

Brandt GlucoPro™

Plant Growth Regulator

4 Hour REI 0 PHI

For agricultural use on listed crop use sites.

ACTIVE INGREDIENT:

Methyl-alpha-D-mannopyranoside (CAS# 617-04-9) . . . 12.15%

OTHER INGREDIENTS: 87.85%

TOTAL: 100.00%

Contains 1.09 lbs. of alpha methylmannoside per gallon.

EPA Reg. No. 48813-3

EPA Est. No. 48813-IL-1

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 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.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also call the National Pesticide Information Center (NPIC) at 1-800-858-7378 seven days a week, 6:30am to 4:30pm PST (NPIC Web site: www.npic.orst.edu) for medical treatment information.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION. Causes moderate eye irritation. Harmful if swallowed. 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.

Personal Protective Equipment (PPE): Applicators and other handlers must wear: Long-sleeved shirt, long pants, waterproof gloves, shoes plus socks. Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

Users should:

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

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

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. 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.

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 greenhouse, 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 the 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, 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: Long-sleeved shirt, long pants, waterproof gloves, shoes plus socks.

GENERAL INFORMATION

Read this entire label before using this product.

BRANDT GLUCOPRO is a plant growth regulator developed to unlock the flow of energy from photosynthesis to respiration in food crops. By increasing the availability of sucrose and diminishing midday wilt, the application of this product will stimulate plant growth and development, resulting in better plant establishment, improved fruit and tuber set, and increased yield.

MIXING INSTRUCTIONS

Fill mix tank with half of required water volume and begin agitation. Add products in this order, mixing thoroughly after each addition: adjuvants, other pesticides, then fertilizers. Add the specified amount of this product last. Fill tank with remainder of water and continue agitation until solution is completely mixed. Use of a 90% active, non-ionic surfactant in the spray mixture may improve coverage and product performance. Agitate the tank mixture during application and use within 24 hours after mixing. Although this product is compatible with most commonly used agricultural inputs, check chemical mixture compatibility using a jar test before mixing a whole tank. Follow the most restrictive label precautions and limitations of all products used in the tank mix.

FOLIAR APPLICATION INSTRUCTIONS

This product may be applied with all types of spray equipment commonly used for making ground and aerial applications. Proper adjustments and calibrations of spraying equipment to give good coverage is essential for good growth regulator effects.

Application volume depends on crop type and size, equipment used, and area to be covered. Dilute applications (20 gal./acre [2 qts./1,000 sq.ft.] minimum spray solution) provide for best coverage. Adjust spray volume to obtain maximum coverage without excessive runoff. A diluent volume of 25-100 gallons of water per acre [2-9 qts./1,000 sq.ft.] should be adequate. Concentrate applications will reduce coverage, thereby reducing effectiveness. If you do not have previous experience with concentrate applications of this product, test for tolerance to crop injury prior to full scale application, as proper calibration and operation of the spray unit is critical to success.

Apply in calm weather conditions, preferably in early morning or in the evening. Applications made under slow drying conditions (cool to warm temperatures, medium to high relative humidity, and no wind) will increase absorption by the plant, thus optimizing effectiveness. Do not spray just prior to rainfall. Re-apply this product if significant rain occurs within 2 hours of application.

SPRAY DRIFT MANAGEMENT

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and method of application (e.g., ground, airblast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

Droplet Size

Apply only as a medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

Wind Speed

Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors on-target deposition (approximately 3 to 10 mph) and there are no sensitive areas within 250 feet downwind.

Temperature Inversions

If applying at wind speeds less than 3 mph, the applicator must determine if a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or unstable atmospheric conditions.

Other State and Local Requirements

Applicators must follow all state and local pesticide drift requirements regarding application of pesticides. Where states have more stringent regulations, they must be observed.

Equipment

All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

Additional requirements for aerial applications:

- The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.
- Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.
- When applications are made with a crosswind, the swath must be displaced downwind. The applicator must compensate for this displacement at the up and downwind edge of the application area by adjusting the path of the aircraft upwind.

Additional requirements for ground boom applications:

- Do not apply with a nozzle height greater than 4 feet above the crop canopy.
- Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, nontarget crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals.

For orchard/vineyard airblast applications, do not direct spray above trees/vines and turn off outward pointing nozzles at row ends and outer rows. Apply only when wind speed is approximately 3-10 mph at the application site as measured by an anemometer outside of the orchard/vineyard on the upwind side.

