

# Nematicide 100

## **BIOLOGICAL NEMATICIDE**

Active Ingredient: Heat-killed Burkholderia spp. strain A396 cells and spent fermentation media	
Total:	,
*Contains not less than 1,500 Beet Armyworm Killing Units (BAWKU)/mg of active ingredient.  Note: The percent active ingredient does not indicate product performance and potency measurements are no	+
federally standardized.	

# KEEP OUT OF REACH OF CHILDREN CAUTION

# FIRST AID If in eyes • Hold eye open and rinse slowly and gently with water for 15–20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice. 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 1-800-222-1222 for emergency medical treatment information.

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**Distributed By:** 

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#### **PRECAUTIONARY STATEMENTS**

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION.** Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- long-sleeved shirt and long pants
- waterproof gloves
- shoes plus socks
- protective eyewear
- A NIOSH-approved particulate respirator with any P or R filter with NIOSH approval number prefix TC-84A or a NIOSH-approved powered air purifying respirator with a HE filter with NIOSH approval number prefix TC-21C. (Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.)

Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables are available, use detergent and hot water. Keep and wash PPE separately from other laundry.

**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 170.240(d)(4-6)], 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:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove 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**

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 washwater or rinsate. See the Directions for Use section of this label for application instructions that minimize risk to bees and other beneficial insects, *including those used in Integrated Pest Management (IPM) programs or organic agriculture.* 

#### **DIRECTIONS FOR USE**

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

- Do not apply this product by aerial application.
- In New York State, application is prohibited within 100 feet of any surface water.

#### **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 interval. 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 the restricted-entry interval (REI) of 4 hours.

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 water) is:

- Protective eyewear
- Coveralls
- Chemical resistant gloves (made from any waterproof material)
- Shoes plus socks

**EXCEPTION:** If the product is soil incorporated or soil injected, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

#### **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.

For commercial seed treatment uses: Keep unprotected persons out of treatment area until seeds have dried or been packaged.

#### PRODUCT INFORMATION

BIOST NEMATICIDE 100 is a biological nematicide containing killed cells of *Burkholderia spp.* strain A396 and spent fermentation media, for use against the pests listed in the Directions for Use section.

BIOST NEMATICIDE 100 controls nematode pests by enzymatic degradation of exoskeletal structures and interference with the molting process leading to mortality through contact and/or ingestion. BIOST NEMATICIDE 100 controls or suppresses many pests infesting labeled crops and plants.

#### **USE INSTRUCTIONS**

BIOST NEMATICIDE 100 is an nematicide for use against listed pests. Close scouting and early attention to infestations is highly recommended. Proper timing of application targeting newly hatched larvae, nymphs or immature pests is important for optimal results.

#### Bees and beneficial insects:

- To minimize potential exposure to bees and other pollinating insects, do not apply while bees are foraging.
- Do not allow product to drift to blooming crops or weeds if bees are foraging.
- Minimize spray drift away from the target area to reduce effects to other non-target insects.

#### SEED TREATMENT APPLICATION

#### Seed (seed pieces) treatment for Potatoes:

For early-season protection from listed pests, apply 1-16 fluid ounces of BIOST NEMATICIDE 100 per 100 pounds of seed pieces.

#### Seed treatment for all other listed crops:

For early-season protection from listed pests, apply 1-8 fluid ounces of BIOST NEMATICIDE 100 per 100 pounds of seed.

BIOST NEMATICIDE 100 can be applied as a seed dressing in commercial seed treatments for early season protection of listed pest damage. Apply BIOST NEMATICIDE 100 as a water-based slurry with other registered seed treatment insecticides, nematicides and fungicides through standard slurry- or mist-type commercial seed treatment equipment.

**Mixing instructions:** Prepare no more mixture than is required for the immediate operation. Agitate the solution continuously during mixing and application. Use mechanical mixing for proper mixing of BIOST NEMATICIDE 100 mixtures. For seed treatment, apply 1-8 fluid ounces of BIOST NEMATICIDE 100 per 100 pounds of seed, or 16 fluid ounces of BIOST NEMATICIDE 100 per 100 pounds of potato seed pieces.

