

72179-2

09/30/2005

1/4

KHH BioSci, Inc.

Milsana® bioprotectant Concentrate

A plant extract to boost the plants' natural defense mechanisms against certain fungal and bacterial diseases.

Active ingredient: Extract of *Reynoutria sachalinensis* 5.0 %
 Other ingredients: 95.0 %
 Total 100.0 %

EPA Reg. No. 72179-2

EPA Est. No. 070051-IND-001

KEEP OUT OF REACH OF CHILDREN

WARNING

ACCEPTED
 SEP 30 2005
 Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 72179-2

First Aid Statement	
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 eye. Call a poison control center or doctor for treatment advice.
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 SWALLOWED:	Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
IF INHALED:	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information on this pesticide product (including health concerns, medical emergencies, or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378.	

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING: Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear protective eyewear (goggles, face shield, or safety glasses). Harmful if absorbed through skin, swallowed or inhaled. Wash thoroughly with soap and water after handling. Avoid breathing spray mist. Remove contaminated clothing and wash clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

- Long sleeved shirt and long pants
- Shoes plus socks
- Chemical resistant gloves
- Protective eyewear

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

Net Contents: 55 gallon drum, 1 gallon, 2.5 gallon, 5 gallon

KHH BioSci, Inc. KHH BioSci, Inc. 634 Lake Hogan Lane Chapel Hill, NC 27516

User Safety Recommendations

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2/4

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. 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, 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 water 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 exemptions pertaining to the statements on this label about personal protective equipment (PPE) and the restricted entry interval (REI). The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of twenty-four (24) 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 plants, soil or water is:

- Coveralls
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

GENERAL INFORMATION

Milsana is an organic extract from the plant *Reynoutria sachalinensis* for use on ornamental plants and edible crops. Milsana applied to actively growing plants (see directions for use) will help make the treated leaf area resistant to certain plant diseases. It also will result in greener, healthier plants. In begonias increased flowering was noted.

Use Milsana as a preventative rather than a curative application. Apply prior to disease infestation to protect the growing leaf tissue. The principle diseases controlled in treated plants are powdery mildew (*Oidium* spp.), gray mold (*Botrytis* spp.) and rust (*Puccinia antirrhini*). See specific information under use directions for Ornamental Plants and Edible Crops.

MODE OF ACTION

The extract obtained from ground-up *R. sachalinensis* plant material contains the active chemical substances. These compounds, when applied to the host plant, raise their natural defense system, based on a five-fold increase in phenolics. This induced resistance against some important diseases is not systemic, but there is some translaminar protection. This means that new plant growth needs to be protected, therefore repeat applications at 7-14 day intervals. The resistance induction takes place in one to two days, therefore use Milsana as a preventative treatment. Light is required. In some rose varieties an increase of green leaf color has been observed.

RESTRICTIONS AND LIMITATIONS

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Do not apply through any type of irrigation equipment.
Do not apply more than 100 gallons of a 1% spray solution per acre.
Do not apply more than six applications per year.
Do not apply with non-phytotoxic oil.

Concentrations of 1% Milsana or more applied to very small, tender plants may produce plant injury. Do not use on Gerbera and Lisianthus plugs. Wait for two weeks after transplanting.

MIXING INSTRUCTIONS - SHAKE WELL PRIOR TO USE -

Milsana bioprotectant concentrate is a suspension concentrate (SC) consisting of certain natural ingredients. Milsana is an extract from Giant Knotweed (REYSA) that contains liquid and solid portions of the plant extract. Both are important for the resistance induction of the treated plants. Some of these ingredients tend to settle out after standing for an extended time in the container. **They need to be shaken vigorously to be re-suspended before using.** Use 50-mesh nozzle screens or larger.

Only the treated green tissues develop resistance, therefore coverage of foliage is important, although there is some translaminar movement. The general use rate is 0.5% v/v of Milsana concentrate in 50-100 gallons of water per acre. The larger sized crops and foliage need the larger volume in order to secure thorough coverage.

If mechanical mixing is available when preparing the spray solution, keep the agitator running. Apply with an anionic wetting agent such as Tween® 20 or Latron B-1956® at 0.02% v/v of the final water volume. Do not mix with any other ingredient unless specified on this label.

