

Messenger[®]GOLD

A Biochemical Pesticide that:

- Suppresses Nematode Egg Production
- Enhances Crop Growth, Quality and Yield
- Increases Plant Stamina and Vigor

Wettable Dry Granule

ACTIVE INGREDIENT:

Harpin $\alpha\beta$ Protein: 1.0%

OTHER INGREDIENTS: 99.0%

Total: 100.0%

EPA Reg. No. 71771-3

EPA Est. No. 69208-MO-001

KEEP OUT OF REACH OF CHILDREN

CAUTION

See additional precautionary statements elsewhere on this label.

Net Weight: 16 oz.

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CAUTION - PRECAUCIÓN**

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

Read the entire label before using this product. Read WARRANTY AND DISCLAIMER before buying or using. If terms are not acceptable, return at once unopened.

Net Weight: 16 oz.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful if inhaled. Avoid breathing dust or spray mist. Remove and wash contaminated clothing before reuse.

FIRST AID

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.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency medical treatment information, call the National Pesticide Information Center at 1-800-858-7378, 6:30 AM to 4:30 PM Pacific Time, seven days a week. During other times, call the poison control center at 1-800-222-1222.

See additional precautionary statements elsewhere on this label.



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PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Shoes and socks.

Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

- Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- 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. 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 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 the area during application. For any requirements 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 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.

Exception: If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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;
- Waterproof gloves; and
- Shoes and socks.

PRODUCT INFORMATION

MESSENGER GOLD stimulates the plant's natural growth and defense systems, enhancing overall plant health. Healthier plants exhibit increased plant stamina and vigor, leading to one or more of the following benefits: improved stand, suppressed nematode egg production, increased marketable yield, enhanced quality, extended shelf life, and improved transplant recovery.

MESSENGER GOLD is a tool for use in Integrated Crop Management (ICM). Product efficacy is based on its ability to activate the plant's own internal defense and growth mechanisms. MESSENGER GOLD works best when used in conjunction with good crop management practices.

NEMATODE EGG SUPPRESSION AND PLANT GROWTH

MESSENGER GOLD can be used to suppress nematode egg production while improving plant and root growth. MESSENGER GOLD offers a different mode of action for nematode suppression. Use of a labeled pre-plant application of a soil fumigant, contact nematicide, or nematicidal seed treatment is typically needed for nematode suppression in most crops. Apply MESSENGER GOLD for supplemental suppression of nematode egg production.

GROWTH ENHANCEMENT AND MARKETABLE YIELD

Use MESSENGER GOLD to overcome transplant shock, increase plant health and vigor, and to enhance crop quality and marketable production.

SITES

Use MESSENGER GOLD for greenhouse, shadehouse, and field production of all plants listed on this label.

COVERAGE

Use spray volume adequate to obtain coverage without runoff. Uniform or full leaf coverage is helpful but is not required.

DAYS TO HARVEST

MESSENGER GOLD can be applied up to the day of harvest.

USE PRECAUTIONS

USE PROMPTLY

Use product on the same day it is mixed with water and use opened packages within 3 weeks. Carefully reseal opened packages to minimize exposure to air and moisture.

TANK MIXING

Use in mixtures: MESSENGER GOLD is believed to be compatible with most other labeled pesticides, such as post-emergence herbicides, insecticides, acaricides, and fungicides, as well as most foliar nutritional products. To determine the physical compatibility of this product with other products, use a jar test. Using a quart jar, add the proportionate amounts of the products to approximately one quart of water with agitation. Add dry flowables first, then flowables, and then emulsifiable concentrates last. After thorough mixing, allow this mixture to stand for 5 minutes. If the combination remains mixed or can be readily remixed, it is physically compatible. Once compatibility has been proven, use the same procedure for adding products to the spray tank. Do not mix this product with any other product containing a label prohibition against such mixing. When tank mixing MESSENGER GOLD with any other approved pesticide, always read and follow all use directions, restrictions, and precautions of both MESSENGER GOLD and the tank mix partner(s). The resulting tank mix must be used in accordance with the most restrictive label limitations and precautions. Do not exceed label dosage rates.

