms1 1/2 - 2 Cutworms\* 1/2 - 1-1/2 Cross-striped Cabbageworm 1/2 - 1-1/2 Heliothis 1/2 - 2 Leaves of root and tuber vegetables (human food or animal feed) 1/2 - 1-1/2 Loopers Omnivorous Leafroller\* (Crop group 2) 1/2 - 1-1/2 Including leaves of: Beet, garden; beet, sugar; burdock, edible; carrot; cassava, bitter 1/2 - 1-1/2 Hornworms\* and sweet; celeriac; chervil, turnip-rooted; chicory; dasheen (taro); parsnip; radish; Imported Cabbageworm 1/2 - 1 - 1/2radish, oriental; rutabaga; salsify, black; sweet potato; tanier; turnip; yam, true. Diamondback Moth4 1/2 - 1-1/2 1/2 - 1-1/2 Green Cloverworm\* 1/2 - 1-1/2 Wehworm Saltmarsh Caterpillar 1/2 - 1-1/2 1/2 - 2 Armyworms1 1/2 - 1-1/2 Cutworms\* Cross-striped Cabbageworm 1/2 - 1-1/2 Heliothis 1/2 - 2 Vegetable, bulb (Crop group 3-07) Looners 1/2 - 1-1/2 Including: Chive, fresh leaves; chive, Chinese, fresh leaves; daylily, bulb; elegans Omnivorous Leafroller\* 1/2 - 1-1/2 hosta; fritillaria, bulb; fritillaria, leaves; garlic, bulb; garlic, great-headed, bulb; Hornworms 1/2 - 1-1/2 garlic, serpent, bulb; kurrat; lady's leek; leek; leek, wild; lily, bulb; onion, Beltsville Imported Cabbageworm 1/2 - 1-1/2 bunching onion bulb onion Chinese bulb onion fresh onion green onion Diamondback Moth4 1/2 - 1-1/2 macrostem; onion, pearl; onion, potato, bulb; onion, tree, tops; onion, Welsh, tops; Green Cloverworm\* 1/2 - 1-1/2 shallot, bulb: shallot, fresh leaves: cultivars, varieties, and/or hybrids of these. Webworm 1/2 - 1-1/2 1/2 - 1-1/2 Saltmarsh Caterpillar' 1/2 - 2 Armyworms1 1/2 - 1-1/2 Cutworms\* Cross-striped Cabbageworm 1/2 - 1-1/2 Heliothis 1/2 - 2 Vegetable, leafy, except brassica (Crop group 4) 1/2 - 1-1/2 Loopers Including: Amaranth (Chinese spinach); arugula (roquette); cardoon; celery; Omnivorous Leafroller\* 1/2 - 1-1/2 celery, Chinese; celtuce; chervil; chrysanthemum, edible-leaved; chrysanthemum 1/2 - 1-1/2 Hornworms\* garland; corn salad; cress, garden; cress, upland; dandelion; dock (sorrel); endive Imported Cabbageworm 1/2 - 1-1/2 (escarole); fennel, Florence; lettuce, head and leaf; orach; parsley; purslane, garden Diamondback Moth<sup>4</sup> 1/2 - 1-1/2 purslane, winter; radicchio (red chicory); rhubarb; spinach, New Zealand; spinach, 1/2 - 1-1/2 Green Cloverworm\* vine: Swiss chard. 1/2 - 1-1/2 Webworm Saltmarsh Caterpillar\* 1/2 - 1-1/2 Armyworms1 1/2 - 2

