



For Organic Production

Specimen Label

- Agriculture, Golf Courses, Parks, Commercial Horticulture, Greenhouses, Turf & Ornamentals
- Emulsifiable Concentrate Antifeedant, Insect Repellent, Insecticide, Miticide, Fungicide & Nematicide
- Broad spectrum insecticide
- Works against insects, fungus, mites and nematodes
- DEBUG controls Aphids, Whiteflies, Caterpillars, Beetles, Grubs, Leafminers, Mites and more

ACTIVE INGREDIENTS:	
Fats and Glyceridic Oils Margosa	15.04%
Azadirachtin	0.70%
OTHER INGREDIENTS:	84.26%
TOTAL:	100.00%
1.23 Lbs. (558 grams) active ingredient per gallon of product	

KEEP OUT OF REACH OF CHILDREN CAUTION

See inside for first aid and precautionary statements.

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 requirement specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation. Refer to the attached booklet for the listing of crops and pests treated, dilution directions and application rates.

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 personnel protective equipment (PPE), notification to workers, and restricted-entry interval. The requirements in this box 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.

PPE required for early entry into 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 barrier laminates or butyl rubber or nitrile rubber or PVC.
- Shoes and socks

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 on agricultural plants on farms, forests, nurseries, or greenhouses. Keep unprotected persons out of treated areas until sprays have dried.

PLEASE READ THE FOLLOWING INFORMATION CAREFULLY BEFORE USING DEBUG® OPTIMO

TANK MIXING and MIXING DIRECTIONS:

Follow the most restrictive of the labeling limitations and precautions of all products used in mixtures

DEBUG® OPTIMO is compatible with commonly used insecticides, fungicides and foliar fertilizers. Do not use DEBUG OPTIMO with Bordeaux mixture, lime sulfur or other highly alkaline materials.

It is advisable to pre-test the tank mix combination proposed on a few plants to observe phytotoxicity, if any. The climatic conditions and cultural practices may be different in the actual field than experimental conditions. This product is damaged by oxidants. Do not mix acids and bleaches with DEBUG OPTIMO.

1. Determine the acreage to be treated with DEBUG OPTIMO.
2. Fill tank with appropriate amount of water.
3. Add the pre-measured amount of DEBUG OPTIMO.
4. Keep tank agitated with an agitation device. Proper agitation is required, especially when mixing DEBUG OPTIMO with other pesticides.

SPRAYING DIRECTIONS:

Spray DEBUG OPTIMO using a boom system, propeller turbine system (indicated for orchards); pressure hose with gun sprayers, powered back sprayers and manual hand sprayers. Use a minimum boom pressure of 160 psi and maximum tractor speed of 2.0

miles per hour. Use horizontal nozzles at 10- inch spacing and two vertical drops, one at each end. Each vertical drop must have two nozzles, one at 90° angle and the other at 45° angle. The water used for mixing should have a pH at about 5.5 for DEBUG OPTIMO to be most effective. If necessary, use a buffer to bring the pH to the desired level.

1. DURING APPLICATION, MAKE SURE THAT THE SPRAY COVERS THE ENTIRE PLANT INCLUDING THE UNDERSIDE OF LEAVES.
2. AERIAL APPLICATIONS: DEBUG OPTIMO may be aerially applied using suitable equipment such as fixed-wing aircraft or helicopters.

CHEMIGATION DIRECTIONS

GENERAL CHEMIGATION REQUIREMENTS:

1. Apply this product only through sprinkler, or drip (trickle) irrigation systems. Do not apply this product through any other type of irrigation system.
2. Crop injury or lack of effectiveness can result from non-uniform distribution of treated water.
3. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
4. 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.
5. 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 REQUIREMENTS:

1. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. 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.
5. Do not apply when wind speed favors drift beyond the area intended for treatment.
6. Agitation is generally recommended in the pesticide supply tank.
7. Apply this product continuously for the duration of the water application.
8. A supply tank is recommended for this product. If using a supply tank, dilute this product at the rate of 1.25 gallons per 500 gallons of water.
9. Apply between 1200 to 1500 gallons of water per acre to achieve efficacy.

