

65626-12

4-12-1999

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Biopesticides and Pollution Prevention Division
(7511C) 401 M St., S.W.
Washington, D.C. 20460

EPA Reg. Number:
65626-12

Date of Issuance:
APR 12 1999

NOTICE OF PESTICIDE:
 Registration
 Reregistration

Term of Issuance:
Unconditional

Name of Pesticide Product:
Organigard
Emulsifiable
Suspension
Mycoinsecticide

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Mycotech Corporation, 117 South Parkmont, Butte, MT 59702-4109

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Biopesticides and Pollution Prevention Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5).

Please change the label by revising the EPA Registration to read "EPA Reg. No. 65626-12.

This registration does not eliminate the need for continual reassessment of the pesticide. If EPA determines at any time, that additional data are required to maintain in effect an existing registration, the Agency will require submission of such data under section 3(c)(2)(B) of FIFRA.

Please submit five (5) copies of the final printed labeling before you release the product for shipment. Refer to the A-79 enclosure for a further description of final printed labeling.

A stamped copy of the label is enclosed for your records.

Signature of Approving Official:

James L. Anderson

Date:

4-12-99

EPA Form 8570-6

CONCURRENCES

SYMBOL	7511C	7511C					
SURNAME	BALL	MURDOJ					
DATE	4/08/99	4/9/99					

ACCEPTED

APR 12 1999

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 65626-12

ORGANIGARD

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; Grasshoppers Mormon Crickets, Locusts and Beetles in Rangeland, Improved Pastures and Agronomic Crops; Whitefly, Aphids, Thrips, Psyllids and Mealybugs in Vegetables grown in Indoor/Outdoor Nursery, Greenhouse, and Shadehouse.

Active Ingredient: *Beauveria bassiana* Strain GHA.....10.9%*
Inert Ingredients.....89.1%

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

OrganiGard contains 2×10^{13} viable *Beauveria bassiana* spores per quart.

KEEP OUT OF REACH OF CHILDREN

CAUTION

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

Causes moderate, but temporary eye irritation. Avoid contact with skin, eyes or clothing. Harmful if swallowed, inhaled or absorbed through skin. Wash thoroughly with soap and water after handling. Avoid breathing spray mist. Remove contaminated clothing and wash clothing before reuse.

FIRST AID

If Swallowed: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. If person is unconscious, do not give anything by mouth and do not induce vomiting.

If Inhaled: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

If On Skin: Wash with plenty of soap and water. Get medical attention if irritation persists.

If In Eyes: Flush with plenty of water. Call a physician if irritation persists.

USER SAFETY RECOMMENDATIONS: Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

NOTE TO PHYSICIAN

Probable mucosal damage may contraindicate the use of gastric lavage.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear: Long-sleeved shirt and long pants. Shoes plus socks and dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95 or P-95. Waterproof gloves. 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.

ENVIRONMENTAL HAZARDS

This product is potentially pathogenic to honey bees. Avoid applying to areas where honey bees are actively foraging or around bee hives. 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 washwaters.

Net Contents:

Lot Number:

Expiration Date:

117 South Parkmont
P.O. Box 4109 - Butte, MT 59702-4109
Phone: (406)782-2386

EPA Registration Number 65626-_____
EPA Establishment Number 65626-MT-02
Edition-990405

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GENERAL INFORMATION

OrganiGard contains live spores of the naturally occurring fungus, *Beauveria bassiana* Strain GHA and vegetable oil. Spores are alive and may be harmed by storage at high temperatures or contact with water for more than 24 hours. See storage instructions on this 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 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 with other control methods.

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

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 agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR, part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours unless wearing 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:

- Long-sleeved shirt and long pants
- Shoe plus socks
- Waterproof gloves
- Dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95 or P-95.

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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 appropriate personal protective equipment.

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

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; Grasshoppers Mormon Crickets, Locusts and Beetles in Rangeland, Improved Pastures and Agronomic Crops; Whitefly, Aphids, Thrips, Psyllids and Mealybugs in Vegetables grown in Indoor/Outdoor Nursery, Greenhouse, and Shadehouse. May be aerially applied. Suitable for use with ultra low-volume application equipment.