Cutworms\*

Heliothis

Cross-striped Cabbageworm

APPLICATION INSTRUCTIONS/RATES FOR XENTARI (continued) Crop or Crop Group	Pests	Pound/Acre
Fruit, pome (Crop group 11-10)	Redhumped Caterpillar*	1/2 - 2
ncluding: Apple; azarole; crabapple; loquat; mayhaw; medlar; pear; pear, Asian; juince; quince, Chinese; quince, Japanese; tejocote; cultivars, varieties, and/or	Tent Caterpillars* Omnivorous Leafroller*	1/2 - 2 1/2 - 2
ybrids of these.	Fall Webworm*	1/2 - 2
	Walnut Caterpillar*	1/2 - 2
	Cankerworms* Gypsy Moth*	1/2 - 2 1/2 - 2
	Variegated Leafroller*	1/2 - 2
	Redbanded Leafroller*	1/2 - 2
	Tufted Apple Budmoth* Fruittree Leafroller*	1/2 - 2 1/2 - 2
	Oriental Fruit Moth*	1/2 - 2
	Cutworms*	1/2 - 2
	Filbert Leafroller*	1/2 - 2
	Obliquebanded Leafroller* Codling Moth*	1/2 - 2 1/2 - 2
	Armyworms <sup>1</sup>	1/2 - 2
	Twig Borer*	1/2 - 2
ruit, stone (Crop group 12)	Redhumped Caterpillar*	1/2 - 2
ncluding: Apricot; cherry, sweet; cherry, tart; nectarine; peach; plum; plum, hickasaw; plum, Damson; plum, Japanese; plumcot; prune (fresh).	Tent Caterpillars*	1/2 - 2
mickasaw, piam, bamson, piam, bapanese, piameet, piame (mesin).	Omnivorous Leafroller* Fall Webworm*	1/2 - 2 1/2 - 2
	Walnut Caterpillar*	1/2 - 2
	Cankerworms*	1/2 - 2
	Gypsy Moth*	1/2 - 2 1/2 - 2
	Variegated Leafroller* Redbanded Leafroller*	1/2 - 2
	Tufted Apple Budmoth*	1/2 - 2
	Fruittree Leafroller*	1/2 - 2
	Oriental Fruit Moth*	1/2 - 2
	Cutworms* Filbert Leafroller*	1/2 - 2 1/2 - 2
	Obliquebanded Leafroller*	1/2 - 2
	Codling Moth*	1/2 - 2
	Armyworms <sup>1</sup> Twig Borer*	1/2 - 2 1/2 - 2
Berry and small fruit (Crop group 13-07)	Grapeleaf Skeletonizer	1/2 - 1-1/2
ncluding: Amur river grape; aronia berry; bayberry; bearberry; bilberry;	Grape Leafroller*	1/2 - 1-1/2
lackberry ( <i>Rubus</i> spp.) (includes Andean blackberry, arctic blackberry,	Achema Sphinx Moth*	1/2 - 1-1/2
ingleberry, black satin berry, boysenberry, brombeere, California blackberry, hesterberry, Cherokee blackberry, Cheyenne blackberry, common blackberry,	(Hornworm) Saltmarsh Caterpillar*	1/2 - 1-1/2
oryberry, darrowberry, dewberry, Dirksen thornless berry, evergreen blackberry,	Omnivorous Leafroller*	1/2 - 1-1/2
imalayaberry, hullberry, lavacaberry, loganberry, lowberry, Lucretiaberry, nammoth blackberry, marionberry, mora, mures deronce, nectarberry, Northern	Loopers	1/2 - 1-1/2
ewberry; olallieberry, Oregon evergreen berry, phenomenalberry, rangeberry,	Orange Tortrix*	1/2 - 1-1/2
