82074-1 1/27/2011 1/37

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JAN 2 7 2011

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

CERTIFIED MAIL

Ms. Lori J. Walsh
Laverlam International Corp.
117 South Parkmont
Butte, MT 59701

Subject: Fast Track Label Amendment to Add Advisory Statement
EPA Reg. Nos.: 82074-1, Mycotrol ES 82074-2, Botanigard 22 WP, and 82074-3, Mycotrol O
Decision Nos: 441138, 441137, and 441136

Dear: Ms.Walsh,

The Agency has reviewed your request to amend the subject product registrations, which included the following changes to the product label:

1. Addition of the statement "use caution when making applications to open blooms, especially on varieties known to be sensitive" under the Phytotoxicity heading.

The amendment referred to that were submitted in connection with registration under section 3(c)(7)(A) of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable provided that you:

1. Submit and/or cite all data required for registration of your product under FIFRA section 3(c)(5) when the Agency requires all registrants of similar products to submit such data.

2. Submit two (2) copies of the final printed labeling prior to releasing the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA § 6(e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions. If you have any questions, contact Susanne Cerrelli at 703-308-8077

CONCURRENCES								
SYMBOL ▶	75IIP	75IIP						
SURNAME ▶	SCerrelli	Rully						
DATE ▶	1/26/11	1/27/11						

EPA Form 1320-1A (1/90) OFFICIAL FILE COPY

2/137

or by email at cerrelli.susanne @epa.gov. A stamped copy of the label is enclosed for your records.

Sincerely,

Sheryl K. Reilly, Ph.D.
Chief
Biopesticides and Pollution Prevention Division
Microbial Pesticides Branch (7511P)

Enclosures

3137

MYCOTROL® ES

Emulsifiable Suspension Mycoinsecticide

(Alternate Brand Name: BotaniGard® ES)

MASTER LABEL

Sub-label A: MYCOTROL® ES – Primary Brand Name

Sub-label B: BOTANIGARD® ES – Alternate Brand Name

Active Ingredient: *Beauveria bassiana* Strain GHA	11.3%**
Inert Ingredients:	88.7%*
Total:	100.0%

*Contains petroleum distillates

**Based on the weight estimate of 4.78×10^{-12} grams per spore.
Mycotrol ES contains 2×10^{13} viable spores per quart.

EPA Registration No.: 82074-1
EPA Establishment No.: 65626-MT-02

LAVERLAM INTERNATIONAL CORPORATION
117 South Parkmont; PO Box 4109
Butte, MT 59702
Ph: (406)782-2386; Fax: (406)782-9912

ACCEPTED
JAN 27 2011

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No.

82074-1

4137

MYCOTROL® ES

Emulsifiable Suspension Mycoinsecticide

Sub-label A

Primary Brand Name

(Front Panel)

MYCOTROL® ES

Emulsifiable Suspension Mycoinsecticide

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 Ornamentals and Vegetables, Indoor/Outdoor Nursery, Greenhouse, Shadehouse, Commercial Landscape, Interiorscape and Turf.

Active Ingredient: *Beauveria bassiana* Strain GHA	11.3%**
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Total:	100.0%

*Contains petroleum distillates

**Based on the weight estimate of 4.78×10^{-12} grams per spore.

Mycotrol ES contains 2×10^{13} viable spores per quart.

KEEP OUT OF REACH OF CHILDREN

CAUTION

Store between 40°F and 85°F

SHAKE WELL

See additional precautionary statements and first aid statements in attached booklet.

LAVERLAM INTERNATIONAL CORPORATION

117 S. Parkmont; PO Box 4109 – Butte, MT 59702; Ph: (406)782-2386; Fax: (406)782-9912

EPA Registration Number 82074-1 EPA Establishment Number 65626-MT-02

Edition: Lot No.:

Net Contents: Expiration Date:

(Booklet)

MYCOTROL® ES

Emulsifiable Suspension Mycoinsecticide

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EPA Registration Number 82074-1 EPA Establishment Number 65626-MT-02

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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. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. • Call poison control center or doctor for treatment advice.
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.
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. • Call a poison control center or doctor for further treatment advice.
If swallowed	• Immediately call a poison control center or doctor. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give any liquid to the person. • Do not give anything by mouth to an unconscious person.
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.	
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 Ornamentals 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 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

Mycotrol 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. Mycotrol 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 Mycotrol 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 Mycotrol ES is zero (0) days. Mycotrol ES can be applied up to the day of harvest.