**BIOST NEMATICIDE 100 alone:** Add ½ of the required amount of water to the mix tank. With the agitator running, add the BIOST NEMATICIDE 100 to the mix tank. Continue agitation while adding the remainder of the water. Begin application of the solution after the BIOST NEMATICIDE 100 has completely dispersed into the mix water. Maintain agitation until all the mixture has been applied.

**BIOST NEMATICIDE 100 + tank-mixtures:** Add ½ of the required amount of water to the mix tank. Start the agitation before adding any tank mix partners. In general, tank-mix partners should be added in this order: wettable powders, dry flowable formulations, liquid flowable formulations, and emulsifiable formulations. Always allow each tank-mix partner to become completely dispersed before adding the next component. Maintain continuous agitation until all components have been dispersed and throughout the application process.

**Note:** When using BIOST NEMATICIDE 100 in tank-mixtures, all products in water soluble packaging should be added to the tank before any other tank-mix partner, including BIOST NEMATICIDE 100. Allow the water-soluble packaging to completely dissolve and the product(s) to completely disperse before adding any other tank-mix partner to the tank.

If using BIOST NEMATICIDE 100 in a tank mixture with other seed treatment products, observe all directions for use, crops/sites, use rates, dilution ratios, precautions, and limitations that appear on the tank-mix partner label. No label dosage may be exceeded and the most restrictive label precautions and limitations must be followed. This product must not be mixed with any product that prohibits such mixing.

For Pre-plant Seed Treatment: Do not use treated seed for food or feed purposes or process for oil.

**For Commercial Seed Treatment:** This product does not contain dye. All seed treated commercially with this product must be colored with an EPA-approved dye or colorant of a suitable color to prevent accidental use as food for humans or feed for animals. The Federal Seed Act requires that bags containing seed treated with this product shall be labeled with the following information: "This seed has been treated with heat-killed *Burkholderia* spp. Strain A396. Do not use for food, feed or oil purposes."

#### FOR USE ON THE FOLLOWING CROPS FOR CONTROL OR SUPPRESSION OF NEMATODES

Nematodes: Early season protection against nematodes, including the following:

- awl (Dolichodorus spp.) nematodes\*
- dagger (Xiphinema spp.) nematodes\*
- pin (Paratylenchus spp) nematodes\*
- (Columbia) root-knot (Melodigyne spp.) nematodes
- (Columbia) lance (Hoplolaimus galeatus, Hoplolaimus columbus) nematodes\*
- lesion (Pratylenchus spp.) nematodes
- sting (Belonolaimus spp.) nematodes
- stunt (*Tylenchorhynchus* spp.) nematodes
- ring (Bursaphelenchus spp.) nematodes
- soybean cyst (Heterodera glycines) nematodes\*
- stubby-root (Paratrichodorus spp.) nematodes\*
- reniform (Rotylenchulus spp.) nematodes
- \*=Not labeled for use in California

### SEED TREATMENT USE OF BIOST Nematicide 100 WILL ALSO AID IN THE EARLY SEASON PROTECTION AGAINST THE FOLLOWING SOIL BORNE INSECTS:

- Aphids (suppression)
- Cutworms (suppression)
- root and seed maggots
- · Mexican, southern, western, and northern corn rootworm larvae
- · seed corn beetle
- thrips (suppression)
- white grubs
- wireworms

#### **SHAKE WELL BEFORE USE**

Pre-harvest Interval (PHI) = 0 days

#### **ROOT AND TUBER VEGETABLES (Not for Use in California)**

**Potatoes and Tuberous and Corm Vegetables** 

Artichoke, Cassava, Chayote Root, Chinese Artichoke, Garden Beet, Ginger, Jerusalem Artichoke, Potatoes, Sugar Beet, Sweet Potatoes, Turmeric, Yams

Black Salsify, Carrot, Celeriac, Chicory, Edible Burdock, Ginseng, Horseradish, Parsnip, Radish, Oriental Radish, Rutabaga, Salsify, Skirret, Spanish Salsify, Turnip, Turnip-rooted Chervil, and Turnip Rooted Parsley

#### Seed treatment for POTATO - SEED PIECES

For early-season protection from plant-parasitic nematodes and early season soil dwelling insects, apply 8-16 fluid ounces of BIOST Nematicide 100 per 100 pounds of seed.