ORNAMENTAL PLANTS

The following plant species have been treated with Milsana, either for the purpose of rendering them more vigorous or to prevent disease. The disease most prominently controlled is powdery mildew (*Oidium* spp.), and there are also reports of gray mold (*Botrytis cinerea*) and rust (*Puccinia antirrhini*) control. Plants investigated:

Begonias	Lisianthus	Salvias
Crape myrtle	Petunias	Snapdragons
Freesias	Poinsettias	Zinnias
Gerbera	Roses	

Since it is not possible to test all ornamental species or varieties grown in the greenhouse, test Milsana on a few plants prior to large-scale usage.

Application Rates and Timing for Ornamental Plants

Mix Milsana bioprotectant concentrate with tap water at a concentration of 0.5% v/v (2 qts Milsana/100 gals water). For trial purposes use rates ranging from 0.25%-1% v/v. Begin applications preventatively (before disease symptoms become visible) at the 4-6 leaf stage and treat at 7-14 day intervals as needed prior to sale or harvest. Use water volumes between 50-100 gallons/acre. Spray until run-off. Make no more than six applications for annual ornamentals.

EDIBLE CROPS

Milsana bioprotectant used as specified and preventatively will increase the natural defense system of the treated plants listed below towards the diseases specified below.

LIMITATIONS:

Do not apply more than six applications per crop.
Do not apply more than two quarts of Milsana per acre seven days prior to harvest.

Application Rates and Timing for Edible Crops

Grapes and Cucurbits – Powdery mildew (*Sphaerotheca* spp.)

Apply Milsana preventatively at 0.5% v/v in 50-100 gallons of water on the crop when the first symptoms of powdery mildew are visible, or when disease pressure is high, and adding 0.02% v/v of a wetting agent. Repeat applications in 7-14 day intervals depending upon crop growth and disease pressure. Use the shorter interval for greenhouse cucurbits under high disease conditions.

Strawberries – Powdery mildew (*Sphaerotheca macularis*)

Apply Milsana at a concentration of 0.5%-1% v/v in 100 gallons of water at 7-14 day spray intervals as soon as first symptoms appear, adding 0.02% v/v of a wetting agent.

4/4

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Peppers and Walnuts – Bacterial blight (*Xanthomonas campestris*)

For the preventative control of bacterial blight apply 0.5%-1% v/v Milsana in 50-100 gallons of water and add a surfactant such as Nu-Film-P at 0.02% v/v. Repeat applications at 7-10 day intervals.

Lettuce – Powdery mildew (*Erysiphe cichoracearum*)

Apply Milsana preventatively at 0.5% v/v in 50 gallons of water, adding 0.02% v/v of a wetting agent such as Tween 20. Repeat applications at 10-14 day intervals.

Peppers– Powdery mildew (*Sphaerotheca* spp.)

For the preventative control of powdery mildew apply 0.5%-1% v/v Milsana in 50-100 gallons of water and add a surfactant such as Nu-Film-P at 0.02% v/v. Repeat applications at 7-10 day intervals.

Tomato – Grey mold (*Botrytis cinerea*)

For the preventative control of grey mold apply 0.5%-1% v/v Milsana in 50-100 gallons of water and add a surfactant such as Nu-Film-P at 0.02% v/v. Repeat applications at 7-10 day intervals.

INTEGRATED PEST MANAGEMENT (IPM)

Although only some conventional fungicides have been tested in an IPM regime with Milsana, results have been very satisfactory. One of the major objectives of IPM has been to reduce the probability of disease resistance development to a particular active ingredient.

The alternate use of Milsana (1-2 sprays) followed by a conventional, registered fungicide (1-2 sprays) has been successfully used in grapes, cucurbits and lettuce.

Follow label instructions of the particular registered product, not to exceed amounts or treatment intervals as in the label directions.

STORAGE AND DISPOSAL: Do not contaminate water, food, or feed by storage and disposal.

PESTICIDE STORAGE: Store in original container. Keep container tightly closed when not in use. Keep from freezing. Store in a heated warehouse.

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

CONTAINER DISPOSAL: Do not reuse empty container. Triple rinse container, then offer for recycling or puncture and dispose of in a sanitary landfill or by incineration, or if allowed by State and Local authorities, by burning. If burning is allowed, stay out of smoke.

WARRANTY

Other than as indicated on this product label, the seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning use of this product. The user assumes all risks of use, storage or handling that are not in strict accordance with the accompanying directions.

Label date:

US Patents No. 4,863,734 and No. 5,989,429

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