GENERAL INFORMATION (FOR CORN ONLY)

Mycotrol 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
Mycotrol 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 Mycotrol 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.

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

INSECTS FOR WHICH MYCOTROL 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 Tobacco 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 Cocci
Citrus Mealybug
Buffalo Grass Mealybug
Grape Mealybug

Longtailed Mealybug

LEAFHOPPERS AND PLANTHOPPERS

Grape Leafhopper
Leafhoppers
Planthoppers
Potato Leafhopper
Rice Delphacid
Variegated Grape Leafhopper
Virginia Creeper Leafhopper

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
Corn Rootworm
Cucumber Beetles
Elm Leaf Beetle
Flea Beetles

SCARAB BEETLES

Ataenius
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

Twospotted Spider Mite

CROPS ON WHICH MYCOTROL ES MAY BE USED

VEGETABLES

acerola	arracacha	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	catjang

cauliflower
celeriac
celery
celtuce
chayote
chervil
chickpeas
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
lentils
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 melon
pimento (all varieties)
pineapple melon
potato
pumpkin
purslane
radish
radicchio
rambutan
rape greens
rapini
rhubarb
rutabaga
salsify
shallot
snake melon
soybeans
spinach
squash (summer/winter)
sugar beet
sweet potato
Swiss chard
tanier
tomatillo
tomatoes
tumeric
turnip
watermelon
yam
zucchini

FRUITS AND BERRIES

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

TREE NUTS

almonds
beech nut
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
cotton	flax	seed, corn grown for
hay	hops	meal/flour)
jojoba	millet	oats
oil seed rape (canola)	peanuts	potato
rice	rye	safflower
sorghum	soybeans	sugar beets
sugarcane	sunflower	sweet corn
sweet potato	tea	teosinte
triticale	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	caperbuds	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	sesame
spearmint	sweet bay leaf	tansy
tarragon	thyme	wintergreen
woodruff	wormwood	

ORNAMENTALS, INCLUDING FLOWERS, FLOWERING AND FOLIAGE PLANTS, BEDDING PLANTS, GROUNDCOVERS, SHRUBS, VINES, EVERGREENS AND TREES

African lily	African violet	ageratum
alyssum	anthurium	arborvitae
ash	asparagus sprengeri	aster
atlas cedar	azalea	bald cypress
balsam fir	bamboo	barberry
beech	begonia	birch
Boston fern	bougainvillea	boxwood
bridal veil	cacti	caladium
calceolaria	calendula	calla lily
camella	camellias	carissa
carnation	ceanothus	celosia
chenille plant	cherro	Christmas cactus
chrysanthemum	cineraria	cleyera
coleus	cordyline	corylus avellana
cotoneaster	cottonwood	crabapple
crepe myrtle	crossandra	croton

cyclamen	cypress	daffodil
dahlia	daisy	delphinium
deodar cedar	dichondra	dieffenbachia
dogwood	Douglas fir	dracaena
dumb cane	Dusty Miller	elm
eucalyptus	ferns	ficus
fig	firethorn	fittonia
floss flower	foliage plants	forsythia
freesia	fuchsia	gardenia
geranium	gerbera	gerber daisy
gladiolus	gloxinia	grape
gynura	gypsophila	hackberry
hawthorn	hedera	hemlock
hibiscus	hickory	holly
honey suckle	hop bush	horsechesnut
hyacinth	hydrangea	iceplant
imitari	impatiens	India hawthorn
iris	ivy	Japanese aucuba
Japanese barberry	Japanese boxwood	Japanese spindle tree
Japanese yew	juniper	kalanchoe
lantana	larch	larkspur
laurel	leasianthus	leatherleaf fern
linden	lilac	lily
lithodora	lobelia	loquat
magnolia	mandevilla	maple
marigold	Mediterranean fan palm	mesembryanthemum
mimosa	monstera	mother-in-law plant
mountain laurel	myrtle	nandina
narcissus	oak	oleander
olive	orchid	ornamental kale
pachysandra	palms	pansy
parasol pine	pelargonium	peony
petunia	philodendron	phlox
photina	piggyback plant	pine
pink	pittosporum	planetree
podocarpus	poinsettia	poplar
pothos ivy	prayer plant	primrose
privet	pteris fern	pyracantha
rhododendron	rose	rubber plant
salvia	scabiosa	schefflera
schlumbegera	sedum	shrub verbena
shrubby cinquefoil	smoke tree	snapdragon
spathiphyllum	spruce	stock
sweet gum	sweet pea	sweet William
sycamore	syngonium	taxus
Texas sage	tulip	tulip tree
verbena	viburnum	vinca
Virginia creeper	walnut	wandering Jew
willow	yew	yucca
zinnia		

