


**messenger** STS

**A Biochemical Pesticide that:**  
 Activates Plant Growth and Defense Systems, Enhances Plant Health, Aids Post Harvest Disease Management, and Facilitates Integrated Pest Management Programs.

**Greenhouse · Nursery · Ornamentals · Trees · Turf**



**KEEP OUT OF REACH OF CHILDREN  
CAUTION  
PRECAUCION**

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.)

**ACTIVE INGREDIENT:**  
 Harpin Protein:..... 3.0%  
 OTHER INGREDIENTS: ...97.0%  
 Total:.....100.0%

**Net Weight: 8 oz.**

EPA Reg. No. 66834-2  
 EPA Est. No. 66834-NA-001

**EDEN BIOSCIENCE**

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See full label inside for additional precautionary statements, directions for use, as well as storage and disposal statements. Read the entire label before using the product. If the conditions of sale and exclusive warranty are not acceptable, return this product unopened within (30) days of purchase.

04.06/14 Messenger STS T&O-GH-US-Product M37E3

**PRECAUTIONARY STATEMENTS**

**HAZARD TO HUMANS & DOMESTIC ANIMALS**

**CAUTION**

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Shoes and socks.
- Particulate dust mask, when mixing.

**USER SAFETY RECOMMENDATIONS**

Users should wash hands before eating, drinking, chewing gum, using tobacco, or using toilet.

**ENVIRONMENTAL HAZARDS**

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 cleaning equipment or disposing of equipment washwaters.

**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 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), 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 restricted entry interval (REI) of 4 hours.

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 plant, soil, or water is:

- Coveralls over long-sleeved shirt and long pants;
- Waterproof gloves; and
- Shoes and socks.

**PRODUCT INFORMATION**

Messenger<sup>STS</sup> 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, increased marketable yield, enhanced quality, and extended shelf life. Messenger<sup>STS</sup> works best when used in conjunction with good crop management practices.

**GENERAL INSTRUCTIONS**

**GROWTH ENHANCEMENT AND MARKETABLE YIELD**

Use Messenger<sup>STS</sup> to increase plant health and vigor, to assist in the management of certain diseases, and to enhance crop quality and marketable production.

**POST HARVEST BENEFITS**

Messenger<sup>STS</sup> can be used to extend shelf life through pre-harvest applications.

**SITES**

Messenger<sup>STS</sup> may be used for greenhouse, shadehouse, nursery, outdoor home and garden, and field production on all crops 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<sup>STS</sup> may be applied up to or after harvest.

**USE ADVISORIES**

**USE PROMPTLY**

Use product within 8 hours of mixing into water. Reseal opened packets to minimize exposure to air and moisture. Use opened packets within 3 weeks.

**MIXING**

Messenger<sup>STS</sup> may be tank mixed with most other labeled pesticides to enhance efficiency. Do not use Messenger<sup>STS</sup> in tank mixes or water below pH 5.0 or above 10.0. Use of the resulting tank mix must be in accordance with more restrictive label limitations and precautions. No dosage rates should be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing. Messenger<sup>STS</sup> may be inactivated by exposure to strong oxidizing agents or materials that are strongly acidic or basic found in some tank mixes.

- Do not mix this product with pyrophosphates, phosphoric acid, or other strong oxidizers
- The active ingredient in Messenger<sup>STS</sup> is a protein, therefore, compatibility with inorganic salts, chemicals using clay-based formulas, or other materials in a tank mix cannot be assured under all circumstances.
- Only non-ionic adjuvants that have been approved for use on growing and harvested crops may be used.

Check with your local EDEN BIOSCIENCE field representative or EDEN BIOSCIENCE Customer Service for specific compatibility information for Messenger<sup>STS</sup> and other labeled products.

**DILUTION WATER QUALITY**

If dilution water is high in total mineral content, salinity, and/or suspended solids then first dissolve Messenger<sup>STS</sup> in an appropriate volume of "clean water" such as municipal tap water. Then pour the dissolved Messenger<sup>STS</sup> solution into the dilution water for the spray (see step 1 of "Mixing Instructions").

**DILUTION WATER QUANTITY**

For application rates of less than 4 oz per acre, if dilution water is chlorinated (e.g., municipal water) and the volume exceeds 150 gpa, then use labeled water treatment products to remove excess chlorine. Consult your EDEN BIOSCIENCE representative if you need further directions on water treatment.

**CROP RIPENING**

Crop maturity may be different in crops treated with Messenger<sup>STS</sup>. User must monitor crop 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 deficiencies may 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 the mix tank with clean water. Provide gentle agitation.

**Step 2:** If using more than 150 gpa of chlorinated water and an application rate of less than 4 oz per acre, add water treatment agent and continue gentle agitation (See Use Advisory on "Dilution Water Quantity").