CHEMIGATION APPLICATION INSTRUCTIONS

Apply this product through the following types of systems. Do not apply this product through any other type of irrigation system.

- Low volume (ground or underground) drip, drip tape, strip tubing, micro-jet sprinklers, mini-sprinklers;
- Sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, greenhouse overhead, fog, electrostatic, manual sprinkler, or hand move;
- Flood (basin), furrow, border, drench, sprench

Crop injury or lack of effectiveness 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 systems 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.

Fill the supply tank with the desired amount of water. Then add the amount of this product required to achieve the final solution rate recommended for the specific crop to be treated. Agitate the solution frequently during the chemigation period to assure a uniform distribution throughout the system.

Inject this product into the irrigation system after the filter(s) or shut off the automatic back flush system in order to avoid back flushing of treated water.

For best results, inject this product into the irrigation line in the last quarter of the irrigation time. Continue irrigation until all lines are flushed. Do not over irrigate after applying this product. If excessive watering occurs immediately following application, this product may move down past the desired root zone. Do not irrigate for at least 24 hours following application of this product. If applied in heavy rainfall areas, avoid application during rain or when rain is forecasted within the next 24 hours that may exceed movement of this product past targeted root zone.

Before applying this product through sprinkler irrigation equipment, the chemigation system must meet the following specifications:

1. 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 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-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
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.

Before connecting an irrigation system (including greenhouse systems) used for pesticide application to a public water system [public water system means a system for the provision to the public of piped water for 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], the chemigation system must meet requirements 2, 3 and 6 listed above and the following specifications:

8. Chemigation systems connected to public water systems must contain a functional, reduced pressure zone, backflow preventer (RPZ) or the functional equivalent 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.
9. 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.

Before applying this product through drench, flood (basin), furrow and border irrigation systems, the chemigation system must meet the following specifications:

10. Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from back flow if water flow stops.
11. Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:
 - a. 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 from back flow.
 - b. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
 - c. 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 system is either automatically or manually shut down.
 - d. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
 - e. 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.
 - f. 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.

Before applying this product through low volume (ground or underground) drip, drip tape, strip tubing, micro-jet sprinklers, mini-sprinklers irrigation systems, the chemigation system must meet the specifications listed in 11.a through 11.f above.

GROWING CROPS (OUTDOORS, IN GREENHOUSES, SHADEHOUSES AND NURSERIES)

No preharvest interval is required for this product.

Where dosage and/or interval ranges are indicated, these may be adjusted according to plant size and/or crop canopy. Contact your local Brandt representative for recommendations for your specific crop and geographic location.

Crop	Use/Benefit	Application Timing/Use Instructions
BRASSICA (COLE) LEAFY VEGETABLES: Including, but not limited to: Broccoli, Chinese Broccoli (Gai Lan), Broccoli Raab (Rapini), Brussels Sprouts, Cabbage, Chinese Cabbage (Bok Choy), Chinese Cabbage (Napa), Chinese Mustard Cabbage (Gai Choy), Cauliflower, Cavalo Broccolo, Col-lards, Kale, Kohlrabi, Mizuna, Mustard Greens, Mustard Spin-ach, Rape Greens	Increase har-vestable weight	For soil applications at or im-mediately prior to transplant-ing, use 10-20 fl.oz. per acre. AND/OR Apply 6-10 fl.oz. per acre foliarly for head-forming varieties , first application at head initiation, then 1-2 more sprays on 2 week intervals as needed. Apply 6-10 fl.oz. per acre foliarly for leafy varieties , first application 4-6 weeks pre-harvest, then 1-2 more sprays on 2 week intervals as needed.
CUCURBIT VEGETA-BLES: Including, but not limited to: Balsam Apple, Balsam Pear (bitter melon), Cha-yote (fruit), Chinese Waxgourd (Chinese preserving melon), Chinese Cucumber, Cit-ron Melon, Cucumber, Gherkin, Edible Gourds, Melons (including hybrids, cantaloupe, casaba, crenshaw, golden pershaw melon, honeydew melons, honey balls, mango melon, muskmelon, Persian melon, pineap-ple melon, Santa Claus melon, snake melon), Pumpkin, Squash (summer and winter), Watermelon (including hybrids).	Increase fruit size For melons, elevate brix at harvest	Make foliar or soil applica-tions at 6-10 fl.oz. per acre; first application at early bloom, then 1-2 more appli-cations on 2 week intervals as needed. For melons and watermelons, apply again 2-3 weeks before harvest.
FRUITING VEGETA-BLES: Including, but not limited to: Egg-plant, Ground Cherry, Okra, Pepinos, Pepper (bell pepper, chili pep-per, cooking peppers, pimentos, sweet pep-pers), Tomatillo, Toma-toes.	Increase fruit size Increase fruit count Increase mar-ketable fruit	For soil applications at or immediately prior to trans-planting, use 10-20 fl.oz. per acre. AND/OR Make foliar applications at 6-12 fl.oz. per acre; first application at first green fruit, then 1-2 more sprays on 2 week intervals as needed.