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 Mycotrol ES using hand-held, ground and/or aerial spray equipment, low-volume application equipment and chemigation (**follow specific directions for chemigation in this booklet**). Mycotrol 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 Mycotrol ES to suspend spores then with agitator running, slowly add desired quantity of Mycotrol ES to spray tank. Add remainder of desired amount of water. Continue agitation throughout loading and spraying. Triple rinse empty Mycotrol ES container with water and add rinse water to spray tank. For best results, continue agitation during spraying. Do not mix more Mycotrol ES than needed for that day. Do not mix Mycotrol 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 Mycotrol ES per 100 gallons of spray volume in high volume sprays (2-6 tsp. or 0.33 - 1.00 fluid ounces of Mycotrol 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

Whitefly, Mealybugs, Aphids.....½ quart to 1 quart of Mycotrol ES/100 gallons spray volume
Thrips .....1 to 2 quarts of Mycotrol ES/100 gallons spray volume
Other labeled insects.....½ to 2 quarts of Mycotrol ES/100 gallons spray volume depending on insect population and foliage density.

Low volume sprays: Apply at a rate equivalent to area coverage of high volume spray. This would normally be ½ quart to 2 quarts of Mycotrol ES for 5,000 to 20,000 square feet. Follow spray equipment manufacturer's instructions for final spray volume to obtain adequate coverage. **DO NOT APPLY THROUGH A THERMAL PULSE FOGGER.**

Contact your dealer or Laverlam International Corporation for specific instructions.

Cuttings Dip

Applications of Mycotrol ES can be used as pre-plant dips for cuttings as noted below. To prepare dip solution, thoroughly mix ½ - 1 fl. oz. Mycotrol 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 Mycotrol 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 Mycotrol 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 Mycotrol 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 Mycotrol ES up to a maximum of 3 quarts per acre for extreme insect pressure or dense foliage.

Aerial Application

Apply ¼ to 1 quart Mycotrol 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; Mycotrol 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

Diamondback moth .....½ to 1 quart of Mycotrol ES/acre
Imported cabbage worm .....½ to 1 quart of Mycotrol ES/acre
Cabbage looper .....1 quart of Mycotrol ES/acre

Leaf-Feeding Beetles

For use against Colorado potato beetle; Mycotrol 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

Colorado potato beetle..... ½ to 1 quart of Mycotrol ES/acre

DOSAGE RATE FOR TURF AND SOIL APPLICATIONS IN ORCHARDS AND CONTAINER ORNAMENTALS

For most soil applications, apply 2-8 fluid ounces of Mycotrol ES per 1,000 square feet. For difficult to control soil pests, especially citrus root weevil (*Diaprepes abbreviatus*), apply Mycotrol ES at the upper rate (8 fl. oz. of Mycotrol ES per 1,000 square feet).

Do not apply to water-saturated soil. Apply Mycotrol ES in enough water to ensure good coverage of treated area, at least one gallon of water per 1,000 square feet. Irrigate treated area after application to disperse Mycotrol ES into soil.

APPLICATION FREQUENCY

Apply Mycotrol ES at 5-10 day intervals. High insect populations, especially whitefly and aphids, may require application at 2-5 day intervals. Repeat applications for as long as pest pressure persists. There is no limit on the number of applications or total amount of Mycotrol ES which can be applied in one season.

PHOTOTOXICITY

Mycotrol ES has shown plant safety but has not been tested on all plant varieties or in all tank mixes. Use caution when making applications to open blooms, especially on varieties known to be sensitive. Test Mycotrol ES on a small number of plants to check for potential damage before applying to larger number of plants. **Do not apply on poinsettias after bract formation.**

TANK MIX COMPATIBILITY

Mycotrol ES is physically and biologically compatible with a wide range of insecticides and spray adjuvants. It is compatible with some fungicides in tank mixtures. Fungicides may kill the spores. Do not exceed label dosage rates. Observe the most restrictive of the labeling limitations and precautions of all products used in mixtures.

