

U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs
Registration Division (7505P)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

82074-5

Date of Issuance:

11/18/15

NOTICE OF PESTICIDE:

X Registration
Reregistration

Reregistration (under FIFRA, as amended)

Conditional

Term of Issuance:

EPA Reg. Number:

XPECTRO OD

Name of Pesticide Product:

Name and Address of Registrant (include ZIP Code):

Christopher Burnside Laverlam International Corporation 117 South Parkmont Butte, MT 59701

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration 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 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 conditionally registered in accordance with FIFRA section 3(c)(7)(A). You must comply with the following conditions:

1. Submit and/or cite all data required for registration/registration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Date:

11/18/15

Kable Bo Davis, Product Manager 3 Invertebrate & Vertebrate Branch 1 Registration Division (7505P)

EPA Form 8570-6

- 2. You are required to comply with the data requirements described in the DCI identified below:
 - a. Pyrethrins GDCI-069001-1290

You must comply with all of the data requirements within the established deadlines. If you have questions about the Generic DCI listed above, you may contact the Chemical Review Manager in the Pesticide Reevaluation Division: http://www.epa.gov/oppsrrd1/contacts_prd.htm

- 3. The data requirements for storage stability and corrosion characteristics (Guidelines 830.6317 and 830.6320) are not satisfied. A one year study is required to satisfy these data requirements. You have 18 months from the date of registration to provide these data.
- 4. Make the following label changes before you release the product for shipment:
 - Revise the EPA Registration Number to read, "EPA Reg. No. 82074-5."
- 5. Submit one copy of the final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSF:

• Basic CSF dated 03/25/2015

If you have any questions, please contact Maggie Rudick by phone at 703-347-0257, or via email at rudick.maggie@epa.gov.

Enclosure



For use in controlling Whitefly, Aphids, Thrips, Psyllids, Spider Mites, Mealybugs, Leafhoppers, Weevils, Plant Bugs, Borers and Leaf-feeding Insects in Field, Agronomic, Vegetable and Orchard Crops; Ornamentals and Vegetables, Indoor/Outdoor Nursery, Greenhouse, Shadehouse; Improved Pastures and Agronomic Crops; Commercial Landscape, Interiorscape and Turf.

ACTIVE INGREDIENTS:

Pyrethrins	0.75%
•	0.06%
OTHER INGREDIENTS**:	
	100.00%

Contains 0.055 lbs pyrethrins per gallon.

KEEP OUT OF REACH OF CHILDREN

WARNING AVISO

Si usted no entiende la eliqueta, 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.)

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

ACCEPTED

11/18/2015

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

82074-5

Store between 40°F and 85°F **SHAKE WELL**

LAM INTERNATIONAL CORPORATION

117 S. Parkmont; P.O. Box 4109-Butte, MT 59702; Ph: (406)782-2386; Fax: (406)782-9912 EPA Reg. No. (Pending as File Symbol 82074-L) EPA Est. Number 65626-MT-02

Edition: Lot No.:

Net Contents: □ 1 Quart □ 1 Gallon □ 2 Gallon

□ 2.5 Gallon □ 5 Gallon □ 15 Gallon

□ 250 Gallon Tote

Expiration Date: [6 months from date of manufacture1

^{*}Contains not less than 1x10⁸ viable spores per ml.

^{**}Contains petroleum distillates.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING. Contains Petroleum Distillate. Causes Substantial but temporary eye injury. Harmful if absorbed through skin or swallowed. Do not get in eyes or on clothing. Wear protective eyewear (goggles, face shield, or safety glasses). Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. Avoid contact with skin, eyes or clothing. Wear long sleeved shirt and long pants, socks, shoes and gloves. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

USER SAFETY REQUIREMENTS

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

	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	Take off contaminated clothing.
clothing	 Rinse skin immediately with plenty of water for 15 – 20 minutes.
	Call a poison control center or doctor for treatment advice.
If swallowed	Immediately call poison control center or doctor.
	Do not induce vomiting unless told to do so by a 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 made of barrier laminate, nitrile rubber, neoprene rubber or viton.
- Shoes plus socks

In addition to the above PPE, applicators using hand held foggers in an enclosed area must wear a half-face, full-face, or hood-style NIOSH approved respirator with:

- A dust/mist filtering cartridge (MSHA/NIOSH approval number prefix TC-21C), or
- A canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or
- A cartridge or canister with any R. P. or HE filter.