Precautions: Do not use MESSENGER GOLD in tank mixes or water below pH 5 or above pH 10. Do not mix this product with pyrophosphates, phosphoric acid, or other strong oxidizers.

Surfactants: Use only non-ionic adjuvants approved for use on growing crops.

DILUTION WATER QUANTITY

If 1 ounce of MESSENGER GOLD is diluted in more than 35 gallons of chlorinated water (e.g., municipal water), add a labeled water treatment product to remove excess chlorine before adding MESSENGER GOLD. Consult your Plant Health Care representative if you need further directions on water treatment.

CROP RIPENING

Crop maturing can infrequently differ in crops treated with MESSENGER GOLD. User must monitor crops for maturity and harvest accordingly.

RAIN

Do not apply during rain. Reapplication is not necessary if the spray has dried before rain begins.

STRESSED PLANTS

Plants must be actively growing at the time of foliar applications. Applications made to plants that are stressed by extreme heat, cold, moisture, or nutrient deficiency can be less effective.

SPRAY DRIFT

Avoiding spray drift at the application site is the responsibility of the applicator. The interactions of many equipment- and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering these factors when making decisions.

MIXING INSTRUCTIONS

- Step 1:** Fill at least one-half of the mix tank with clean water. Provide gentle agitation.
- Step 2:** If 1 ounce of MESSENGER GOLD is diluted in more than 35 gallons of chlorinated water, add a labeled water treatment product and continue gentle agitation (see Use Precautions on "Dilution Water Quantity").
- Step 3:** Add the required amount of MESSENGER GOLD. Agitate until dissolved and avoid excessive foaming.
- Step 4:** If tank mixing, add other materials to the mix tank. Add remaining water to mix tank.
- Step 5:** Continue gentle agitation and apply promptly.

APPLICATION INSTRUCTIONS

Apply MESSENGER GOLD as a pre-transplant foliar, root dip, or as a foliar application.

Pre-Plant Dip: Apply MESSENGER GOLD as a pre-plant foliar or root dip to vegetable crops (e.g., cucurbit and cole vegetables), ornamentals, tobacco, and small fruit crops at the rate of 3 - 4 oz per 100 gallons of water immediately prior to transplanting. Completely immerse planting stock in solution. Dip, soak, or expose plants for a minimum of 2 to 5 minutes. DO NOT reuse dip solution. Dispose of dip solution according to local restrictions. Plant treated plants as quickly as possible. For continued

crop management, follow with foliar applications of MESSENGER GOLD as specified in the tables that follow.

Foliar Application: Apply MESSENGER GOLD as a greenhouse or field application using conventional ground or aerial equipment. Use MESSENGER GOLD to enhance plant growth and vigor, to increase marketable production, or as part of an integrated pest management (IPM) program to assist disease management.

CROPS AND APPLICATION RATES

Use the following tables to make decisions on application rates and timing. Follow applicable specifications for your crop.

NEMATODE SUPPRESSION	
Use MESSENGER GOLD for supplemental suppression of nematodes. Use MESSENGER GOLD in conjunction with other nematode management practices. Use rates are specified beside each crop or crop grouping in tables below.	
Crop	Use Instructions
DIRECT-SEEDED CROPS	In Field: Use MESSENGER GOLD following a pre-plant application of soil fumigant, contact nematocide, or nematocidal seed treatment, if available. Make first foliar application of MESSENGER GOLD at 2 - 3 weeks after plant emergence. Re-apply as specified in tables below.
TRANSPLANTED CROPS	Use MESSENGER GOLD following a pre-plant application of soil fumigant, contact nematocide, or nematocidal seed treatment, if available. Pre-Plant: Apply MESSENGER GOLD as a pre-plant foliar or root dip at the rate of 3 - 4 oz per 100 gallons of water immediately prior to transplanting. In Field: Make first foliar application of MESSENGER GOLD at 2 - 3 weeks after transplanting. Re-apply as specified in tables below.

