

# **CONIFERS (INCLUDING CHRISTMAS TREES) IN NURSERIES AND FOREST NURSERIES - PHYTOPHTHORA ROOT AND STEM DISEASES (1.25 PT/A)**

General Information

## **PRODUCT INFORMATION**

Subdue MAXX is a systemic fungicide for use on ornamental plants; ornamental bulb, corm, and tuber plants; conifers and conifer nurseries; Christmas trees and Christmas tree plantations; forest plantations; forest nurseries; and non-bearing fruit, citrus, and nut trees grown in greenhouses and nurseries (including field- and container-grown plants grown outdoors and in shade houses, lath houses, and other production sites and structures), retail nurseries, residential and commercial landscapes, and interior plantscape ornamentals; vegetable transplants grown for retail sale to consumers; and turf.

Subdue MAXX provides control of damping off, root and stem diseases caused by *Pythium* and *Phytophthora* spp., and foliar diseases such as downy mildew and those caused by *Phytophthora* spp., including *Phytophthora ramorum*.

## **PLANT SAFETY**

**NOTICE TO USER:** Due to the large number of species and varieties of ornamentals and nursery plants, it is impossible to test every one for tolerance to Subdue MAXX and tank mixtures with Subdue MAXX. Neither the manufacturer nor the seller has determined whether or not Subdue MAXX can be used safely on ornamental and nursery plants not specified on this label. The applicator must determine if Subdue MAXX and tank mixtures with other fungicides can be used safely prior to commercial use. In a small area, test the labeled rates for a particular group of unlabeled plants, i.e., bedding plants, foliage, etc., for phytotoxicity prior to widespread use.

## **Resistance Management**

Subdue MAXX is a systemic fungicide having a specific mode of action. Use of Subdue MAXX could result in development of insensitive strains of fungi. Development of insensitivity cannot be predicted. Consult with your State Agricultural Experiment Station or Extension Service Specialist for guidance and

ways to control any possible Subdue MAXX insensitive strains of fungi which may occur.

The active ingredient in Subdue MAXX is mefenoxam, a Group 4 fungicide (phenylamide). Some disease pathogens are known to have developed resistance to fungicides used repeatedly for their control. To prevent the development of insensitive strains of fungi to mefenoxam, apply Subdue MAXX in an alternation or tank-mix program with fungicides that are not in Group 4 and to which pathogen resistance has not developed.

Applications targeted for downy mildew diseases should always be in a tank mixture with a non-Group 4 fungicide.

For foliar applications to ornamentals and conifers, do not make more than one (1) application before alternating with a non-Group 4 fungicide for sequential foliar applications. For all other applications, do not make more than two (2) sequential applications of Subdue MAXX before alternating with a non-Group 4 fungicide. An example of a sound resistance management program would include two (2) Subdue MAXX applications (one could be a foliar application) followed by two (2) non-Group 4 fungicide applications.

## APPLICATION DIRECTIONS

### Methods of Application

Subdue MAXX may be applied through traditional spray equipment or through irrigation systems as a soil drench, soil surface (broadcast or banded), or as a stem and foliar spray. Subdue MAXX may also be incorporated into a pre-potting growing media for subsequent seeding or transplanting of ornamentals. Refer to Sections 7.0, 8.0, and 9.0 for specific use directions in addition to those given below. Refer to Section 4.3 for chemigation instructions.

### PRE-POTTING GROWING MEDIA MIX

Combine the specified rate of Subdue MAXX in Section 7.0 into 1.0 gallon of water. Uniformly mix this solution onto one (1) cubic yard of growing media. Uniform mixing can be accomplished by placing the potting mix in a rotating drum and spraying the Subdue MAXX solution onto the mix while the drum is rotating. It is recommended that this media treatment be prepared just prior to use.