Adjuvants Mycotrol 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 Mycotrol ES, or contribute to poor mixing and spray problems.

Compatibility With Chemical Insecticides Mycotrol ES is compatible with most chemical insecticides. However, some insecticide formulations can kill the fungal spores, the active ingredient in Mycotrol ES. If you are going to use Mycotrol 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.

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

MIXING AND APPLICATION FOR CORN – GROUND AND AERIAL APPLICATION

SHAKE WELL BEFORE USING. Apply Mycotrol ES using ground and/or aerial spray equipment and chemigation using overhead sprinklers. **(Follow specific directions for chemigation on this label).** Mycotrol ES contains emulsifiers and mixes readily in water. To mix, fill spray tank with half the desired amount of water and start agitation. Shake Mycotrol ES to suspend spores, then with agitator running, slowly add desired quantity of Mycotrol ES to spray tank. Add remainder of desired amount of water. Triple rinse empty Mycotrol ES container with water and add rinse water to spray tank. For best results, continue agitation during spraying. Do not mix more Mycotrol ES than needed for that day. Do not mix Mycotrol 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 specific instructions.

Dosage Rates for Corn

Apply 4 fluid ounces of Mycotrol ES per acre (2 ½ gallons of Mycotrol 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.

Contact your dealer or Laverlam International Corporation for specific instructions.

CHEMIGATION

Apply Mycotrol 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.

Apply Mycotrol ES undiluted (neat) or diluted for injection flow rate and irrigation volume. For best results, use one part water to one part Mycotrol ES. If Mycotrol ES is diluted, supply tank must be agitated to thoroughly mix Mycotrol ES in water. Add water to supply tank, start agitation, and then add Mycotrol ES. Continue supply tank agitation during chemigation cycle to maintain uniform emulsion.

Supply tank agitation is not necessary if Mycotrol ES is used without dilution. Shake well to suspend spores before adding Mycotrol ES to supply tank. Use contents of supply tank within one day.

Crop injury, lack of effectiveness, or illegal pesticide residues 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.

Sprinkler Chemigation

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

For best results, time Mycotrol ES chemigation with the end of the irrigation water application. Time injection duration to apply Mycotrol 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 Mycotrol ES in ¼ to ½ inches of water per acre.

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

Supply tank agitation is necessary if Mycotrol ES is diluted in water before injection into irrigation system. Tank agitation is not necessary if Mycotrol 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 contaminated 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 Mycotrol ES per acre for most drip or microjet chemigation. For difficult to control pests, especially citrus root weevil (*Diaprepes abbreviatus*), apply Mycotrol ES at up to 8 fl. oz. of Mycotrol ES per 1,000 square feet.

Apply Mycotrol 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 Mycotrol ES is diluted in water before injection into irrigation system. Supply tank agitation is not necessary if Mycotrol 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.

Chemigation Systems Connected to Public Water Systems

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.

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.

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 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 or in cases where there is no water pump, 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 Mycotrol ES is diluted in water before injection into irrigation system. Spray tank agitation is not necessary if Mycotrol 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 Mycotrol ES chemigation with the end of irrigation water application. Time injection duration to apply Mycotrol 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 Mycotrol ES continuously for the duration of irrigation water application. Apply sufficient volume of water to carry Mycotrol 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.

Sensitive Areas
The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE

Store in a cool, dry place. Avoid storage below freezing temperatures or above 85°F. Mycotrol ES stability decreases with time at elevated temperatures above 85°F. Tightly reclose the container of unused product. Do not contaminate unused product with water.

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 DISPOSAL

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 ¼ 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. Do not burn, unless allowed by state and local ordinances.

WARRANTY AND DISCLAIMER

Mycotrol ES conforms to the description set forth on this label and is reasonably fit for the purposes described herein when used according to the label directions and specified conditions. The manufacturer disclaims any and all other express or implied warranties of merchantability and fitness for particular purpose. Buyers and users shall assume all risk and responsibility for potential loss or damage if this product is used, stored, handled or applied in a manner inconsistent with this labeling. To the extent permitted by law, manufacturer shall not be liable for more than the purchase price for the quantity involved including incidental, consequential or special damages.