**Step 3:** If dilution water quality is suspect, then pre-dissolve Messenger<sup>STS</sup> in "clean" water before adding to the mix tank (see Use Advisory on "Dilution Water Quantity").

Add the required amount of Messenger<sup>STS</sup>. Agitate until dissolved and avoid excessive foaming.

**Step 4:** If tank mixing, add other spray materials to the tank.

**Step 5:** Continue gentle agitation and apply promptly.

**APPLICATION INSTRUCTIONS**

**Foliar Application:** Messenger<sup>STS</sup> may be used as a greenhouse or field application using conventional ground or aerial equipment. Messenger<sup>STS</sup> is recommended to boost plant growth, vigor, and marketable production; and as part of an IPM program to assist disease management and obtain post harvest benefits. Use the following tables to make proper decisions on application rates and timing. Follow recommendations for your crop.

**Greenhouse and Transplant Applications**

Use Site & Crop	Rate	Timing
<b>Greenhouse:</b> Any Crop Listed Elsewhere on this Label and all Vegetable and Fruit Crops including:  Berries Cole Crops Cucurbits Fruiting Vegetables Herbs Leafy Crops Legumes Oil and Seed Crops Root and Tuber Crops Small Fruits Tree Fruits	8 oz per 100 gal water	Apply overhead applications after seeding emergence. Repeat every 14 - 21 days.
<b>Transplant</b> Any Crop Listed Elsewhere on this Label	8 oz per 100 gal water	Apply 57 days before transplanting. Can also be applied as a plant drench at transplanting.

**Trees**

Crop	Rate (Oz/Acre)	Dilution (Gal/Acre)	Timing
<b>TREES</b> Conifer Broadleaf	6 - 8	50-200 by ground. Minimum 3 by air.	Apply at approximately 14 day intervals beginning after complete emergence

**Turf and Ornamentals**

Crop	Rate (Oz/Acre)	Dilution (Gal/Acre)	Timing
TURF	2 - 4	10-200 by ground. Minimum 3 by air.	Apply after complete emergence during vegetative growth phase. Repeat at 21 - 28 day intervals as needed.
<b>ORNAMENTALS</b> Such as: Fresh Cut Flowers Bedding Plants Green Foliage Plants Woody Ornamentals Rose	4 - 8	10-200 by ground. Minimum 3 by air.	Begin applications prior to first bloom. Repeat at 21 - 28 day intervals or as needed.

**Pre-harvest Applications for Post-harvest Benefits**

Crop	Rate (Oz/Acre)	Dilution (Gal/Acre)	Timing
Any Crop Listed Elsewhere on this Label	6 - 8	20-200 by ground. Minimum 3 by air.	Apply 5-14 days before harvest. Use higher rates if no previous applications have been made.

**STORAGE AND DISPOSAL****GENERAL**

Do not contaminate water, food, or feed by storage and disposal. Keep product away from exposure to air, sunlight, moisture, or heat. Use product within 3 weeks of opening and within 8 hours of mixing.

**STORAGE**

Store dry and out of direct sunlight. Do not store in temperatures over 110° F for more than seven days.

**DISPOSAL OF PRODUCT**

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

**DISPOSAL OF CONTAINER**

Completely empty bag into application equipment. Then 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.

**LIMIT OF WARRANTY AND LIABILITY****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 should 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. All of the aforementioned risks are beyond the control of EDEN BIOSCIENCE Corporation and the Buyer shall assume all such risks.

**EXCLUSIVE WARRANTIES**

EDEN BIOSCIENCE Corporation warrants that at the time of first sale of this product it conforms to the chemical description on the label and under normal conditions is reasonable fit for the purposes referred to in the Directions for Use, subject to inherent risks referred to above. 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 EDEN BIOSCIENCE Corporation. TO THE EXTENT ALLOWED BY 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 full extent allowed by law, EDEN BIOSCIENCE Corporation 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 EDEN BIOSCIENCE Corporation 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 EDEN BIOSCIENCE Corporation. This disclaimer of liability for damages will not be affected if any remedy provided herein fails of its essential purpose.

**ASSUMPTION OF RISK**

Buyer and Users 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 this product as set forth above. EDEN BIOSCIENCE Corporation 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 EDEN BIOSCIENCE Corporation.

**PROMPT NOTICE OF CLAIM**

EDEN BIOSCIENCE Corporation must have prompt notice as soon as Buyer or User has reason to believe they may have a claim (not to exceed twentyone days from the date of application) so that an inspection of the affected property and growing crops may be made. Unless Buyer and Users shall promptly notify EDEN BIOSCIENCE of any claims, they shall be barred from obtaining any remedy.

**TANK MIXES**

Tank mixing or use of this product with any other product which is not specifically and expressly authorized by the 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 herein.

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