### GROWING MEDIA DRENCH

Use enough of the specified Subdue MAXX water solution to wet the root zone of

plants. In general, 1.0 pt/sq ft of this solution is sufficient for ornamentals growing in containers with 4 inches of growing media. Containers with growing media depth greater than 4 inches generally require 1 1/2 to 2.0 pt/sq ft of the solution.

#### INTERIORSCAPE SOIL DRENCH APPLICATIONS AND INDIVIDUAL PLANT USE

In situations where water volumes used are much less than 100 gallons and the area treated is small, the table in Section 13.1 provides the Subdue MAXX rates to make small quantities of solution. Refer to the plant type for the correct amount of product to use when utilizing this table. Apply enough solution to the soil surface to wet the root area of the plants.

#### SOIL SURFACE SPRAYS

For best efficacy with soil surface applications, irrigate in with at least 1/2 inch of water within 24 hours. If applications are banded, calculate the amount of Subdue MAXX needed by using the formula in the label.

#### FOLIAR AND STEM SPRAYS

Apply thoroughly to all parts of the foliage and stems. For *Phytophthora* spp. and *Pythium* spp., you may apply Subdue MAXX alone. For downy mildew control (and following resistance management practices), you must apply in a tank mixture with a non-Group 4 fungicide.

#### Application through Irrigation Systems (Chemigation)

Subdue MAXX alone or in tank mixture with other pesticides registered for application through irrigation systems may be applied in irrigation water at rates specified on this label. This product may be applied through micro sprinkler or drip irrigation systems. Do not apply this product through any other type of irrigation system.

#### CHEMIGATION PRECAUTIONS

- Plant injury or lack of effectiveness may result from non-uniform distribution of treated water.
- If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.

#### CHEMIGATION RESTRICTIONS

- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system, unless the label-prescribed safety devices for public water supplies are in place.

- A person knowledgeable of the chemigation system and responsible for its operation shall shut the system down and make necessary adjustments should the need arise.

#### APPLICATION DIRECTIONS FOR IRRIGATION SYSTEMS (CHEMIGATION)

- Subdue MAXX must be applied on the schedule specified in the use recommendations, not according to the irrigation schedule.
- Only pressure injection or Venturi equipment may be used.
- The following calibration and application techniques are provided for user reference, but do not constitute a warranty of fitness for application through sprinkler irrigation equipment. Users should check with state and local regulatory agencies for potential use restrictions before applying any agricultural chemical through sprinkler irrigation equipment.

#### Calibration Instructions

- Each run of the irrigation system must be calibrated separately to determine the time it takes water to move through the system and to make sure all emitters in the system are putting out the same amount of water.
- Determine the area to be treated in each irrigation run.
- Measure the output of each of the emitters or drip tubes closest to and farthest from the injector site.
- For calibration, substitute a concentrated detergent (such as Wisk) for the Subdue MAXX in the injector tank. It is important to use the same volume of soap solution as the planned volume of Subdue MAXX solution when calibrating the system. The detergent will bubble as it leaves the emitters. The time period over which bubbles occur should be checked for both the closest and farthest emitters. If these times are not within 2 minutes of each other, adjust the dilution ratio and/or the injection rate.

#### Step-by-Step Calibration and Application Instructions

- Before starting to calibrate, operate the system until all the emitters are putting out at equal flow rates or until the system is operating at full pressure.
- Make up an indicator solution of detergent or fertilizer, using the same ratio to be used with mixing Subdue MAXX.
- Set the injector to apply the indicator solution at the injection rate to be used in the actual Subdue MAXX application.
- Attach a 5-inch length of flexible tubing over the emitter closest to the injection point, another length over the emitter farthest away. Both emitters should be

monitored to determine the time intervals that the indicator solutions are observed.

