Si Usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

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

FIRST AID

- If in eyes: Hold eye open and rinse slowly and gently with water for 15 – 20 minutes.
- If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 – 20 minutes.
- If swallowed: Immediately call a poison control center or doctor.
- If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.
- If swallowed: Do not induce vomiting unless told to do so by the poison control center or doctor.

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.

NOTE TO PHYSICIAN

Contains petroleum distillate. Vomiting may cause aspiration pneumonia.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:
- Long-sleeved shirt and long pants
- Protective eyewear (goggles, face shield, or shielded safety glasses)
- Chemical-resistant gloves such as nitrile rubber or butyl rubber
- Shoes plus socks

Mixers/loaders and applicators must wear a dust/mist filtering respirator meeting NIOSH standards of at least R-95 or P-95. Repeated exposure 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.

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 potentially pathogenic to honey bees. Avoid applying to areas where honey bees are actively foraging or around bee hives. This product may be toxic to fish. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

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 by cleaning of equipment or disposal of equipment wash waters or rinsate. Do not discharge into lakes, streams, ponds, or public waterways.

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.
For use in controlling Whitefly, Aphids, Thrips, Psyllids, Mealybugs, Leafhoppers, Weevils, Plant Bugs, Borers and Leaf-feeding Insects in Field, Agronomic, Vegetable and Orchard Crops; also in Forestry; Grasshoppers, Mormon Crickets, Locusts and Beetles in Rangeland, Improved Pastures and Agronomic Crops; Whitefly, Aphids, Thrips, Psyllids and Mealybugs in Ornaments and Vegetables, Indoor/Outdoor Nursery, Greenhouse, Shadehouse, Commercial Landscape, Interiorscape and Turf. May be applied aerially. Suitable for use with ultra low-volume application equipment.

**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 apply only 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 unless wearing the appropriate personal protective equipment.

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
- Chemical-resistant gloves such as nitrile rubber or butyl rubber
- Shoes plus socks
- Protective eyewear (goggles, face shield, or shielded safety glasses)

**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.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours unless wearing the appropriate personal protective equipment.

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

**GENERAL INFORMATION**

BotaniGard ES contains live spores of the naturally occurring fungus, *Beauveria bassiana* Strain GHA. Spores are alive and may be harmed by storage at high temperatures or contact with water for more than 24 hours. See STORAGE AND DISPOSAL instructions on the container label.

**MODE OF ACTION AND APPLICATION TIMING**

Begin treatment of crops at the first appearance of the insect pest. Typically, it takes 7-10 days after the first spray to see control. Application rates, frequency, spray coverage and insect numbers impact the speed at which acceptable control is achieved. BotaniGard ES is most effective when used early, before high insect populations develop. Reapply as necessary under a pest management program that includes close scouting. Intense pest outbreaks may require combination of BotaniGard ES with a compatible insecticide.

Contact Laverlam International Corporation or your distributor for specific information on compatible insecticides.

**PRE-HARVEST INTERVAL**

Pre-harvest interval for BotaniGard ES is zero (0) days. BotaniGard ES can be applied up to the day of harvest.

**GENERAL INFORMATION (FOR CORN ONLY)**

BotaniGard ES contains live spores of fungus, *Beauveria bassiana* Strain GHA. This fungus is a naturally occurring disease organism of corn borers. Spores are alive and may be harmed by storage at high temperature or by contact with water for more than 24 hours. See STORAGE AND DISPOSAL instructions on the container label.

**MODE OF ACTION**

BotaniGard ES acts by contact. Spores attach to the insect, germinate and penetrate through the insect cuticle. The fungus then grows rapidly within the insect, causing mortality.

*Beauveria bassiana* occurs naturally in close association with corn plants where it infects corn borers. When BotaniGard ES is applied to corn early in the season, the fungus persists in association with corn plants providing season long reduction in corn borer damage.