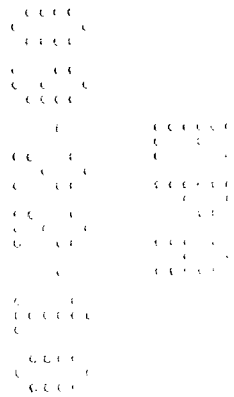
21/37

BOTANIGARD® ES

Emulsifiable Suspension Mycoinsecticide

Sub-label B

Alternate Brand Name



(Front Panel)

BOTANIGARD® ES

Emulsifiable Suspension Mycoinsecticide

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 Ornamentals and Vegetables, Indoor/Outdoor Nursery, Greenhouse, Shadehouse, Commercial Landscape, Interiorscape and Turf.

Active Ingredient: *Beauveria bassiana* Strain GHA	11.3%**
Inert Ingredients:	88.7%*
Total:	100.0%

*Contains petroleum distillates

**Based on the weight estimate of 4.78×10^{-12} grams per spore.

BotaniGard ES contains 2×10^{13} viable spores per quart.

KEEP OUT OF REACH OF CHILDREN

CAUTION

Store between 40°F and 85°F

SHAKE WELL

See additional precautionary statements and first aid statements in attached booklet.

LAVERLAM INTERNATIONAL CORPORATION

117 S. Parkmont; PO Box 4109 – Butte, MT 59702; Ph: (406)782-2386; Fax: (406)782-9912

EPA Registration Number 82074-1 — PA Establishment Number 65626-MT-02

Edition: — Lot No.:

Net Contents: — Expiration Date:

(Booklet)

BOTANIGARD® ES

Emulsifiable Suspension Mycoinsecticide

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 Ornamentals and Vegetables, Indoor/Outdoor Nursery, Greenhouse, Shadehouse, Commercial Landscape, Interiorscape and Turf.

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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. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. • Call poison control center or doctor for treatment advice.
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.
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. • Call a poison control center or doctor for further treatment advice.
If swallowed	• Immediately call a poison control center or doctor. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give any liquid to the person. • Do not give anything by mouth to an unconscious person.
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.	
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 Ornamentals 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 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.

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

INSECTS FOR WHICH BOTANIGARD ES MAY BE USED

ORTHOPTERA
Grasshoppers
Mole Crickets
Locusts
Mormon Crickets

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

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

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

PSYLLIDS
Pear Psylla
Tomato/Potato Psylla

MEALYBUGS

Citrus Cocci
Buffalo Grass Mealybug
Longtailed Mealybug
Citrus Mealybug
Grape Mealybug

LEAFHOPPERS AND PLANTHOPPERS

Grape Leafhopper
Planthoppers
Rice Delphacid
Virginia Creeper Leafhopper
Leafhoppers
Potato Leafhopper
Variegated Grape Leafhopper

STEM-BORING LEPIDOPTERA

European Corn Borer
Rice Stem Borer
Sugar Cane Borer
Lesser Cornstalk Borer
Southwestern Corn Borer

FOLIAGE-FEEDING LEPIDOPTERA

Diamondback Moth
Fall Army Worm
Cabbage Looper
Imported Cabbage Worm

LEAF-FEEDING BEETLES

Bean Leaf Beetle
Colorado Potato Beetle
Cucumber Beetles
Flea Beetles
Cereal Leaf Beetle
Corn Rootworm
Elm Leaf Beetle

SCARAB BEETLES

Ataenius
White Grubs
Green June Beetle

PLANT BUGS (HETEROPTERA)

Chinch Bugs
Lace Bugs
Seed Bugs
Tarnished Plant Bug
Fleahoppers
Lygus Bug
Stink Bugs

WEEVILS

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

ACARI

Twospotted Spider Mite

CROPS ON WHICH BOTANIGARD ES MAY BE USED

VEGETABLES

acerola	arracacha	arrowroot
artichoke	arugula	asparagus
atermoya	balsam pear	bamboo shoots
beans (all varieties)	beet	blackeyed peas
bokchoy	broccoli	broccoli raab