ivenberry, rossberry, Shawnee blackberry, Southern dewberry, tayberry, bungberry, zarzamora, and cultivars, varieties and/or hybrids of these); blueberry,	Obliquebanded Leafroller* Armyworms <sup>1</sup>	1/2 - 1-1/2 1/2 - 2
ighbush: blueberry, lowbush: buffalo currant: buffaloberry: che: Chilean guava:	Tobacco Budworm	1/2 - 2
hokecherry; cloudberry; cranberry*; cranberry, highbush; currant, black; currant,	Grape Berry Moth	1/2 - 2
ed; elderberry; Europeán barberry, gooseberry; grape; honeysuckle, edible; uckleberry; jostaberry; Juneberry (Saskatoon berry); kiwifruit, fuzzy; kiwifruit,	Melonworms*	1/2 - 1-1/2
ardy; lingonberry; maypop; mountain pepper berries; mulberry; muntries; native	Cutworm* Spanworm	1/2 - 1-1/2 1/2 - 1-1/2
urrant; partridgeberry; phalsa; pincherry; raspberry, black and red; riberry; salal; chisandra berry; sea buckthorn; serviceberry; strawberry; wild raspberry; cultivars,	оранионн	1/2 1 1/2
arieties, and/or hybrids of these.		
or cranberry - Spray only when there is no standing water in the bed)		
ut, tree (Crop group 14)	Redhumped Caterpillar*	1/2 - 2
cluding: Almond; beech nut; Brazil nut; butternut; cashew; chestnut; chinquapin; bert (hazelnut); hickory nut; macadamia nut; pecan; walnut, black and English.	Tent Caterpillars*	1/2 - 2 1/2 - 2
bort (nazomat), monory mat, madadama mat, podan, wamat, bladk and English.	Omnivorous Leafroller* Fall Webworm*	1/2 - 2
	Walnut Caterpillar*	1/2 - 2
	Cankerworms*	1/2 - 2
	Gypsy Moth*	1/2 - 2
	Variegated Leafroller* Redbanded Leafroller*	1/2 - 2 1/2 - 2
	Tufted Apple Budmoth*	1/2 - 2
	Fruittree Leafroller*	1/2 - 2
	Oriental Fruit Moth*	1/2 - 2
	Cutworms* Filbert Leafroller*	1/2 - 2 1/2 - 2
	Obliquebanded Leafroller*	1/2 - 2
	Codling Moth*	1/2 - 2
	Armyworms <sup>1</sup>	1/2 - 2
45)	Twig Borer*	1/2 - 2
irain, cereal (Crop group 15) ncluding: Barley; buckwheat; corn; millet, pearl; millet, proso; oats; popcorn; rice;	Heliothis <sup>5</sup>	1/2 - 2 1/2 - 2
/e; sorghum (milo); teff; teosinte; wheat; wild rice.	Headworms*	1/2 - 2
or rice – Do not release floodwaters within 7 days of application; limit the number		1/2 - 2
applications per crop to two (2))	1	1/0 0
rass forage, fodder, and hay (Crop group 17) cluding: Any grass, <i>Gramineae</i> family (either green or cured) except sugarcane	Loopers Armyworms <sup>1</sup>	1/2 - 2 1/2 - 2
nd those included in the cereal grains group, that will be fed to or grazed by	,	.,
vestock, all pasture and range grasses and grasses grown for hay or silage.		(n==#:=: -1
		(continued