Crop	Use/Benefit	Application Timing/Use Instructions
LEAFY VEGETABLES: Including, but not limited to: Amaranth (leafy amaranth, Chinese spinach, tam-pala), Arugula, Cardoon, Celtuce, Chervil, Cilantro, Corn Salad, Chrysanthemum (edible-leaved), Chrysanthemum (garland), Cress (garden, water), Upland Cress (yellow rocket, winter cress), Dandelion, Dock (sor-rel), Endive (escarole), Fennel (Florence), Lettuce (head and leafy), Orach, Parsley, Purslane (garden and winter), Radicchio, Rhubarb, Spinach, Fine Spinach (Malabar, Ceylon), Spinach (New Zealand), Swiss Chard.	Increase harvestable weight	For leafy varieties , apply 6-10 fl.oz. per acre foliarly; first application at 4 weeks pre-harvest and one additional application 1-2 weeks pre-harvest. For head-forming varieties , apply 6-10 fl.oz. per acre foliarly; first application at head initiation and one additional application 1-2 weeks pre-harvest.
Blueberry	Increase yield	Apply 6-10 fl.oz. per acre foliarly; 3-4 applications during green fruit development starting at early fruit set and continuing at 2 week intervals.
Cherry	Larger fruit size Improve color	Apply 10-20 fl.oz. per acre foliarly; first application at post-bloom, second two weeks later, and third at straw color.
Grape	Increase bunch weight Elevate brix at harvest	Apply 10-20 fl.oz. per acre foliarly; 1-3 applications on 2 week intervals during green fruit development and 1-3 sprays during vera-sion on 2 week intervals.
Sweet Potato	Increase yield	For soil applications, apply 8-16 fl.oz. per acre in trans-plant water. Follow with an additional foliar application at 8 fl.oz. per acre 4 weeks pre-harvest during root siz-ing.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a cool, dry place. Keep container tightly closed when not in use.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING (for containers with capacities equal to or less 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 and drain for 10 seconds after the flow begins to drip. Fill the container ½ 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. Offer for recycling if available, or puncture and dispose of in a sanitary landfill, by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

CONTAINER HANDLING (for containers with capacities equal 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 ¼ 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 2 more times. Offer for recycling or reconditioning if available, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

LIMITED WARRANTY

Brandt Consolidated, Inc. ("BRANDT") warrants that the Product conforms to the chemical description given on this label and is reasonably fit for the purpose stated on this label when used in accordance with the Direction for Use under normal conditions of use. BRANDT NEITHER MAKES, NOR AUTHORIZES ANY AGENT, REPRESENTATIVE OR THIRD PARTY TO MAKE, ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, AS TO THE PRODUCT'S CONDITION, QUALITY, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Buyer and User accept all risks arising from any use of the Product, including without limitation, uses contrary to label instructions, or under conditions not reasonably foreseeable to (or beyond the control of) BRANDT and Seller. The Buyer's or User's exclusive remedy for any injury, loss or damage resulting from the handling or use of this Product shall be limited to one of the following, at the election of BRANDT or the Seller: (i) direct damages not exceeding the purchase price of the product; or (ii) replacement of the Product. TO THE EXTENT ALLOWED BY LAW, BRANDT AND THE SELLER SHALL NOT BE LIABLE TO THE BUYER OR USER OF THIS PRODUCT FOR ANY CONSEQUENTIAL, SPECIAL, INCIDENTAL OR INDIRECT DAMAGES OR EXPENSE OF ANY NATURE, INCLUDING BUT NOT LIMITED TO THE LOSS OF PROFITS OR INCOME OR DAMAGES IN THE NATURE OF A PENALTY.

NET CONTENTS: _____

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