Mixers/loaders and applicators other than those using hand held foggers in an enclosed area must wear a dust/mist filtering respirator meeting NIOSH standards of a least R-95 or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

USER SAFETY RECOMMENDATIONS

Users should: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove all 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.

ENGINEERING CONTROLS

Mixers/loaders and applicators not in enclosed cabs or aircraft 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. Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)]. Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

ENVIRONMENTAL HAZARDS

This product is toxic to aquatic organisms, including fish and invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. This product may contaminate water through runoff. This product has a potential for runoff for several weeks after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are foraging the treatment area.

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash-waters or rinsate.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in area during application. For any requirement specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and 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 12 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;
- Shoes plus socks, and
- Chemical resistant gloves made of barrier laminate, nitrile rubber, neoprene rubber or viton.

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.

PRODUCT INFORMATION

XPECTRO OD contains live spores of the naturally occurring fungus, *Beauveria bassiana* Strain GHA and natural pyrethrins. Live spores and natural pyrethrins can 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.

For use in controlling Whitefly, Aphids, Thrips, Spider Mites, 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.

Can be applied aerially. Suitable for use with ultra low-volume application equipment.

MODE OF ACTION AND APPLICATION TIMING

XPECTRO OD 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. Pyrethrins exert their toxic effects by disrupting the sodium and potassium ion exchange process in insect nerve fibers and interrupting the normal transmission of nerve impulses.

Begin treatment of crops at the first appearance of the insect pest. Typically, it takes 2-5 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. XPECTRO OD is most effective when used early, before high insect populations develop. Reapply as necessary under a pest management program that includes close scouting.

If possible, apply in the early morning, or evening hours. The reduced UV exposure and lower temperatures will increase the performance and reduce the impact on pollinators.

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

DIRECTIONS

RESTRICTIONS:

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Do not contaminate food or feedstuffs. Only protected handlers may be in the area during application. Do not make applications during rain. Do not remain in the treated area. Exit area immediately and remain outside the treated area until sprays have dried. Not for use in outdoor residential misting systems (indoor or outdoor). Not for indoor use except in greenhouses. Do not reapply within 3 days, except under extreme pest pressure. In case of extreme pest pressure, do not reapply within 24 hours. Do not wet plants to point of runoff or drip. Do not harvest until spray has dried.

SPRAY DRIFT MANAGEMENT:

Avoiding spray drift at the application site is the responsibility of the applicator and the grower. The interactions 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.

Do not apply at wind speeds greater than 10 mph at the application site.

Do not make any type of application into temperature inversions.

Apply as a medium or coarse spray (ASABE standard 572).

Additional Requirements for Aerial Applications:

Do not release spray at a height greater than 10 feet above the ground or crop canopy. The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter. Aerial applicators must consider flight speed and nozzle orientation in determining droplet size. When applications are made with a cross-wind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

Additional requirements for ground applications:

Do not release spray at a height greater than 4 feet above the ground or crop canopy

Additional requirements for airblast applications:

Direct sprays into the canopy.

Turn off outward pointing nozzles at row ends and when spraying outer rows.

USED ALONE: Dilute in sufficient water to allow for thorough coverage. Apply 8 fluid ounces (1/2 pint) to 32 fluid ounces (1 quart) per acre by ground. For aerial applications, apply at the rate of 8 to 32 fluid ounces per acre in a minimum of 5 gallons of water. Mix only enough for immediate use. Begin spraying when the insects first appear. Do not wait until the plants are heavily infested.

IMPORTANT: Adjust the final spray mix to a pH of 5.5 to 7.0. Outside of this range pyrethrins can degrade and the product will lose its effectiveness. To avoid possible harm to honey bees, apply in the early morning or late evening hours.

USED AS A TANK MIX: This product can be tank mixed with other insecticides, acaricides, fungicides, adjuvants and wetting agents. This application must conform to accepted use restrictions, precautions, and directions for both products. Tank mix applications must be made in accordance with the more restrictive of label restrictions and precautions. Do not exceed label application rates. This product cannot be mixed with any product with label prohibitions against such mixing. Prior to tank mixing, conduct a compatibility test using the proper proportions of products and water to ensure the physical compatibility of the mixture.