Crop or Crop Group	Pests	Pound/Acr
Nongrass animal feeds (forage fodder straw and hay) (Crop group 18) Including: Alfalfa; bean, velvet; clover; kudzu; lespedeza; lupin; sainfoin; trefoil; vetch; vetch, crown; vetch, milk.	Loopers Alfalfa Caterpillar* European Skipper* (Essex Skipper) Armyworms <sup>1</sup>	1/2 - 1-1/2 1/2 - 1-1/2 1/2 - 1-1/2 1/2 - 2
Herbs and spices (Crop group 19) and mint including: Allspice; angelica; anise; anise, star; annatto (seed); balm; basil; borage; burnet; chamomile; caper buds; caraway, erarway, black; cardamom; cassia bark; cassia buds; catnip; celery seed; chervil (dried); chive; chive, Chinese; cinnamon; clary; clove buds; coriander leaf (cilantro; or Chinese parsley); coriander seed (cilantro; or costmary; culantro (leaf); culantro (seed); cumin; curry (leaf); dill (dillweed); dill (seed); fennel (common); fennel, Florence (seed); fenugreek; grains (lovage (seed); mace; marigold; marijoram; mustard (seed); masturtium; nutmeg; parsley (dried); pennyroyal; pepper, black; pepper, white; peppermint; poppy (seed); rosemary; rue; saffron; sage; savory, summer and winter; sweet bay; tansy; tarragon; thyme; vanilla; wintergreen; woodruff; wormwood.	Looper Saltmarsh Caterpillar* Armyworms <sup>1</sup>	1/2 - 1-1/2 1/2 - 1-1/2 1/2 - 2
Oilseed (Crop group 20) Including: Borage; calendula; castor oil plant; Chinese tallowtree; cottonseed;	Looper Armyworms <sup>1</sup>	1/2 - 2 1/2 - 2
crambe; cuphea; echium; euphorbia; evening primrose; flax seed; gold of pleasure; hare's ear mustard; jojoba: lesquerella; lunaria; meadowfoam; milkweed; mustard seed; niger seed; oil radish; poppy seed; rapeseed (canola); rosehip; safflower; sesame; stokes aster; sunflower; sweet rocket; tallowwood; tea oil plant; vernonia; cutlivars, varieties, and/or hybrids of these.	Heliothis Tobacco Budworm <sup>2</sup> * Cotton Bollworm <sup>2</sup> * Saltmarsh Caterpillar*	1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2
(For sunflower - Use ground application only)	Head Moth*	1/2 - 2
Asparagus	Armyworms1	1/2 - 2
Avocado	Armyworms¹ Amorbia Moth* Omnivorous Leafroller* Ornivorous Looper* Orange Tortrix* Spanworm*	1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2
Flowers, Bedding Plants and Ornamentals	Loopers Tobacco Budworm Omnivorous Looper* Omnivorous Leafroller* Diamondback Moth <sup>4</sup> Armyworms <sup>1</sup> Ello Moth* (Hornworm)	1/2 - 1-1/2 1/2 - 1-1/2 1/2 - 1-1/2 1/2 - 1-1/2 1/2 - 1-1/2 1/2 - 2 1/2 - 1-1/2
(Ground application only)	Io Moth* Oleander Moth* Azalea Caterpillar*	1/2 - 1-1/2 1/2 - 1-1/2 1/2 - 1-1/2
Fruit, tropical (grown in U.S.A.) Including: Anonna; avocado; banana/plantain; caimito; carambola (star fruit); guava; longan; sapodilla; papaya; passion fruit; mango; lychee; jakfruit; dragon fruit; mamey sapote; coconut cherimoya; canistel; monstera; wax jambu; pomegranate; rambutan; pulasan; Pakistani mulberry; langsat; chempedak; durian; fig pineapple; jaboticaba; mountain apples.	Armyworms¹ Hornworm* Leafrollers* Omnivorous Looper* Loopers Banana Skipper* Omnivorous Leafroller* Batrachedra comosae (Hodges) Thecla Moth Redhumped Caterpillar* Tent Caterpillars* Fall Webworm* Fall Webworm* Gypsy Moth* Variegated Leafroller* Redbanded Leafroller* Tufted Apple Budmoth* Fruittree Leafroller* Oriental Fruit Moth* Cutworms* Giber Leafroller* Obliquebanded Leafroller* Codling Moth* Twig Borer* Artichoke Plume Moth	1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 1 1/2 - 1 1/2 - 1 1/2 - 2 1/2 -
Giobe artichoke	Artichoke Plume Moth Cutworms* Thistle Butterfly	1/2 - 1-1/2 1/2 - 1-1/2
Hemp	Armyworms <sup>1</sup> Tobacco Budworm Hornworms* Loopers	1/4 - 2 1/4 - 2 1/4 - 2 1/4 - 2
Hops	Loopers Armyworms <sup>1</sup>	1/2 - 2 1/2 - 2
Malanga	Saltmarsh Caterpillar* Armyworms <sup>1</sup>	1/2 - 2 1/2 - 2
Peanut	Armyworms¹ Loopers Velvetbean Caterpillar* Green Cloverworm* Podworms¹	1/2 - 2 1/2 - 1-1/2 1/2 - 1-1/2 1/2 - 1-1/2 1/2 - 1-1/2 (continued