INSECTS FOR WHICH ORGANIGARD MAY BE USED**ORTHOPTERA, SUCH AS, BUT NOT LIMITED TO**

Grasshoppers
Mormon Crickets

Locusts
Mole Crickets

WHITEFLY, SUCH AS, BUT NOT LIMITED TO

Banded-winged Whitefly
Citrus Blackfly
Citrus Whitefly
Giant Whitefly

Greenhouse Whitefly
Silverleaf Whitefly
Sweet Potato Whitefly (aka Tobacco Whitefly)

APHIDS, SUCH AS, BUT NOT LIMITED TO

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, SUCH AS, BUT NOT LIMITED TO

Greenhouse Thrips
Cuban Laurel Thrips
Pear Thrips

Potato/Onion Thrips
Thrips palmi
Western Flower Thrips

PSYLLIDS, SUCH AS, BUT NOT LIMITED TO

Pear Psylla

Tomato/Potato Psylla

MEALYBUGS, SUCH AS, BUT NOT LIMITED TO

Citrus Mealybug
Grape Mealybug

Buffalo Grass Mealybug
Longtailed Mealybug

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LEAFHOPPERS AND PLANTHOPPERS, SUCH AS, BUT NOT LIMITED TO

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

STEM-BORING LEPIDOPTERA, SUCH AS, BUT NOT LIMITED TO

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

FOLIAGE-FEEDING LEPIDOPTERA, SUCH AS, BUT NOT LIMITED TO

Diamondback Moth	Cabbage Looper
Imported Cabbage Worm	

LEAF-FEEDING BEETLES, SUCH AS, BUT NOT LIMITED TO

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

SCARAB BEETLES, SUCH AS, BUT NOT LIMITED TO

Atenius
Green June Beetle
White Grubs

PLANT BUGS (HETEROPTERA), SUCH AS, BUT NOT LIMITED TO

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

WEEVILS, SUCH AS, BUT NOT LIMITED TO

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

CROPS ON WHICH ORGANIGARD MAY BE USED

OrganiGard may be used on most crops since *Beauveria bassiana* Strain GHA, the active ingredient, is exempt from residue tolerances when applied to growing crops. Each crops list below is introduced with the phrase "including, but not limited to". This allows the use of this product on crops not specifically listed herein.

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VEGETABLES, INCLUDING, BUT NOT LIMITED TO:

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

FRUITS AND BERRIES, INCLUDING, BUT NOT LIMITED TO:

apple	blueberry	cherry (sweet/sour)
apricot	boysenberry	chironja
avacado	calamondin	citrus citron
bananas	carob	citrus hybrids
blackberry	cherimoya	coffee

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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, INCLUDING, BUT NOT LIMITED TO:

almond
 beech nut
 Brazil nut
 butternut
 cashew

chestnut
 chinquapin
 filbert
 hickory nut

macadamia nut
 pecan
 pistachios
 walnut

AGRONOMIC CROPS, INCLUDING, BUT NOT LIMITED TO:

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
 sugarbeets

sugarcane
 sunflower
 sweet corn
 sweet potato
 tea
 teosinte
 tobacco
 triticale
 wheat
 wild rice

HERBS, SPICES AND EDIBLE FLOWERS, INCLUDING, BUT NOT LIMITED TO:

allspice
 anise
 balm
 basil
 borage
 burnet
 chamomile
 caper buds
 caraway
 cardamom
 carnations
 catnip

celery seed
 chervil
 chicory
 chives
 chrysanthemum
 cilantro/coriander
 cinnamon
 clary
 coriander
 costmary
 cumin
 curry leaf

dandelion
 dill
 fennel
 fenugreek
 ginseng
 gladiolus
 horehound
 hyssop
 mace
 marigolds
 marjoram
 mint

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mustard	rosemary	tansy
nasturtium	roses	tarragon
nutmeg	rue	thyme
oregano	sage	violets
pansies	saffron	wintergreen
paprika	savory	woodruff
pennyroyal	sesame	wormwood
pepper (black/white)	spearmint	
peppermint	sweet bay leaf	

MIXING AND APPLICATION

SHAKE WELL BEFORE USING. OrganiGard may be applied using hand-held, ground and/or aerial spray equipment, low-volume application equipment and chemigation (follow specific directions for chemigation on this label). OrganiGard contains emulsifiers and mixes readily in water. Mix well by 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 OrganiGard to suspend spores then with agitator running, slowly add desired quantity of OrganiGard to spray tank. Add remainder of desired amount of water. Continue agitation throughout loading and spraying. Triple rinse empty OrganiGard container with water and add rinse water to spray tank. For best results, continue agitation during spraying. Do not mix more OrganiGard than needed for that day. Do not mix OrganiGard the day before application. Performance may suffer if spores are left overnight or longer in the spray tank.

Contact your dealer or Mycotech Corporation for recommendations about specific crops, insects and spray equipment.

DOSE RATE FOR FIELD, AGRONOMIC, AND VEGETABLE CROPS; RANGELAND, AND IMPROVED PASTURES**GROUND APPLICATION**

Typically apply ¼ to 1 quart OrganiGard/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.**

OrganiGard may be applied up to a maximum of 3 quarts per acre for extreme insect pressure or dense foliage.

AERIAL APPLICATION

Apply ¼ to 1 quart OrganiGard per 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: OrganiGard 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. No label dosage rates should be exceeded. 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 Mycotech Corporation.

