GRANDEVO® ST

Active Ingredient: *Chromobacterium subtsugae* strain PRAA4-1 and spent fermentation media* ................................................................. 30.0%

Other Ingredients: ................................................................................................................. 70.0%

Total: ..................................................................................................................................... 100.0%

*Contains not less than 1000 Cabbage Looper Killing Units (CLKU)/mg of active ingredient. Note: 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

- 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.

IF INHALED

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
- Call a poison control center or doctor for further treatment advice.

IF SWALLOWED

- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by the poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

IF ON SKIN OR CLOTHING

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 – 20 minutes.
- Call a poison control center or doctor for treatment advice.

HOTLINE 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.

Can be used in organic production

EPA Reg. No.: 84059-17
EPA Est. No: 84059-MI-001
EPA Est. No: 39578-TX-001

Manufactured by: Marrone Bio Innovations, Inc.
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Davis, CA 95618 USA
1-877-664-4476;
info@marronebio.com

Net Weight: 5 lb, 30 lb, 1,000 lb

Version: GVO_ST_042018_052218_V1

Lot No: Printed on Container PN61630

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PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Causes moderate eye irritation. Harmful if inhaled, swallowed or absorbed through the skin. Avoid contact with skin, eyes or clothing. Avoid breathing dust or spray mist. 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.

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 N, R or P filter with NIOSH approval number prefix TC-84A; or a NIOSH-approved powered air purifying respirator with an 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, 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
This product is toxic to aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

This product is toxic to certain nontarget terrestrial arthropods. Minimize spray drift away from target area to reduce effects to nontarget insects.

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.

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. 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.

**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.

**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.

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:

- Coveralls
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

**NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of the 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 treatment area until seeds have dried or been packaged.

**PRODUCT INFORMATION**

GRANDEVO® ST is a biological insecticide/miticide/nematicide containing fermentation solids of *Chromobacterium subtsugae* strain PRAA4-1<sup>T</sup> for use on edible crops against the pests listed in the Directions for Use section. GRANDEVO® ST must be mixed with water and applied by seed treatment.

**USE INSTRUCTIONS**

GRANDEVO® ST is a biological insecticide and nematicide for use against listed insects and nematodes.
SEED TREATMENT USE DIRECTIONS

GRANDEVO® ST can be applied as a seed dressing at plant or in commercial seed treatments for suppression of insect damage to corn, cotton and legumes at rates specified in the DIRECTIONS FOR USE section. GRANDEVO® ST may be applied as a water-based slurry with other registered seed treatment insecticides 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. Mechanical mixing is recommended for proper mixing of GRANDEVO® ST mixtures.

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

GRANDEVO® ST + 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 GRANDEVO® ST in tank mixtures, all products in water-soluble packaging should be added to the tank before any other tank mix partner, including GRANDEVO® ST. 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 GRANDEVO® ST 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. Treat only those seeds needed for immediate use, minimizing the interval between treatment and planting. Do not store excess treated seeds beyond planting time.

For Commercial Seed Treatment: This product does not contain dye and is not covered by an appropriate tolerance, tolerance exemption, or other clearance under the Federal Food, Drug and Cosmetic Act. To comply with 40 CFR 153.155, therefore, all seeds 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 man 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 Chromobacterium subtsugae strain PRAA4-1\textsuperscript{T}. Do not use for food, feed or oil purposes.”
FOR USE ON THE FOLLOWING CROPS FOR CONTROL OF SPECIFIED INSECTS AND NEMATODES:

Cereal Grains

Amaranth Grain (Quinoa), Barley, Buckwheat, Oats, Pearl Millet, Proso Millet, Rye, Sorghum (Milo), Triticale, and Wheat

Seed Treatment for Cereal Grains
For suppression of soil-dwelling pests, including root and seed maggots, and wireworms, apply 4-16 ounces of GRANDEVO® ST per 100 pounds of seed in accordance with the instructions presented in the SEED TREATMENT USE DIRECTIONS.

Corn (Field Corn, Sweet Corn, Popcorn and Corn Grown for Seed)

Seed Treatment for Corn
For suppression of soil-dwelling pests, including root and seed maggots, corn rootworm larvae, and wireworms, apply 8-16 ounces of GRANDEVO® ST per 100 pounds of seed in accordance with the instructions presented in the SEED TREATMENT USE DIRECTIONS.

For suppression of plant-parasitic nematodes, apply 8-16 ounces of GRANDEVO® ST per 100 pounds of seed in accordance with the instructions presented in the SEED TREATMENT USE DIRECTIONS.

Cotton

Seed Treatment for Cotton
For suppression of soil-dwelling pests, including root and seed maggots and wireworms, apply 4-8 ounces of GRANDEVO® ST per 100 pounds of seed in accordance with the instructions presented in the SEED TREATMENT USE DIRECTIONS.

For suppression of plant-parasitic nematodes, apply 4-8 ounces of GRANDEVO® ST per 100 pounds of seed in accordance with the instructions presented in the SEED TREATMENT USE DIRECTIONS.

Legume Vegetables (Succulent or Dried)


Seed Treatment for Legumes
For suppression of soil-dwelling pests, including root and seed maggots, and wireworms, apply 4-8 ounces of GRANDEVO® ST per 100 pounds of seed in accordance with the instructions presented in the SEED TREATMENT USE DIRECTIONS.

For suppression of plant-parasitic nematodes, apply 4-8 ounces of GRANDEVO® ST per 100 pounds of seed in accordance with the instructions presented in the SEED TREATMENT USE DIRECTIONS.

**STORAGE AND DISPOSAL**

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

**Pesticide Storage:** Store in original container in a cool, dry place.

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

**WARRANTY**

To the extent consistent with applicable law, the seller makes no warranty, expressed or implied, of merchantability, fitness or otherwise concerning use of this product. To the extent consistent with applicable law, the user assumes all risks of use, storage or handling that are not in accordance with the accompanying directions.

Label date: May 2018

Made in the U.S.A.