DRIP (TRICKLE) CHEMIGATION REQUIREMENTS:

1. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Agitation is generally recommended in the pesticide supply tank.
8. Apply this product continuously for the duration of the water application.
9. A supply tank is recommended for this product. If using a supply tank, dilute this product at the rate of 1.25 gallons per 500 gallons of water.
10. Apply between 1200 to 1500 gallons of water per acre to achieve efficacy.

For Golf Courses, Parks, Agricultural, Commercial Turf & Ornamentals NEMATODE AND TURF INSECT CONTROL

Controls many insects including:

Red ants, Cutworms, Grubs, Chinch bugs, Crickets, Aphids, Whiteflies, Thrips, Beetles, Leafhoppers, Fruitworms, Caterpillars, Cabbage loopers, Armyworms, Colorado potato beetles, Diamondback moths, Grasshoppers, Maggots, Weevils, Chafers, Spider Mites, spittlebugs, Webworms, Rhizoctonia solani, Sclerotium rolfsii, Sclerotinia sclerotiorum, Fusarium oxysporum, Rust, and Powdery Mildew, Pythium

1. SHAKE THIS CONTAINER WELL BEFORE USE.
- 2A. FOR NEMATODE CONTROL: (Ornamentals and Turf)
MIX 24 to 48 FL. OZ OF DEBUG OPTIMO WITH 2 TO 50 GALLONS WATER TO SPRAY ON 1000 SQUARE FEET. Using sprinklers, deliver additional amounts of water to push the material to the required depth below ground level. Apply every week or as needed. Repeat application if the nematode count is over the threshold limit.
- 2B. FOR INSECT AND WORM CONTROL (see above list):
MIX 1 to 2 FL. OZ. OF DEBUG OPTIMO IN 2 TO 3 GALLONS OF WATER (or 48 FL. OZ. to 96 FL. OZ. of DEBUG OPTIMO with 100 gallons water per acre). Ensure that pH of this mixture is around 5.5 by using a buffer. Spray the mixture on to 1000 square feet of turf. Using sprinklers or other means, deliver additional amounts of water to push the material to ¼ inch - ½ inch below ground level. For worm and insect control apply at the earliest sign of infestation. Repeat the application at 7 - 10 days interval if infestation persists.
3. SPRAY DEBUG OPTIMO IN THE EARLY MORNING OR LATE AFTERNOON OR EVENINGS.
4. USE ALL OF THE DILUTED MATERIAL SOON AFTER MIXING. DO NOT SAVE MIXED MATERIAL.
5. USE AS A PREVENTATIVE TO KEEP INSECTS AWAY.

GENERAL:

- DEBUG OPTIMO is more effective when used as a preventative.
- DEBUG OPTIMO is a broad-spectrum herbal insecticide.
- DEBUG OPTIMO affects the insects at all stages of growth.
- SHAKE THE CONTAINER WELL, BEFORE USE.
- IF GELLING OCCURS, WARM IT TO ROOM TEMPERATURE BEFORE APPLICATION.

AGRICULTURAL, COMMERCIAL HORTICULTURAL, AND GREENHOUSE USE CROPS AND APPLICATION SITES

Top fruits including but not limited to Citrus, Lemons, Oranges, Grapefruits, Pummelo, Apples, Plums, Peaches, Apricots, Avocados, Figs, Prunes, Nectarines, Pears. Mangoes, Cherries, Kiwifruit, Kumquats, Loquats, Quinces, Persimmons and Palm. Cucurbits, Watermelons, Gherkins, Squashes, Pumpkins, Gourds, Bitter melons, Chayote, Okra, Asparagus and Melons. Bulb, Cole and Leafy vegetables including but not limited to Broccoli, Brussels sprouts, Cabbage, Cauliflower, Celery, Lettuce, Endives, Kale, Parsley, Onions, Garlic, Shallots, Leeks, Kohlrabi, Chard, Collard, Amaranth, Radicchio, Chicory, Mustard Greens, Rapeseed, Mizuna, Arugula and Spinach.