**INSECTS FOR WHICH BOTANIGARD ES MAY BE USED**

**ORTHOPTERA**
- Grasshoppers, Locusts, Mole Crickets, Mormon Crickets

**WHITEFLY**
- Banded-winged Whitefly, Cassava Whitefly, Citrus Blackfly, Citrus Whitefly, Giant Whitefly, Greenhouse Whitefly, Silverleaf Whitefly, Sweet Potato Whitefly (aka Tobaccon Whitefly)

**APHIDS**
- Bean Aphid, Cabbage Aphid, Cowpea Aphid, Green Peach Aphid, Greenbug, Hop Aphid, Melon/Cotton Aphid, Pea Aphid, Potato Aphid, Rose Aphid, Russian Wheat Aphid, Spotted Alfalfa Aphid

**THRIPS**
- Greenhouse Thrips, Cuban Laurel Thrips, Pear Thrips, Potato/Onion Thrips, *Thrips palmi*, Western Flower Thrips

**PSYLLIDS**
- Pear Psylla, Tomato/Potato Psylla

**MEALYBUGS**
- Citrus Coccoi, Citrus Mealybug, Buffalo Grass Mealybug, Grape Mealybug, Longtailed Mealybug

**LEAFHOPPERS AND PLANTHOPPERS**
- Grape Leaffopper, Leaffoppers, Planthoppers, Potato Leaffopper, Rice Delphacid, Variegated Grape Leaffopper, Virginia Creeper Leaffopper

**STEM-BORING LEPIDOPTERA**
- European Corn Borer, Lesser Cornstalk Borer, Rice Stem Borer, Southwestern Corn Borer, Sugar Cane Borer

**FOLIAGE-FEEDING LEPIDOPTERA**
- Diamondback Moth, Cabbage Looper, Fall Army Worm, Imported Cabbage Worm

**LEAF-FEEDING BEETLES**
- Bean Leaf Beetle, Cereal Leaf Beetle, Colorado Potato Beetle, Crootworm, Cucumber Beetles, Elm Leaf Beetle, Flea Beetles

**SCARAB BEETLES**
- Atenius, Green June Beetle, White Grubs

**PLANT BUGS (HETEROPTERA)**
- Chinch Bugs, Fleahoppers, Lace Bugs, Lygus Bug, Seed Bugs, Stink Bugs, Tarnished Plant Bug

**WEEVILS**
- Alfalfa Weevil, Apple Curculio, Billbugs, Black Vine Weevil, Citrus Root Weevil, Coffee Berry Borer, Cotton Boll Weevil, Fuller Rose Weevil, Palm Weevil, Pecan Weevil, Pepper Weevil, Plantain Weevil, Plum Curculio, Root Weevil, Rose Curculio, Strawberry Root Weevil, Sweet Potato Weevil, Vegetable Weevil

**ACARI**
- Two-spotted Spider Mite

**CROPS ON WHICH BOTANIGARD ES MAY BE USED**

**VEGETABLES**
- acerola, aracacha, arrowroot, artichoke, arugula, asparagus, atermoya, balsam pear, bamboo shoots, beans (all varieties), beet, blackeyed peas, bokchoy, broccoli, broccoli raab, Brussels sprouts, burdock, cabbage, cantaloupe, carambols, carrots, casaba melons, cassava, catjung, cauliflower, celeria, celery, celtuce, chayote, chervil, chicory, Chinese broccoli, Chinese cabbage, Chinese gai lon, Chinese longbeans, Chinese mustard, Chinese spinach, Chinese waxgourd, chrysanthemum (edible), chufa, cilantro, citron melon, collards, corn salad, crenshaw melon, cress, cucumber, dandelion, dasheen, daikon, dock, edamame, eggplant, endive, escarole, fennel, garlic, gherkin, ginger, golden pershaw melon, gourds (edible), groundcherry, guar, honey balls, honeydew melon, horseradish, kale, kohlrabi, leek, lentilis, leren, lettuce, mango melon, muskmelon hybrids/varieties, mustard greens, New Zealand spinach, okra, onion, orach, parsley, parsnip, peas (all varieties), pepinos, pepper (all varieties), Persian

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melon, pimento (all varieties), pineapple melon, potato, pumpkin, purslane, radish, radicchio, rambutan, rape greens, rapini, rhubarb, rutabaga, salisify, shallot, snake melon, soybeans, spinach, squash (summer/winter), sugar beet, sweet potato, Swiss chard, tanier, tatarian, tumeric, turnip, watermelon, yam, zucchini

FRUITS AND BERRIES apple, apricot, avocado, bananas, blackberry, blueberry, boysenberry, calamondin, carob, cherimoya, cherry (sweet/sour), chironia, citrus citrus, citrus hybrids, coffee, cranberry, cranberry, currant, dates, dewberry, durian, elderberry, feijoa, figs, gooseberry, grape (table, raisin, wine), grapefruit, guava, huckleberry, kiwi, kumquat, lemon, limes, loganberry, loquat, lychee, mandarin, mango, marionberry, nectarine, ollalie berry, olives (all varieties), orange, oriental pear, papaya, passion fruit, peach, pear, persimmon, pineapple, plum, pomegranate, prune, pumelo, quinina, quince, raspberry, sour cherry, strawberry, sweet cherry, tangelo, tangerine, youngberry