For growing field crop and orchard applications, do not exceed the maximum application rate of 0.050 lb. active ingredient / Acre (Equivalent to 110 fl. oz. XPECTRO OD / Acre) or .0012 lb. active ingredient / 1,000 sq. ft. (Equivalent to 2.68 fl. oz. of XPECTRO OD / 1,000 sq. ft.).

For surface applications to greenhouse grown crops, do not exceed the maximum application rate of 0.050 lb. active ingredient / Acre (Equivalent to 110 fl. oz. XPECTRO OD / Acre) or .0012 lb. active ingredient / 1,000 sq. ft. (Equivalent to 2.68 fl. oz. of XPECTRO OD / 1,000 sq. ft.).

For space spray applications to greenhouse grown crops, do not exceed the maximum application rate of .00014 lb. active ingredient / 1,000 cu. ft. (Equivalent to 0.31 fl. oz. or 9.28 mls of XPECTRO OD / 1,000 cu. ft.).

IMPORTANT NOTE: Plant safety is an important consideration when using insecticides in a greenhouse. However, it is not possible to evaluate the phytotoxicity of XPECTRO OD on numerous plant varieties that may react differently to insecticides in different growth stages or under varying environmental conditions. Before making widespread applications of XPECTRO OD, or tank mix combinations, treat a limited number of plants and observe for phytotoxicity over a 10-day period.

FOR THE CONTROL OF INSECTS AT VARIOUS LIFE STAGES, INCLUDED, BUT NOT LIMITED TO:

<u>WHITEFLY:</u> Greenhouse Whitefly, Silverleaf Whitefly, Sweet Potato Whitefly (aka Tobacco Whitefly), Banded-winged Whitefly, Cassava Whitefly, Citrus Blackfly, Citrus Whitefly, Giant Whitefly

<u>APHIDS:</u> 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

SPIDER MITES: Two-spotted Spider Mite, Carmine Spider Mite, Citrus Rust Mite, Panicle Rice Mite, Pacific Spider Mite,

Clover Mite

PSYLLIDS: Pear Psylla, Tomato/Potato Psylla, Citrus 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

<u>STEM-BORING LEPIDOPTERA:</u> European Corn Borer, Lesser Cornstalk Borer, Rice Stem Borer, Southwestern Corn Borer, Sugar Cane Borer

FOLIAGE-FEEDING LEPIDOPTERA: Diamondback Moth, Cabbage Looper, Fall ArmyWorm, 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: Atenius, Green June Beetle, White Grubs

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

<u>WEEVILS:</u> 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

ORTHOPTERA: Grasshoppers, Locusts, Mole Crickets, Mormon Crickets

<u>OTHER INSECTS:</u> Crane Flies, Earwigs, Fungus Gnats, Fruit Flies, Fruittree Leafrollers, Glassy Winged Sharpshooters, Mushroom Flies, Skippers, Sowbugs, Tabanidae, and Webworms.

CROPS ON WHICH XPECTRO OD CAN BE USED

GROWING CROPS (OUTDOORS AND IN GREENHOUSES):

ROOT AND TUBER VEGETABLES: Including: Arracacha, Arrowroot, Purple Arrowroot, Japanese Artichoke, Jerusalem Artichoke, Garden Beets, Sugar Beets, Edible Burdock, Edible Canna, Carrots, Cassava (bitter or sweet), Celeriac (celery root), Chayote (root), Chervil (turnip rooted), Chicory, Chufa, Dasheen, Ginger, Ginseng, Horseradish, Leren, Parsley (turnip rooted), Parsnip, Potato, Radish, Japanese Radish (Daikon), Rutabaga, Salsify, Black Salsify, Spanish Salsify, Sweet Potato, Tanier, Turmeric, Turnip, Yam (true), Yam Bean.

LEAVES OF ROOT AND TUBER VEGETABLES: Including: Garden Beet, Sugar Beet, Edible Burdock, Carrot, Cassava (bitter or sweet), Celeriac (celery root), Chervil (turnip rooted), Chicory, Dasheen (taro), Parsnip, Radish, Japanese Radish (Daikon), Rutabaga, Black Salsify, Sweet Potato, Tanier, Turnip, Yam (true).

BULB VEGETABLES: Including: Garlic, Great-headed Garlic, Leek, Onion (bulb and green), Welch, Shallot.