#### Seed treatment for ROOT AND TUBER VEGETABLES - SEED

For early-season protection from plant-parasitic nematodes and early season soil dwelling insects, apply 3-8 fluid ounces of BIOST Nematicide 100 per 100 pounds of seed.

#### **BULB VEGETABLES (Not for Use in California)**

Leek, Garlic, Onion (bulb and green), and Shallot

#### Seed treatment for BULB VEGETABLES

For early-season protection from plant-parasitic nematodes and early season soil dwelling insects, apply 3-8 fluid ounces of BIOST Nematicide 100 per 100 pounds of seed.

#### BRASSICA (COLE) LEAFY VEGETABLES (Not for Use in California)

Broccoli, Broccoli Raab, Brussels Sprouts, Cabbage, Chinese Broccoli, Chinese Cabbage (Bok Choy), Chinese Cabbage (Napa), Chinese Mustard Cabbage (Gai Choy), Cauliflower, Cavalo, Collards, Kale, Kohlrabi, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens, Turnip Greens

#### Seed treatment for BRASSICA (COLE) LEAFY VEGETABLES

For early-season protection from plant-parasitic nematodes and early season soil dwelling insects, apply 3-6 fluid ounces of BIOST Nematicide 100 per 100 pounds of seed.

#### LEGUME VEGETABLES (SUCCULENT OR DRIED) (Not for Use in California)

Adzuki Bean, Black-eyed Pea, Beans, Chickpea, Cowpea, Crowder Pea, Edible-Pod Pea, English Pea, Fava Bean, Field Bean, Field Pea, Garbanzo Bean, Garden Pea, Green Pea, Kidney Bean, Lentils, Lima Bean, Lupins, Mung Bean, Navy Bean, Peas, Pigeon Pea, Pinto Bean, Runner Bean, Snap Bean, Snow Pea, Sugar Snap Pea, Tepary Bean, Wax Bean, and Yardlong Bean, Soybean

#### Seed treatment for LEGUME VEGETABLES (SUCCULENT OR DRIED) - excluding soybeans

For early-season protection from plant-parasitic nematodes and early season soil dwelling insects, apply 3-6 fluid ounces of BIOST Nematicide 100 per 100 pounds of seed.

#### Seed treatment for SOYBEANS

For early-season protection from plant-parasitic nematodes and early season soil dwelling insects, apply 3-4 fluid ounces of BIOST Nematicide 100 per 100 pounds of seed.

#### FRUITING VEGETABLES (Not for Use in California)

#### Tomato, Tomatillo, Pepper, Ground Cherry, Pepino, Okra and Eggplant

#### Seed treatment for FRUITING VEGETABLES

For early-season protection from plant-parasitic nematodes and early season soil dwelling insects, apply 3-6 fluid ounces of BIOST Nematicide 100 per 100 pounds of seed.

#### **CUCURBIT VEGETABLES (Not for Use in California)**

Cucumber, edible gourds, muskmelon (cantaloupe, muskmelon, etc.), pumpkin, watermelon, winter and summer squash, zucchini Seed treatment for CUCURBIT VEGETABLES

For early-season protection from plant-parasitic nematodes and early season soil dwelling insects, apply 3-6 fluid ounces of BIOST Nematicide 100 per 100 pounds of seed.

#### **CEREAL GRAINS (Not for Use in California)**

Barley, Buckwheat, Grain Amaranth, Milo, Oats, Pearl Millet, Proso Millet, Rye, Sorghum, Triticale, Wheat, Rice, Corn (Field Corn, Sweet Corn, Popcorn and Corn Grown for Seed)

#### Seed treatment for CEREAL GRAINS, EXCLUDING CORN

For early-season protection from plant-parasitic nematodes and early season soil dwelling insects, apply 3-6 fluid ounces of BIOST Nematicide 100 per 100 pounds of seed.