Crop	Use Instructions		
PERENNIAL CROPS	<p>In Field: Use MESSENGER GOLD following a pre-plant application of soil fumigant, contact nematicide, or nematocidal seed treatment, if available. Make first foliar application of MESSENGER GOLD after plants break dormancy and begin root growth. Re-apply as specified in tables below.</p>		
GROWTH ENHANCEMENT AND MARKETABLE YIELD			
Crop	Rate (Oz/Acre)	Dilution* (Gal/Acre)	Timing
VEGETABLES			
POTATO	1 - 2	20 - 125 by ground. 2 - 50 by air.	Apply at tuber initiation. Repeat applications as needed every 21 - 28 days.
POTATO Seed Production			Apply at first hook and repeat applications as needed every 21 - 28 days.
PERENNIAL VEGETABLES Globe Artichoke, Asparagus	Begin applications when new growth starts in spring. Repeat at 21- to 28-day intervals as needed.		
OTHER ROOT AND TUBER VEGETABLES (e.g., Carrots)	2 - 3	Apply after complete emergence during vegetative growth phase.	
OTHER VEGETABLES Bulb, Leafy, Cole, Fruiting (e.g., Okra, Peppers, Tomatoes), Cucurbit, Legume (e.g., Snap Beans)		Begin applications prior to first bloom. Repeat applications at 21- to 28-day intervals. For direct-seeded plants, begin at first true leaf.	

Crop	Rate (Oz/Acre)	Dilution* (Gal/Acre)	Timing
SWEET CORN (Fresh or Seed)	0.5 - 1	10 - 50 by ground. 2 - 50 by air.	Make 1 - 2 applications before tassels present.
TOBACCO			
TOBACCO - All Types	2 - 4	20 - 125 by ground. 2 - 50 by air.	Begin applications when plants are established. Repeat at 21- to 28-day intervals as needed.
BERRIES, SMALL FRUIT, TREES, VINES AND SPECIALTY CROPS			
BERRIES AND SMALL FRUIT - All Types	2 - 4	20 - 125 by ground. 2 - 50 by air.	Begin applications when plants are established or 14 days after full leaf emergence. Repeat at 21- to 28-day intervals as needed.
HERBS - All Types		20 - 200 by ground. 2 - 50 by air.	Apply at 21- to 28-day intervals, beginning 7 days after new growth/ new spring growth is initiated.
ALOE, BANANA, COFFEE, FIGS, MANGO, PAPAYA		10 - 200 by ground. 2 - 50 by air.	Apply at 21- to 28-day intervals, beginning 7 days after new growth/ new spring growth is initiated.
AVOCADO, CITRUS, TREE NUTS, POME FRUIT Apple, Pear STONE FRUIT			Apply at 21- to 35-day intervals, beginning before bloom initiation. For peaches, apply at pit hardening and again 21 days later.

Crop	Rate (Oz/Acre)	Dilution* (Gal/Acre)	Timing
TREES Conifer, Broadleaf	2 - 4	10 - 200 by ground. 2 - 50 by air.	Apply after complete emergence.
VINE CROPS Grape (Juice, Raisin, Table, Wine), Kiwifruit, Hops			Apply at 21- to 28-day intervals, beginning when new shoot growth is present.
TURF			
TURF GRASSES Sod Farms, Grasses Grown for Seed	0.5 - 2	10 - 200 by ground. 2 - 50 by air.	Begin applications when plants are established or 14 days after full emergence. Repeat at 28- to 35-day intervals.