LEAFY VEGETABLES: Including: Amaranth (leafy amaranth, Chinese spinach, tampala), Arugula, Cardoon, Celery, Chinese Celery, Celtuce, Chervil, Cilantro, Corn Salad, Chrysanthemum (edible-leaved), Chrysanthemum (garland), Cress (garden, water), Upland Cress (yellow rocket, winter cress), Dandelion, Dock (sorrel), Endive (escarole), Fennel (Florence), Lettuce (head and leafy), Orach, Parsley, Purslane (garden and winter), Radicchio, Rhubarb, Spinach, Fine Spinach (Malabar, Ceylon), Spinach (New Zealand), Swiss Chard.

BRASSICA (COLE) LEAFY VEGETABLES: Including: Broccoli, Chinese Broccoli (Gai Lan), Broccoli Raab (Rapini), Brussels Sprouts, Cabbage, Chinese Cabbage (Bok Choy), Chinese Cabbage (Napa), Chinese Mustard Cabbage (Gai Choy), Cauliflower, Cavalo Broccolo, Collards, Kale, Kohlrabi, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens.

LEGUME VEGETABLES (SUCCULENT OR DRIED): Including: Adzuki Beans, Field Beans, Kidney Beans, Lima Beans, Moth Beans, Mung Beans, Navy Beans, Pinto Beans, Rice Beans, Runner Beans, Snap Beans, Tepary Beans, Urd Beans, Wax Beans, Asparagus Beans, Black-eyed Peas, Catjang, Chinese Longbeans, Cowpeas, Crowder Peas, Southern Peas, Yard-Longbeans, Broad Beans (fava beans), Chick Peas (garbanzo beans), Guar, Jackbean (sword bean), Lablab Bean (hyacinth bean), Lentils, Peas (garden peas, field peas, sugar snap peas, English pea, snow pea), Pigeon Peas, Soybeans, Sweet Lupin Beans, White Lupin Beans, White Sweet Lupin, Sword Bean.

FOLIAGE OF LEGUME VEGETABLES: Including: Plant part of any legume vegetable included in the legume vegetable group that will be used as animal feed including any variety of Beans, Field Peas, Soybeans.

FRUITING VEGETABLES: Including: Eggplant, Ground Cherry, Okra, Pepinos, Pepper (bell pepper, chili pepper, cooking peppers, pimentos, sweet peppers), Tomatillo, Tomatoes.

<u>CUCURBIT VEGETABLES:</u> Including: Balsam Apple, Balsam Pear (bitter melon), Chayote (fruit), Chinese Waxgourd (Chinese preserving melon), Chinese Cucumber, Citron Melon, Cucumber, Gherkin, Edible Gourds, Melons (including hybrids, cantaloupe, casaba, crenshaw, golden pershaw melon, honeydew melons, honey balls, mango melon, muskmelon, Persian melon, pineapple melon, Santa Claus melon, snake melon), Pumpkin, Squash (summer and winter), Watermelon (including hybrids).

<u>CITRUS FRUITS:</u> Including: Calamondin, Citrus Citron, Citrus Hybrids, Grapefruit, Kumquats, Lemons, Limes, Mandarin (tangerine), Orange (sweet and sour), Pummelo, Satsuma Mandarin, (Citrus spp. includes chironja, tangelos, tangors).

POME FRUITS: Including: Apple, Crabapple, Loquat, Pear, Mayhaw, Oriental Pear, Quince.

STONE FRUITS: Including: Apricot, Cherry (sweet and sour), Nectarine, Peach, Plum, Prune, Chickasaw Plum, Damson Plum, Japanese Plum, Plumcot.

SMALL FRUITS AND BERRIES: Including: Blackberry, Blueberry, Cranberry, Currant, Dewberry, Elderberry, Gooseberry, Grape, Huckleberry, Loganberry, Olallie Berry, Raspberry (black and red), Strawberry, Youngberry.

TREE NUTS: Including: Almond, Beech Nut, Brazil Nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory nut, Macadamia Nut (bush nut), Pecan, Pistachio, Walnut, Black and English (Persian).

ORIENTAL VEGETABLES: Including: Acerola, Atemoya, Balsam Pear (bitter melon), Carambola, Japanese Artichoke, Chinese Broccoli (Gai Lan), Chinese Cabbage (Bok Choy, Napa), Chinese Mustard Cabbage (Gai Choy), Dasheen, Ginger, Ginseng, Chinese Longbeans, Mung Beans, Citron Melon, Japanese Radish (Daikon), Chinese Spinach, Chinese Waxgourd, Cilantro, Citron Melon, Rambutan, Water Chestnut.