Crop or Crop Group	Pests	Pound/Acre
Tobacco	Armyworms <sup>1</sup>	1/2 - 2
	Tobacco Budworm	1/2 - 2
	Hornworms*	1/2 - 2
	Loopers	1/2 - 2
Turf	Armyworms1	1/2 - 2
	Sod Webworm	1/2 - 2
Watercress	Loopers	1/2 - 2
(Spray only when there is no standing water in the bed)	Armyworms1	1/2 - 2
(opray only whom there is no standing water in the sea,	Diamondback Moth	1/2 - 1-1/2
GREENHOUSE/SHADEHOUSE AND OUTDO	OR NURSERY	
Crops including, but not limited to: Vegetable, leafy, except brassica (Crop group	4): Loopers	1/2 - 1-1/2
Vegetable, brassica (cole) leafy (Crop group 5); Vegetable, fruiting (Crop group 8	); Heliothis	1/2 - 2
Herbs and spices (Crop group 19)	Armyworme1	1/2 - 2

<sup>\*</sup>For all states except California

- 1 XenTari may be used to control armyworms and/or podworms. For best results, apply full coverage sprays when 1st or 2nd instar larvae are present. Repeat treatment as necessary. Under rapidly increasing populations, use the highest labeled application rate, or tank mix with a contact insecticide. Against heterogeneous armyworm populations where 4th and 5th instar larvae are present, a contact insecticide in combination with XenTari should be used to enhance control.
- <sup>2</sup> Use to control light to moderate populations of newly hatched worms in integrated pest management conditions. Repeat treatments at 4- to 5-day intervals as long as necessary and results are acceptable. Use in combination with ovicidal rates of labeled *Heliothis*
- <sup>3</sup> Apply to light to moderate populations of newly-hatched worms.
- <sup>4</sup> For best results, use a ground applicator, a minimum of 50 gallons total mix (XenTari + water) per acre, 50-100 psi and 3-7 nozzles
- <sup>5</sup> Use XenTari alone to suppress light to moderate populations of *Heliothis* on corn or sorghum. A contact insecticide in combination with XenTari is recommended to control moderate to heavy populations. XENTARI FOR TREES AND FORESTS6 (For all states except California)

Crop	Pest	Pounds/100 Gallons <sup>7</sup>
Forest, Shade, Sugar Maple Trees and Ornamentals	Gypsy Moth	1/2 - 1
	Bagworm	1/2 - 1
	Redhumped Caterpillar	1/2 - 1
	Spring & Fall Cankerworm	1/2 - 1
	Fall Webworm	1/2 - 1
	Elm Spanworm	1/2 - 1
	Tent Caterpillars	1/2 - 1
	California Oakworm	1/2 - 1
	Pine Butterfly	1/2 - 1
	Spruce Budworms	1/2 - 1
	Saddle Prominent Caterpillar	1/2 - 1
	Douglas Fir Tussock Moth	1/2 - 1
	Western Tussock Moth	1/2 - 1
	Fruittree Leafroller	1/2 - 1
	Blackheaded Budworm	1/2 - 1
	Mimosa Webworm	1/2 - 1
	Jack Pine Budworm	1/2 - 1
	Saddleback Caterpillar	1/2 - 1
(Ground Application Only)	Greenstriped Mapleworm	1/2 - 1

<sup>&</sup>lt;sup>6</sup> Forest, Shade, Sugar Maple Trees and Ornamentals.

### STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and

Pesticide Storage: Reclose containers of unused XenTari Biological Insecticide Dry Flowable (hereafter referred to as XenTari). Store in a dry place inaccessible to children and out of sunlight.

Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

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, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

### NOTICE TO BUYER

Greenstriped Mapleworm Hemlock Looper

> To the extent consistent with applicable law, seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning the use of this product other than as indicated on the label. User assumes all risks of use, storage or handling not in strict accordance with accompanying directions.

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XenTari is a registered trademark of Valent BioSciences LLC.



<sup>&</sup>lt;sup>7</sup> Rate for hydraulic sprayer. For mist blowers, mix the applicable amount of XenTari (pounds) in 10 gallons of water.

Note: Inclusion of a suitable spreader-sticker approved for forest insect control is recommended to improve coverage and/or rain fastness and/or to resist wash-off.