*See Dilution Water Quantity Use Precaution

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE

Keep product away from exposure to air, sunlight, moisture, or heat. Do not store in temperatures over 110°F for more than 7 days. Use product within 3 weeks of opening and the same day as mixing.

PESTICIDE DISPOSAL

Wastes resulting from use of this product must be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING

Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

WARRANTY AND DISCLAIMER

CONDITIONS OF SALE AND EXCLUSIVE WARRANTY

The Directions for Use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness of the product, or other unintended consequences may result because of such factors as horticultural practices, use with other products (unless otherwise expressly provided in the Directions for Use of this product), presence of other materials, the manner of use or application, and various environmental conditions, including but not limited to weather conditions and moisture conditions. To the extent consistent with applicable law, all of the aforementioned risks are beyond the control of Plant Health Care, Inc. and the Buyer shall assume all such risks.

EXCLUSIVE WARRANTIES

Plant Health Care, Inc. warrants that, at the time of first sale of this product, it conforms to the chemical description on this label and, under normal conditions, is reasonably fit for the purposes referred to in the Directions for Use, subject to the inherent risks referred to above. To the extent consistent with applicable law, if this product does not perform as warranted above, customer's sole remedy for breach of that warranty shall be replacement of the product or refund of the purchase price paid, at the option of Plant Health Care, Inc. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE

FOREGOING WARRANTIES AND REMEDIES ARE EXCLUSIVE AND ARE IN LIEU OF ALL OTHER WARRANTIES, TERMS, OR CONDITIONS EXPRESSED OR IMPLIED, EITHER IN FACT OR BY OPERATION OF LAW, STATUTORY OR OTHERWISE, INCLUDING BUT NOT LIMITED TO WARRANTIES, TERMS, OR CONDITIONS OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE, AND SATISFACTORY QUALITY.

LIMITATION OF LIABILITY

To the extent consistent with applicable law, Plant Health Care, Inc. excludes for itself and its suppliers any liability, whether based in contract or tort (including negligence), for incidental, consequential, indirect, special, or punitive damages of any kind, or for loss of revenue or profits, loss of business, or crop injury arising out of or in connection with the sale, use, injury, performance, or failure of this product, even if Plant Health Care, Inc. or its authorized reseller has been advised of the possibility of such damages, and limits its liability to replacement of the product or a refund of the purchase price paid, at the option of Plant Health Care, Inc. This disclaimer of liability for damages will not be affected if any remedy provided by this label fails of its essential purpose.

ASSUMPTION OF RISK

To the extent consistent with applicable law, Buyer and User of this product assume the risk of any use contrary to the Directions for Use and/or all of the risks inherent in the use of the product as set forth above. Plant Health Care, Inc. offers this product, and the Buyer and User accept it,

subject to the foregoing Conditions of Sale and Exclusive Warranty, which may be varied only by agreement in writing signed by a duly authorized representative of Plant Health Care, Inc.

PROMPT NOTICE OF CLAIM

Plant Health Care, Inc. must have prompt notice as soon as Buyer or User has reason to believe they may have a claim (not to exceed twenty-one days from the date of application) so that an inspection of the affected property and growing crops may be made. To the extent consistent with applicable law, unless Buyer and User promptly notify Plant Health Care, Inc. of any claims, they shall be barred from obtaining any remedy.

TANK MIXES

To the extent consistent with applicable law, tank mixing or use of this product with any other product, which is not specifically and expressly authorized by this label, shall be the exclusive risk of User, Applicator, and/or Application Advisor. Read and follow the entire label of each product to be used in a tank mix with this product.

LIMITED USE LICENSE AND PATENTS

The contents of this package and/or the use of the contents are covered by U.S. Patent Nos. 5,849,868, 5,859,324, 5,776,889, 5,977,060, and 6,277,814 as well as pending patent applications. The purchase of this package grants the Buyer a license, under these patents and patent applications, to use its contents only for treating plants, plant seeds, and other plant parts as described by this label.

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