SUBTROPICAL FRUITS: Including: Avocado, Banana, Carob, Barbados Cherry, Cherimoya, Dates, Durian (jackfruit), Feijoa, Figs, Guava, Kiwifruit, Lychee, Mango, Papaya, Passion Fruit, Persimmon, Pineapple, Pomegranate.

CEREAL GRAINS: Including: Barley, Buckwheat, Corn (sweet and field), Millet, Proso, Oats, Pearl Millet, Popcorn, Rice, Rye, Sorghum (Milo), Teosine, Triticale, Wheat, Wild Rice.

FORAGE. FODDER AND STRAW OF CEREAL GRAINS: Including: Barley, Buckwheat, Corn (sweet and field), Millet, Proso, Oats, Pearl, Popcorn, Rice, Rye, Sorghum (milo), Teosine, Triticale, Wheat, Wild Rice.

GRASSES FOR SEED. FORAGE. FODDER AND HAY: Including: any Grass

(Gramineal family, green or cured, except sugarcane and those listed in the cereal grains group), that will be fed to or grazed by livestock, all Pasture and Range Grasses and Grasses grown for hay and silage, Bermuda Grass, Bromegrass, Fescue.

NON-GRASS ANIMAL FEEDS: Including: Alfalfa, Velvet Bean, Clover, Kudzu, Lespedeza, Lupine, Sainfoin, Trefoil, Crown Vetch, Milk Vetch.

HERBS AND SPICES: Including: Allspice, Angelica, Anise (anise seed), Anise (star), Annatto (seed), Balm (lemon balm), Basil, Borage, Burnet, Camomile, Caper buds, Caraway, Caraway (black), Cardamom, Cassia bark, Cassia buds, Catnip, Celery seed, Chervil (dried), Chicory, Chive, Chive (Chinese), Cinnamon, Clary, Clove buds, Coriander (cilantro or Chinese parsley) (leaf), Coriander (cilantro) (seed), Costmary, Culantro (leaf), Culantro (seed), Cumin, Curry (leaf), Dill (dillweed), Dill (seed), Fennel (common), Fennel (Florence) (seed), Fenugreek, Grains of Paradise, Horehound, Hyssop, Juniper Berry, Lavender, Lemongrass, Lovage (leaf), Lovage (seed), Mace, Marigold, Marjoram (includes sweet or annual marjoram, wild marjoram or oregano and pot marjoram), Mustard (seed), Nasturtium, Nutmeg, Oregano, Mint, Paprika, Parsley (dried), Pennyroyal, Pepper (black), Pepper (white), Poppy (seed), Rosemary, Rue, Saffron, Sage, Savory (summer and winter), Sweet bay (bay leaf), Tansy, Tarragon, Thyme, Vanilla, Wintergreen, Woodruff, Wormwood.

ADDITIONAL PLANTS: Including: Artichoke, Asparagus, Avocado, Coffee, Cotton, Hops, Jojoba, Mushroom, Okra, Olives, Peanuts, Pineapple, Rice, Safflowers, Sesame, Sugar Cane, Sunflower, Tea.

USE ON GREENHOUSE FRUITS, VEGETABLES, FLOWERS AND FOLIAGE PLANTS:

USED ALONE: Combine 8 fluid ounces (1/2 pint) to 32 fluid ounces (1 quart) with 30 gallons of water for applications with conventional hydraulic sprayers or 1 to 2 fluid ounces per gallon of water for applications with compressed sprayers.

MIXING AND APPLICATION

SHAKE WELL BEFORE USING. Apply XPECTRO OD using hand-held, ground and/or aerial spray equipment; low-volume application equipment and chemigation (follow specific instructions provided in the <u>Directions for Application Through Irrigation Systems</u> section of this booklet). XPECTRO OD 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 XPECTRO OD to suspend spores then with agitator running, slowly add desired quantity of XPECTRO OD to spray tank. Add remainder of desired amount of water. Continue agitation throughout loading and spraying. Triple rinse empty XPECTRO OD container with water and add rinse water to spray tank. For best results, continue agitation during spraying. Do not mix more XPECTRO OD than needed for that day. Do not mix XPECTRO OD the day before application. Spores will die if left overnight or longer in the spray tank.