TREE NUTS almonds, beechnut, Brazil nut, butternut, cashew, chestnut, chinquapin, filbert, hickory nut, macadamia nut, pecan, pistachios, walnut

AGRONOMIC CROPS alfalfa, barley, buckwheat, clover, coffee, corn (field, sweet, pop, silage, seed, corn grown for meal/mill), cotton, flax, hay, hops, jojoba, millet, oats, oil seed rape (canola), peanuts, potato, rice, rye, safflower, sorghum, soybeans, sugar beets, sugarcane, sunflower, sweet corn, sweet potato, tea, teosinte, triticate, wheat, wild rice

FORESTRY, INCLUDING Trees and conifers, tree and forest seedlings and woody ornamentals

HERBS AND SPICES allspice, anise, balm, basil, borage, burnet, chamomile, caper buds, caraway, cardamom, catnip, celery seed, chervil, chicory, chives, cilantro/coriander, cinnamon, clary, coriander, costmary, cumin, curry leaf, dill, fennel, fenugreek, ginseng, horehound, hyssop, mace, marjoram, mint, mustard, nasturtium, nutmeg, oregano, paprika, pennyroyal, pepper (black/white), peppermint, rosemary, rue, sage, saffron, savory, sesam, spearmint, sweet bay, tea, thyme, turmeric, valerian, vanilla, wort, winter savory, yarrow


TURF, INCLUDING LAWN AND SOD TURF GRASSES Bermuda grass, blue grass, fescue, St. Augustine grass, zoysia grass

MIXING AND APPLICATION SHAKE WELL BEFORE USING. Apply BotaniGard ES using hand-held, ground and/or aerial spray equipment, low-volume application equipment and chemigation (follow specific directions for chemigation in this booklet). BotaniGard ES contains emulsifiers and mixes readily in water. Mix well by external mixing, in-tank mixing, or pump circulation to form an emulsion. To mix, fill spray tank with half the desired amount of water and start agitation. Shake BotaniGard ES to suspend spores then with agitator running, slowly add desired quantity of BotaniGard ES to spray tank. Add remainder of desired amount of water. Continue agitation throughout loading and spraying. Triple rinse empty BotaniGard ES container with water and add rinse water to spray tank. For best results, continue agitation during spraying. Do not mix more BotaniGard ES than needed for that day. Do not mix BotaniGard ES the day before application. Spores will die if left overnight or longer in the spray tank.

Contact your dealer or Laverlam International Corporation for instructions about specific crops, insects and spray equipment.

DOSAGE RATE FOR GREENHOUSE, SHADEHOUSE, INDOOR/OUTDOOR NURSERY, LANDSCAPE AND INTERIORSCAPE

High volume sprays: Apply at a rate of up to 3 quarts of BotaniGard ES per 100 gallons of spray volume in high volume sprays (2-6 tsp. or 0.33 - 1.00 fluid ounces of BotaniGard ES per gallon of spray volume). Mix well by external mixing, in-tank mixing, or pump circulation to form emulsion. SPRAY TO WET, BUT AVOID RUNOFF.

Typical Application Rates/100 Gallons of Spray Volume

Whitely, Meatly bugs, Aphids. ½ - 2 quarts per 100 gallons spray volume

Typical Application Rates/100 Gallons of Spray Volume

DO NOT APPLY THROUGH A THERMAL PULSE FOGGER.

Contact your dealer or Laverlam International Corporation for specific instructions.

Cuttings Dip Applications of BotaniGard ES can be used as pre-plant dips for cuttings as noted below. To prepare dip solution, thoroughly mix ½ - 1 fl. oz. BotaniGard ES per gallon of water (5 - 10 fl. oz. per 10 gallons water). Prepare only as much dip solution as can be used in one day. Do not use dip solution for more than one day. Spores in water for more than 24 hours will die. Dip a small number of plants in dip solution and observe for plant damage before using dip treatment. Do not use dips if there is any visible damage to test plants.

Unrooted Cuttings

Dip the unrooted cuttings in the BotaniGard ES solution just long enough to wet all surfaces, then removing to a flat area and allow cuttings to dry. For water-sensitive varieties, cover to protect until dry. Then proceed with normal planting and misting.