Root and Tuber vegetables including but not limited to Beets, Carrots, Ginger, Radish, Horseradish, Potatoes, Turnips, Yams, Sweet Potatoes, Ginseng, Rutabagas, Watercress, Artichokes and Turmeric.

Legumes including but not limited to Beans, Lentils, Peas, Peanuts, Soybeans and Garbanzo Beans.

Cereals including but not limited to Barley, Corn, Millet, Rice, Rye, Sorghum, Triticale, Oats and Wheat.

Alfalfa and other feed & forage crops. Grasses.

Fruiting vegetables including but not limited to Tomatoes, Tomatillos, Bell Peppers, Chili Peppers, and Eggplant.

Berries including but not limited to Blackberries, Blueberries, Currants, Strawberries, Cane berries, Gooseberries, Raspberries, Cranberries, Loganberries, Huckleberries, and Boysenberries, Grapes.

Tropical fruits including but not limited to Banana, Cherimoyas, Mangoes, Guavas, Papayas and Pineapple.

Cotton and oilseeds including but not limited to Canola, Sesame, Rapeseed, Sunflower, Safflower, Olive, Peanut and Jojoba.

Herbs & Spices including but not limited to Mints, Anise, Basil, Chives, Coriander, Dill, Fennel, Marigold, Sage, and Thyme. Mushrooms, including but not limited to Agaricus, Bella, Enoki, Maitake, Oyster, Shiitake, and other specialty mushrooms. Nuts including but not limited to Almonds, Pecans, Pistachios, Cashews, Chestnuts, Macadamia, Hazelnuts, Brazil nut, Water chestnuts, and Walnuts.

Hemp, Coffee, Tea, Tobacco, and Sugarcane.

Greenhouse Crops and ornamentals including but not limited to Chrysanthemums, Poinsettias, Roses, Lilies, Geraniums, Daisies, Carnations, Salvias and Dahlias. All Starter Crops.

INSECT PESTS/MITES/DISEASES/NEMATODES

Aphids

Armyworms

Fall Armyworms

Beetles, Bean leaf Beetles, Cucumber Beetles, Japanese Beetles, Mexican Beetles,

Colorado Potato Beetles, Potato Flea Beetles, Corn beetles, Flea Beetles

Borers, Budworms.

Casebearers, Caterpillars, Codling Moth Fruit Flies

Gnats, Fungus Gnats, Grasshoppers, Grubs

Leafhoppers, Leaf Perforators, Leafminers,

Leafrollers, Loopers, Cabbage loopers, Lygus Bug Maggots, Onion Maggots, Mealybugs

Mildew, Rust and Powdery Mildew.

Mites, Twospotted Spider Mites, Pacific Spider mites, Moths, Diamondback Moths, Gypsy

Moths, Grape Berry Moths,

Nematodes

Orange Tortrix

Phylloxera, Pythium, Psylla, Psyllids

Rhizoctonia Solani

Scales, San Jose Scale

Sclerotinia Sclerotiorum

Sclerotium Rolfsii

Sharpshooters

Sucker Ants

Thrips

Weevils, Pepper Weevils, Boll weevils

Whiteflies

Worms

Wireworms

Webworms

Budworms

Alfalfa Worms

Boll Worms

Pickle Worms

Fagot Worms, Root Worms, Ear Worms, Cut Worms

DIRECTIONS FOR CROP APPLICATIONS

STANDARD APPLICATION : ALL APPLICATION RATES ARE FOR ONE ACRE

16 Fl. Oz to 104 Fl. Oz. of DEBUG OPTIMO mixed with 100 gallons water or sufficient amount of water to ensure total foliar coverage. When applying in high population crops like berries and fruit trees, use dilution of 32 Fl. Oz. to 104 Fl. Oz. of DEBUG OPTIMO with 100 to 300 gallons of water.