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Typical Application Rates/Acre

Diamondback moth.....	1/2 to 1 quart/Acre.
Imported cabbage worm.....	1/2 to 1 quart/Acre.
Cabbage looper.....	1 quart/Acre.

LEAF-FEEDING BEETLES

For use against Colorado Potato Beetle: OrganiGard 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. No label dosage rates should be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing. The tank mix improves control and aids in the management of resistant populations. For additional information, contact Mycotech Corporation.

Typical Application Rates/Acre

Colorado Potato Beetle.....	1/2 to 1 quart/Acre.
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DOSAGE RATE FOR GREENHOUSE, SHADEHOUSE, INDOOR/OUTDOOR NURSERY

High volume sprays: Apply at a rate of up to two (2) quarts per 100 gallons in high volume sprays (2 tsp., or 0.33 fluid ounces per gallon). 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

Whiteflies, Mealybugs, Aphids.....	1/2 quart to 1 quart/100 gallons spray volume
Thrips	1 quart/100 gallons spray volume
Other labeled insects.....	1/2 to 2 quarts/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 1/2 quart to 2 quarts 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 Mycotech Corporation for specific recommendations.

DOSE RATE FOR SOIL APPLICATIONS IN ORCHARDS.

For most soil applications, apply 2-8 fluid ounces OrganiGard per 1000 square feet. For difficult to control soil pests, especially citrus root weevil (*Diaprepes abbreviatus*), apply OrganiGard at the upper rate (8 fl. oz. per 1,000 square feet).

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

APPLICATION FREQUENCY

Apply OrganiGard 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 OrganiGard which can be applied in one season.

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PLANT SAFETY

OrganiGard has shown plant safety but has not been tested on all plant varieties or in all tank mixes. Test OrganiGard on a small number of plants to check for potential damage before applying to larger number of plants.

TANK MIX COMPATABILITY OrganiGard is physically and biologically compatible with a wide range of insecticides and spray adjuvants. It is not compatible with fungicides in tank mixtures. Fungicides will kill the spores.

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

Compatibility With Chemical Insecticides OrganiGard is compatible with most organic insecticides and spray adjuvants. However, some insecticide formulations can kill the fungal spores, the active ingredient in OrganiGard. If you are going to use OrganiGard in combination with other pesticides, contact your dealer or Mycotech Corporation for specific information. In all cases, pesticides should be used in accordance with their labels.

Compatibility With Fungicides OrganiGard is not compatible in tank mix with fungicides. Contact Mycotech or your dealer for specific recommendations on using OrganiGard with fungicides.

CHEMIGATION

Apply OrganiGard 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. Do not use in systems having smaller than 40-mesh screens.

OrganiGard may be applied undiluted (neat) or diluted as appropriate for injection flow rate and irrigation volume. A ratio of one part water to one part OrganiGard is recommended for best results. If OrganiGard is diluted, supply tank must be agitated to thoroughly mix OrganiGard in water. Add water to supply tank, start agitation, then add OrganiGard. Continue supply tank agitation during chemigation cycle to maintain uniform emulsion. Supply tank agitation is not necessary if OrganiGard is used without dilution. Shake well to suspend spores before adding OrganiGard 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.

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

For best results, time OrganiGard chemigation with the end of irrigation water application. Time injection duration to apply OrganiGard 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 OrganiGard in 1/4 to 1/2 inches of water per acre.

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

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

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

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock

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Do not apply when wind speed favors drift beyond the area intended for treatment.

DRIP (TRICKLE) AND MICROJET CHEMIGATION

Use ½ to 3 quarts OrganiGard per acre in most drip or microjet chemigation. For difficult to control soil pests, especially citrus root weevil (*Diaprepes abbreviatus*), OrganiGard may need to be applied at up to 8 fluid ounces per 1,000 square feet.

Apply OrganiGard 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 OrganiGard is diluted in water before injection into irrigation system. Supply tank agitation is not necessary if OrganiGard 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 functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

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.

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

For best results in foliar applications by sprinkler, time OrganiGard chemigation with the end of irrigation water application. Time injection duration to apply OrganiGard 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 OrganiGard continuously for the duration of irrigation water application. Apply sufficient volume of water to carry OrganiGard into proximity of the target pests.

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 determine 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 $\frac{3}{4}$ the length of the wingspan or rotor.

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- 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).

- 3 **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rates 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 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 angels 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 $\frac{3}{4}$ 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 crosswind, the swath will be displaced downward. 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.).

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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 spray 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 direction 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 upward 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

STORAGE

- Do not contaminate water, food, or feed by storage or disposal.
- Store in a cool, dry place. Avoid storage below freezing temperatures or above 85°F. OrganiGard 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

- Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL

- Do not reuse as a container. Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

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