Rooted Cuttings

Holding by the roots, briefly dip in the BotaniGard ES solution just long enough to wet all surfaces, including leaves and stems. Once removed from the dip solution, cuttings can be potted, but allow plants to dry before watering.

DOSAGE RATE FOR FIELD, AGRONOMIC AND VEGETABLE CROPS (EXCEPT CORN); RANGELAND, IMPROVED PASTURES AND FORESTRY

Ground Application Apply ¼ to 1 quart BotaniGard ES/acre. Apply in sufficient water to thoroughly cover foliage infested with insects, typically 5 to 100 gallons of water per acre. Final spray volume may be up to 400 gallons per acre. Water volume depends on spray equipment, crop canopy and target pest. SPRAY TO WET, BUT AVOID RUNOFF.

Apply BotaniGard ES up to a maximum of 3 quarts per acre for extreme insect pressure or dense foliage.

Aerial Application Apply ¼ to 1 quart BotaniGard ES/acre. Apply in sufficient water to thoroughly cover foliage infested with insects. For best results, apply in 5-10 gallons water per acre. Do not apply in less than 2 gallons water per acre.
Leaf-Feeding Lepidoptera
For use against diamondback moth, imported cabbage worm and cabbage looper; BotaniGard ES can be used alone or in a tank mix with *Bacillus thuringiensis* (vars. *kurstaki*, *aizawai*) to control these insects in accordance with the more restrictive of label limitations and precautions. Do not exceed label dosage rates. This product cannot be mixed with any product containing a label prohibition against such mixing. The tank mix provides control of later instars (3rd to 4th) and aids in the management of resistant populations. For additional information, contact Laverlam International Corporation.

Typical Application Rates/Acre

<table>
<thead>
<tr>
<th>Pest</th>
<th>Rate</th>
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</thead>
<tbody>
<tr>
<td>Diamondback moth</td>
<td>½ to 1 quart of BotaniGard ES/acre</td>
</tr>
<tr>
<td>Imported cabbage worm</td>
<td>½ to 1 quart of BotaniGard ES/acre</td>
</tr>
<tr>
<td>Cabbage looper</td>
<td>1 quart of BotaniGard ES/acre</td>
</tr>
</tbody>
</table>

Leaf-Feeding Beetles
For use against Colorado potato beetle; BotaniGard ES can be used alone or in a tank mix with *Bacillus thuringiensis* (vars. *tenebrionis*) to control Colorado potato beetle in accordance with the more restrictive of label limitations and precautions. Do not exceed label dosage rates. This product cannot be mixed with any product containing a label prohibition against such mixing. The tank mix provides control and aids in the management of resistant populations. For additional information, contact Laverlam International Corporation.

Typical Application Rates/Acre

<table>
<thead>
<tr>
<th>Pest</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado potato beetle</td>
<td>½ to 1 quart of BotaniGard ES/acre</td>
</tr>
</tbody>
</table>

Dosage Rates for Corn

Apply 4 fluid ounces of BotaniGard ES per acre (2 ½ gallons of BotaniGard ES per 80 acres).

Application Timing for Corn

Apply to corn when plants are 12-16 inches high (V6-V8 stage). A single application is sufficient to establish *Beauveria bassiana* association with corn plants. A second application prior to second generation corn borer flight may further reduce damage from corn borers.

Ground Application for Corn

Apply with sufficient water to provide thorough coverage. Direct spray over row to obtain optimal coverage in whorl and leaf axils. The amount of water will depend on spray equipment, crop size and local conditions. Generally, a minimum of 10 gallons spray volume per acre is necessary to obtain adequate coverage.

Aerial Application for Corn

Apply with sufficient water to provide thorough coverage. Use at least 2 gallons spray volume per acre; 5-10 gallons/acre will generally improve coverage.

Chemigation

Apply BotaniGard ES only through the following types of chemigation systems: overhead sprinkler systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move; or drip (trickle and microjet) systems. Do not apply this product through any other type of irrigation system.

Compatibility With Fungicides

BotaniGard ES is compatible in tank mix with some fungicides. Contact Laverlam International or your dealer for specific instructions on using BotaniGard ES with fungicides.

Mixing and Application for Corn – Ground and Aerial Application

Pour all ingredients in a spray tank, mix thoroughly and start agitation. Do not mix the day before application. Spores will die if left overnight or longer in the spray tank.

Contact your dealer or Laverlam International Corporation for specific instructions.