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

DOSAGE RATE

Apply at a rate of up to 2 quarts of XPECTRO OD per 100 gallons of spray volume. Mix well by external mixing, in-tank mixing, or pump circulation to form emulsion. Most target insects can be controlled at a rate of 1 quart per 100 gallons of water, 1/2 quart per 50 gallons of water, 1 pint per 25 gallons of water. DO NOT WET PLANTS TO POINT OF RUNOFF OR DRIP.

Typical Application Rates/100 Gallons of Spray Volume

Whitefly, Mealybugs, Aphids, Thrips, Spider Mites½ to 1 quart of XPECTRO OD/100 gallons spray volume Other labeled insects......½ to 1 quart of XPECTRO OD/100 gallons spray volume depending on insect population and foliage density.

DOSAGE RATE FOR FIELD. AGRONOMIC AND VEGETABLE CROPS: RANGELAND AND IMPROVED PASTURES

Ground Application

Apply ¼ to 2 quarts XPECTRO OD/acre in sufficient water to thoroughly cover foliage infested with insects, typically 5 to 100 gallons of water per acre. Final spray volume can be up to 400 gallons per acre. Water volume depends on spray equipment, crop canopy and target pest. **DO NOT WET PLANTS TO POINT OF RUNOFF OR DRIP.**

Apply XPECTRO OD up to a maximum of 2 quarts per acre for extreme insect pressure or dense foliage.

Aerial Application

Apply ¼ to 1 quart XPECTRO OD/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. Do not apply when wind speed favors drift beyond the area intended for treatment.

Leaf-Feeding Lepidoptera

For use against diamondback moth, imported cabbage worm and cabbage looper; XPECTRO OD can be used alone. Do not exceed label dosage rates. This product cannot be mixed with any product containing a label prohibition against such mixing. For additional information, contact LAM International Corporation.

Typical Application Rates/Acre

Diamondback moth	½ to 1 quart of XPECTRO OD/acre
Imported cabbage worm	½ to 1 quart of XPECTRO OD/acre
Cabbage looper	1 quart of XPECTRO OD/acre

Leaf-Feeding Beetles

For use against Colorado potato beetle; XPECTRO OD can be used alone 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. For additional information, contact LAM International Corporation.

Typical Application Rates/Acre

APPLICATION FREQUENCY

Apply XPECTRO OD 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.

PLANT SAFETY

XPECTRO OD 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 XPECTRO OD 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

XPECTRO OD is physically and biologically compatible with a wide range of insecticides and spray adjuvants. It is compatible with some fungicides in tank mixtures. Fungicides can kill the spores. Do not exceed label dosage rates.

Adjuvants XPECTRO OD is designed for application without additional wetting agents and spreaders. If adjuvants are needed for some other reason, contact your dealer or LAM International Corporation for specific

XPECTRO OD; EPA Reg. No. (pending as File Symbol 82074-L)

recommendations. Some wetting agents and spreaders kill the spores, the active ingredient in XPECTRO OD, or contribute to poor mixing and spray problems.

<u>Compatibility With Chemical Insecticides</u> XPECTRO OD is compatible with most chemical insecticides. However, some insecticide formulations can kill the fungal spores, part of the active ingredient in XPECTRO OD. If you are going to use XPECTRO OD in combination with other pesticides, contact your dealer or LAM International Corporation for specific information. In all cases, pesticides must be used in accordance with their labels.

<u>Compatibility With Fungicides</u> XPECTRO OD is compatible in tank mix with some fungicides. Contact LAM International or your dealer for specific recommendations on using XPECTRO OD with fungicides.

DIRECTIONS FOR APPLICATION THROUGH IRRIGATION SYSTEMS

Apply this product only through sprinkler (including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move) irrigation systems. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, 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 the operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

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

Systems must be 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.

Constant agitation must be maintained in the chemical supply tank during the entire period of insecticide application. Greater accuracy in calibration and distribution will be achieved by injecting a larger volume of more dilute suspension per unit of time.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE

Store in a cool, dry place. Store between 40 and 75 degrees. XPECTRO OD 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 HANDLING

Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying.

(For containers ≤5 gallons)

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.

(For containers > 5 gallons)

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution in each direction, with each revolution taking less than 30 seconds. Then stand the container on its end and tip it back and forth several times. Turn the container over onto its other end (top) and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate in a separate container for later disposal. 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.

CONDITIONS OF SALE

XPECTRO OD 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. To the extent consistent with applicable law, 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.