Brussels sprouts
cantaloupe
casaba melons
cauliflower
celtuce
chickpeas
Chinese cabbage
Chinese mustard
chrysanthemum (edible)
citron melon
crenshaw melon
dandelion
dock
endive
garlic
golden pershaw melon
guar
horseradish
leek
lettuce
mustard greens
onion
parsnip
pepper (all varieties)
pineapple melon
purslane
rambutan
rhubarb
shallot
spinach
sweet potato
tomatillo
turnip
zucchini
burdock
carambols
cassava
celeriac
chayote
chicory
Chinese gai lon
Chinese spinach
chufa
collards
cress
dasheen
edamame
escarole
gherkin
gourds (edible)
honey balls
kale
lentils
mango melon
New Zealand spinach
orach
peas (all varieties)
Persian melon
potato
radish
rape greens
rutabaga
snake melon
squash (summer/winter)
Swiss chard
tomatoes
watermelon
cabbage
carrots
catjang
celery
chervil
Chinese broccoli
Chinese longbeans
Chinese waxgourd
cilantro
corn salad
cucumber
daikon
eggplant
fennel
ginger
groundcherry
honeydew melon
kohlrabi
leren
muskmelon hybrids/varieties
okra
parsley
pepinos
pimento (all varieties)
pumpkin
radicchio
rapini
salsify
soybeans
sugar beet
tanier
tumeric
yam

FRUITS AND BERRIES

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

TREE NUTS

almonds
beech nut
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/flour)
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
triticale
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
caperbuds
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
sesame
spearmint
sweet bay leaf
tansy
tarragon
thyme
wintergreen
woodruff
wormwood

ORNAMENTALS, INCLUDING FLOWERS, FLOWERING AND FOLIAGE PLANTS, BEDDING PLANTS, GROUNDCOVERS, SHRUBS, VINES, EVERGREENS AND TREES

African lily
African violet
ageratum
alyssum
anthurium
arborvitae
ash
asparagus sprengeri
aster
atlas cedar
azalea
bald cypress
balsam fir
bamboo
barberry
beech
begonia
birch
Boston fern
bougainvillea
boxwood
bridal veil
cacti
caladium
calceolaria
calendula
calla lily
camella
camellias
carissa
carnation
ceanothus
celosia
chenille plant
cherro
Christmas cactus
chrysanthemum
cineraria
cleyera

coleus
cotoneaster
crepe myrtle
cyclamen
dahlia
deodar cedar
dogwood
dumb cane
eucalyptus
fig
floss flower
freesia
geranium
gladiolus
gynura
hawthorn
hibiscus
honey suckle
hyacinth
imitari
iris
Japanese barberry
Japanese yew
lantana
laurel
linden
lithodora
magnolia
marigold
mimosa
mountain laurel
narcissus
olive
pachysandra
parasol pine
petunia
photina
pink
podocarpus
pothos ivy
privet
rhododendron
salvia
schlumbegera
shrubby cinquefoil
spathiphyllum
sweet gum
sycamore
Texas sage
verbena
Virginia creeper
willow
zinnia

cordyline
cottonwood
crossandra
cypress
daisy
dichondra
Douglas fir
Dusty Miller
ferns
firethorn
foliage plants
fuchsia
gerbera
gloxinia
gypsophila
hedera
hickory
hop bush
hydrangea
impatiens
ivy
Japanese boxwood
juniper
larch
leasianthus
lilac
lobelia
mandevilla
Mediterranean fan palm
monstera
myrtle
oak
orchid
palms
pelargonium
philodendron
piggyback plant
pittosporum
poinsettia
prayer plant
pteris fern
rose
scabiosa
sedum
smoke tree
spruce
sweet pea
syngonium
tulip
viburnum
walnut
yew

corylus avellana
crabapple
croton
daffodil
delphinium
dieffenbachia
dracaena
elm
ficus
fittonia
forsythia
gardenia
gerber daisy
grape
hackberry
hemlock
holly
horsechesnut
iceplant
India hawthorn
Japanese aucuba
Japanese spindle tree
kalanchoe
larkspur
leatherleaf fern
lily
loquat
maple
mesembryanthemum
mother-in-law plant
nandina
oleander
ornamental kale
pansy
peony
phlox
pine
planetree
poplar
primrose
pyracantha
rubber plant
schefflera
shrub verbena
snapdragon
stock
sweet William
taxus
tulip tree
vinca
wandering Jew
yucca

TURF, INCLUDING LAWN AND SOD TURF GRASSES

Bermuda grass
St. Augustine grass
blue grass
zoysia grass
fescue

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

Whitefly, Mealybugs, Aphids.....½ quart to 1 quart of BotaniGard ES/100 gallons spray volume
Thrips .....1 to 2 quarts of BotaniGard ES/100 gallons spray volume
Other labeled insects.....½ to 2 quarts of BotaniGard ES/100 gallons spray volume depending on insect population and foliage density.