#### Seed treatment for CORN (Field Corn, Sweet Corn, Popcorn)

For early-season protection from plant-parasitic nematodes and early season soil dwelling insects, apply 6-8 fluid ounces of BIOST Nematicide 100 per 100 pounds of seed.

#### **OILSEED** (In California cotton use only)

# Canola, Castor, Cotton (seed), Flax, Jojoba, Rapeseed, Safflower, Sesame, Sunflower (including sunflower grown for seed) Seed treatment for Oilseed, excluding Cotton

For early-season protection from plant-parasitic nematodes and early season soil dwelling insects, apply 3-6 fluid ounces of BIOST Nematicide 100 per 100 pounds of seed.

#### **Seed treatment for Cotton**

For early-season protection from plant-parasitic nematodes, early season soil dwelling insects and suppression of thrips and aphids, apply 1-8 fluid ounces of BIOST Nematicide 100 per 100 pounds of seed.

#### **PEANUTS (Not for Use in California)**

#### Seed treatment for Peanuts

For early-season protection from plant-parasitic nematodes and early season soil dwelling insects, apply 3-6 fluid ounces of BIOST Nematicide 100 per 100 pounds of seed.

#### TURFGRASS (Not for Use in California)

#### Seed treatment for Turfgrass

For early-season protection from plant-parasitic nematodes and early season soil dwelling insects, apply 3-6 fluid ounces of BIOST Nematicide 100 per 100 pounds of seed.

New TURFGRASS, Including Bluegrass, Bentgrass, Bermudagrass, Dichondra, Fescue, Orchardgrass, Ryegrass, St. Augustine, Zoysia Mixtures and other grasses

#### STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a cool, dry place. Do not freeze.

**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

For plastic containers less than or equal to 5 gallons: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

For plastic containers greater than 5 gallons: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

(continued)

#### STORAGE AND DISPOSAL (cont.)

For plastic, refillable containers: Refillable container. Refill this container with BIOST NEMATICIDE 100 only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat rinsing procedure two more times.



Albaugh, LLC is a member of the Ag Container Recycling Council. Visit <a href="http://www.acrecycle.org/contact">http://www.acrecycle.org/contact</a> for information on how to arrange pick-up of this empty pesticide container.

#### CONDITIONS OF SALE AND LIMITED WARRANTY STATEMENT

Treatment of highly mechanically damaged seed, or seed of known low vigor and poor quality, may result in reduced germination and/or reduction of seed and seedling vigor. Treat and conduct germination tests on a small portion of seed before committing the total seed lot to a selected chemical treatment. Due to seed quality conditions beyond the control of Albaugh, LLC, no claims are made to guarantee germination of carry-over seed.

As its sole express warranty, Albaugh, LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for purposes stated on the label only when used in accordance with directions and instructions specified on the label, subject to the inherent risks set forth above. ONLY AS PERMITTED BY APPLICABLE LAW, IN THE EVENT OF A BREACH OF THIS LIMITED WARRANTY, Albaugh, LLC SHALL NOT BE LIABLE FOR CONSEQUENTIAL DAMAGES. SUBJECT TO APPLICABLE LAW, Albaugh, LLC NEITHER MAKES NOR AUTHORIZES ANY OF ITS AGENTS OR REPRESENTATIVES TO MAKE ANY WARRANTY OF FITNESS OR MERCHANTABILITY, GUARANTY OR REPRESENTATION, EXPRESS OR IMPLIED, CONCERNING THIS MATERIAL. Buyer assumes the responsibility to handle, use, and store this product in accordance with safety instructions and use directions contained on the label.

Buyer/User purchases this product subject to the foregoing Conditions of Sale and Limited Warranty which, subject to applicable law, may be varied only by a written agreement signed by a duly authorized representative of Albaugh, LLC. If these terms are not acceptable, return all products to the place of purchase, unopened for a full refund.)