Repeat application at 7 to 14 day intervals, at least once and if necessary additional times. For Greenhouse crops Prepare a 0.5% - 1% (0.6 oz – 1.25 oz./ Gal) solution of DEBUG OPTIMO in water and completely drench the plants. Repeat every 5 to 7 days until infestation clears. **For NEMATODE CONTROL use 104 oz. DEBUG OPTIMO per acre.** If using Drip Irrigation add enough water to deliver the product to the root zone. If using Sprinklers apply the product by sprayer in the planting bed. Then use sprinklers to deliver the product with enough water to reach the root zone. Repeat applications at the same rate above, as needed.

Livestock Production – (Only for application on floors)

Apply at the rate of not more than 1 Fl Oz. per 420 Sq. Ft. Must be diluted in sufficient quantity of water prior to application. Use handheld, backpack, or portable sprayers. Limit incidental drift. Cover all equipment used in milk production and anything else that might be hit with incidental spray, including animal feed and drinking water. Make sure spray gets into corners, cracks, and crevices where pests hide.

WE RECOMMEND USING DEBUG OPTIMO AS PREVENTATIVE APPLICATION EVEN IF THERE IS NO INFESTATION

Start applying when the plants are tall enough to be susceptible to infestation. Use the following:

- For **Baby Vegetables**, apply 10 days after planting and repeat again in 7 to 10 days.
- For **Regular Vegetables**, apply when the plant has grown two leaves or is 6 inches tall. Repeat application every 10 to 15 days.
- For **Fruit Trees**, apply when the tree ends dormancy and continue to repeat applications every 10 to 15 days.
- For **Berries**, apply when the plant ends dormancy and continue to repeat applications every 10 to 15 days.
- For **Grasses and Forage Crops like Alfalfa**, apply in spring, approximately 2 weeks after dormancy period is over, and repeat every 10 to 15 days.

Maximum application rate is 20 grams of active ingredient (104 fl oz. of DEBUG OPTIMO) or less per acre.

THERE IS NO LIMIT ON THE NUMBER OF APPLICATIONS.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if absorbed through skin or if inhaled. Causes moderate eye irritation. Avoid breathing spray. Avoid contact with skin, eyes or clothing. 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.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators, Mixers and other handlers must wear

- Coveralls
- Socks, shoes, and
- Chemical resistant 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.

USER SAFETY RECOMMENDATIONS

Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Users should 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

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 when disposing of equipment washwater or rinsate.

This product is toxic to fish and aquatic invertebrates. Drift or runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

PHYSICAL OR CHEMICAL HAZARDS

Combustible. Do not use or store near heat or open flame.

FIRST AID

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 mouth to mouth if possible.
- Call a poison control center or doctor for further treatment advice.

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 a poison control center or doctor for treatment advice.

HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For medical emergencies call your poison control center at 1-888-740-8712.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Keep in original packaging in cool and dry place (between 60 degrees F and 80 degrees F) away from sunlight and foodstuffs. Do not refrigerate.

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

CONTAINER HANDLING: Non-refillable container. Do not reuse or refill this container. Triple rinse (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into the application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 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 or dispose of in a sanitary landfill, or by incineration. Do not burn unless allowed by state and local ordinances.

WARRANTY:

MGK warrants that material contained herein conforms to the description on the label and is reasonably useful for the purposes referred to in the directions for use. Method of application and timing, weather, cultural practices, insect problem, crop condition, and incompatibility with other chemicals not specifically recommended in the use of this product are beyond the control of the seller. It is the manufacturer's intention that the buyer assumes risk of use, storage or handling of this material not in strict accordance with directions given herein.



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