Compatibility With Chemical Insecticides

BotaniGard ES is compatible with most chemical insecticides. However, some insecticide formulations can kill the fungal spores, the active ingredient in BotaniGard ES. If you are going to use BotaniGard ES in combination with other pesticides, contact your dealer or Laverlam International Corporation for specific information. In all cases, pesticides must be used in accordance with their labels.

Adjuvants

BotaniGard ES is designed for application without additional wetting agents and spreaders. If adjuvants are needed for some other reason, contact your dealer or Laverlam International Corporation for specific instructions. Some wetting agents and spreaders kill the spores, the active ingredient in BotaniGard ES, or contribute to poor mixing and spray problems.

Sprinkler Chemigation

Use ½ to 1 quart BotaniGard ES per acre for most sprinkler chemigation applications. Apply up to 3 quarts of BotaniGard ES per acre for high insect problems.
pressure or dense foliage. For corn, apply at a rate of 4 fluid ounces of BotaniGard ES per acre.

For best results, time BotaniGard ES chemigation with the end of the irrigation water application. Time injection duration to apply BotaniGard ES in the minimum irrigation volume necessary to achieve uniform coverage immediately prior to shutting off irrigation water. Excessive irrigation during and after chemigation will wash active ingredient (spores) off foliage, reducing effectiveness.

With center pivot or other continuous move equipment, apply BotaniGard ES in ¼ to ½ inches of water per acre.

With stationary sets, wheel lines, solid sets or hand move sprinklers, apply BotaniGard ES during the last 20-30 minutes of the set.

Supply tank agitation is necessary if BotaniGard ES is diluted in water before injection into irrigation system. Tank agitation is not necessary if BotaniGard ES is used without dilution provided the product is shaken well to resuspend spores before adding the tank and those contents of tank are used the same day.

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.

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 system is either automatically or manually shut down.

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.

**Drip (Trickle) and Microjet Chemigation**

Use 1½ to 3 quarts of BotaniGard ES per acre for most drip or microjet chemigation. For difficult to control pests, especially citrus root weevil (Diaprepes abbreviatus), apply BotaniGard ES at up to 8 fl. oz. of BotaniGard ES per 1,000 square feet.

Apply BotaniGard ES continuously for the duration of irrigation water application to achieve uniform distribution and penetration of active ingredient (spores) in the soil.

Supply tank agitation is necessary if BotaniGard ES is diluted in water before injection into irrigation system. Supply tank agitation is not necessary if BotaniGard ES is used without dilution provided the product is shaken well to resuspend spores before adding to the supply tank and that contents of supply tank are used the same day.

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

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 system is either automatically or manually shut down.

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.

Supply tank agitation is necessary if BotaniGard ES is diluted in water before injection into irrigation system. Spray tank agitation is not necessary if BotaniGard ES is used without dilution provided the product is resuspended before adding to the other spray tank and that content of spray tank are used the same day.

For best results in foliar applications by sprinkler, time BotaniGard ES chemigation with the end of irrigation water application. Time injection duration to apply BotaniGard ES in the minimum irrigation volume necessary to achieve uniform coverage immediately prior to shutting off irrigation water. Excessive overhead irrigation during and after chemigation will wash active ingredient (spores) off foliage, reducing effectiveness.

For best results in soil applications by drip trickle, apply BotaniGard ES continuously for the duration of irrigation water application. Apply sufficient volume of water to carry BotaniGard ES into proximity of the target pests.

**SPRAY DRIFT LABELING**

The Agency has been working with the Spray Drift Task Force (made up of U.S. pesticide registrants), EPA Regional Offices, and State Lead Agencies for pesticide regulation to develop the best spray drift management practices. The Agency is now requiring the interim measures specified below for all products that can be applied by aircraft. Actions taken to reduce spray drift will help mitigate contamination of surface water, reduce risk to estuarine species, and reduce harm to nontarget crops and plants. The interim Spray Drift Labeling Requirements for aerial application are as follows:

**Spray Drift for Aerial Application**

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.
1. The distance of the outer most nozzles on the boom must not exceed ¾ the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed. The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information.

Information on Droplet Size
The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

Controlling Droplet Size
- Volume- Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure- Do not exceed the nozzle manufacturer’s recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of nozzles- Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation- Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- Nozzle Type- Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom Length
For some use patterns, reducing the effective boom length to less than ¾ of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height
Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment
When applications are made with a cross-wind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

Wind
Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect drift.

Temperature and Humidity
When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions
Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards and rapidly dissipates indicates good vertical air mixing.