Low volume sprays: Apply at a rate equivalent to area coverage of high volume spray. This would normally be ½ quart to 2 quarts of BotaniGard ES for 5,000 to 20,000 square feet. Follow spray equipment manufacturer's instructions for final spray volume to obtain adequate coverage. **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

Diamondback moth .....½ to 1 quart of BotaniGard ES/acre
Imported cabbage worm .....½ to 1 quart of BotaniGard ES/acre
Cabbage looper .....1 quart of BotaniGard ES/acre

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

Colorado potato beetle..... ½ to 1 quart of BotaniGard ES/acre

DOSAGE RATE FOR TURF AND SOIL APPLICATIONS IN ORCHARDS AND CONTAINER ORNAMENTALS

For most soil applications, apply 2-8 fluid ounces of BotaniGard ES per 1,000 square feet. For difficult to control soil pests, especially citrus root weevil (*Diaprepes abbreviatus*), apply BotaniGard ES at the upper rate (8 fl. oz. of BotaniGard ES per 1,000 square feet).

Do not apply to water-saturated soil. Apply BotaniGard ES in enough water to ensure good coverage of treated area, at least one gallon of water per 1,000 square feet. Irrigate treated area after application to disperse BotaniGard ES into soil.

APPLICATION FREQUENCY

Apply BotaniGard ES at 5-10 day intervals. High insect populations, especially whitefly and aphids, may require application at 2-5 day intervals. Repeat applications for as long as pest pressure persists. There is no limit on the number of applications or total amount of BotaniGard ES which can be applied in one season.

PHOTOTOXICITY

BotaniGard ES has shown plant safety but has not been tested on all plant varieties or in all tank mixes. Use caution when making applications to open blooms, especially on varieties known to be sensitive. Test BotaniGard ES on a small number of plants to check for potential damage before applying to larger number of plants. **Do not apply on poinsettias after bract formation.**

TANK MIX COMPATIBILITY

BotaniGard ES is physically and biologically compatible with a wide range of insecticides and spray adjuvants. It is compatible with some fungicides in tank mixtures. Fungicides may kill the spores. Do not exceed label dosage rates. Observe the most restrictive of the labeling limitations and precautions of all products used in mixtures.

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.

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.

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

SHAKE WELL BEFORE USING. Apply BotaniGard ES using ground and/or aerial spray equipment and chemigation using overhead sprinklers. **(Follow specific directions for chemigation on this label).** BotaniGard ES contains emulsifiers and mixes readily in water. 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. 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 specific instructions.

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.

Contact your dealer or Laverlam International Corporation for specific instructions.

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.

Apply BotaniGard ES undiluted (neat) or diluted for injection flow rate and irrigation volume. For best results, use one part water to one part BotaniGard ES. If BotaniGard ES is diluted, supply tank must be agitated to thoroughly mix BotaniGard ES in water. Add water to supply tank, start agitation, and then add BotaniGard ES. Continue supply tank agitation during chemigation cycle to maintain uniform emulsion. Supply tank agitation is not necessary if BotaniGard ES is used without dilution. Shake well to suspend spores before adding BotaniGard ES to supply tank. Use contents of supply tank within one day.

Crop injury, lack of effectiveness, or illegal pesticide residues 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.

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 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 contaminated 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.

Chemigation Systems Connected to Public Water Systems

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.

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.

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 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 or in cases where there is no water pump, 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.

Sensitive Areas

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE

Store in a cool, dry place. Avoid storage below freezing temperatures or above 85°F. BotaniGard ES stability decreases with time at elevated temperatures above 85°F. Tightly reclose the container of unused product. Do not contaminate unused product with water.

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 DISPOSAL

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 ¼ 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. Do not burn, unless allowed by state and local ordinances.

WARRANTY AND DISCLAIMER

BotaniGard ES conforms to the description set forth on this label and is reasonably fit for the purposes described herein when used according to the label directions and specified conditions. The manufacturer disclaims any and all other express or implied warranties of merchantability and fitness for particular purpose. Buyers and users shall assume all risk and responsibility for potential loss or damage if this product is used, stored, handled or applied in a manner inconsistent with this labeling. To the extent permitted by law, manufacturer shall not be liable for more than the purchase price for the quantity involved including incidental, consequential or special damages.