- Begin injecting the indicator solution. Direct the flow from the tubes at the emitters into a small container. Begin timing when the indicator solution is first detected, stop timing when the indicator solutions are no longer detected.
- If the period of detection of the indicator solution between the 2 emitters are within 2 minutes of each other, comparable coverage will be obtained. If they are not, make adjustments by increasing the dilution ratio, using more water per part of Subdue MAXX, or adjust the injector to a slower flow rate.
- Once the system is calibrated, dilute the needed amount of Subdue MAXX with water and any other tank mix partners in the injection tank using a minimum of 15 parts water to 1 part of Subdue MAXX in the solution tank. Liquid fertilizer may replace all or part of the water. If diluted in liquid fertilizer, the pH level must be less than 7.5. Follow the directions for mixing and equipment setup in the Mixing Instructions section of this label.
- Do not begin to inject Subdue MAXX into the system until all emitters are producing equal flow rates, or until the system is at full pressure. Inject the Subdue MAXX solution at a ratio of 50:1 or greater. Injecting a larger volume of a more dilute mixture will usually allow a more accurate calibration of the metering equipment.
- Inject the Subdue MAXX into the system at the beginning of the irrigation set in 1/2 to 1 inch of irrigation water.

#### SAFETY DEVICES FOR IRRIGATION SYSTEMS NOT CONNECTED TO A PUBLIC WATER SUPPLY

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 backflow.
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 the 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. Do not apply when wind speed favors drift beyond the area intended for treatment.

## SAFETY DEVICES FOR IRRIGATION SYSTEMS CONNECTED TO PUBLIC WATER SUPPLIES

If the source of water for your irrigation system is a public water supply, follow the instructions below.

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.

4. The pesticide injection pipeline must 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.

5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, 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. Do not apply when wind speed favors drift beyond the area intended for treatment.

#### ROTATIONAL CROP RESTRICTIONS

Crops listed in this label may be replanted immediately in soil treated with mefenoxam. All other crops may not be planted in mefenoxam-treated soil for a period of 12 months.

#### RESTRICTIONS AND PRECAUTIONS

##### Use Restrictions

Where mefenoxam/metalaxyl products used allow the same maximum poundage of active ingredient per acre per calendar year:

If more than one product containing mefenoxam/metalaxyl active ingredient is used on an acre during the same calendar year and the mefenoxam/metalaxyl products used allow the same maximum poundage of active ingredient per acre per calendar year, then the total poundage of all such mefenoxam/metalaxyl products used must not exceed any of the specified individual mefenoxam/ metalaxyl product maximum poundage of active ingredient allowed per acre per calendar year.

Where mefenoxam/metalaxyl products used allow different maximum poundage of active ingredient per acre per calendar year:

If more than one product containing mefenoxam/metalaxyl active ingredient is used on an acre during the same calendar year and the mefenoxam/metalaxyl products used allow different maximum poundage of active ingredient per acre per calendar year, then the total poundage of all such mefenoxam/metalaxyl products used must not exceed the lowest specified individual mefenoxam/ metalaxyl product maximum poundage of active ingredient allowed per acre per calendar year.

##### Spray Drift Management

To avoid spray drift, do not apply under windy conditions. Avoid spray overlap, or crop injury may result.

##### Limitations, Restrictions, and Exceptions

#### CONIFER USE DIRECTIONS (INCLUDING CHRISTMAS TREES)

## Application Timing

- Apply to seedbeds and plug-plantings in the spring and again in the fall.

## Use Directions

- Apply as a soil surface spray in at least 50 gallons of water per acre.
- For best efficacy, 1/2 inch irrigation or rainfall is required within 24 hours after application.

## Resistance Management:

- Refer to Section 3.2.
- Make only one foliar application of Subdue MAXX before alternating with a non-Group 4 fungicide for sequential foliar applications.

## Method

### [Soil Surface Spray](#)

## Rates

### [field\\_rates 0](#)

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## Restricted Entry Interval

48 hours

Exception: If the product is soil injected, soil-incorporated, or applied by soil drenching, 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:

There is no restricted-entry interval (REI) requirement following soil injection, soil incorporated, or a soil drench application to ornamentals.

## Timings

### [fall](#)