



Subdue

Granular Fungicide

For the control of certain diseases in ornamentals, turf, vegetable plant beds, nonbearing citrus, conifers, and nonbearing deciduous fruit and nut tree nurseries

25 pounds  
Net weight

10 pounds  
Net weight (sample size only)

Active Ingredient:

<b>Metalaxyl:</b> N-(2,6-dimethylphenyl)-N-(methoxyacetyl) alanine methyl ester .....	27%
Inert Ingredients: .....	73%
Total:	100%

Keep Out of Reach of Children.

CAUTION

See additional precautionary statements on back of bag. (at end of label - 10 lb. bag)

See directions for use on back of bag.

EPA Reg. No. 100-676

EPA Est. 100-AL-1 (25 lb. only)  
100-NC-2 (10 lb. only)

Control No. 55100 (25 lb. only)

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Agricultural Division  
CIBA-GEIGY Corporation  
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Greensboro, NC 27419

CGA  
CGA

SUBD/GR/F2



DIRECTIONS FOR USE AND CONDITIONS OF SALE AND WARRANTY

IMPORTANT: Read the entire Directions for Use and the Conditions of Sale and Warranty before using this product.

Conditions of Sale and 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 use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application all of which are beyond the control of CIBA-GEIGY or the Seller. All such risks shall be assumed by the Buyer.

CIBA-GEIGY warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use subject to the inherent risks referred to above. CIBA-GEIGY makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall CIBA-GEIGY or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product. CIBA-GEIGY and the Seller offer this product, and the Buyer and user accept it, subject to the foregoing Conditions of Sale and Warranty, which may be varied only by agreement in writing signed by a duly authorized representative of CIBA-GEIGY.

DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR DISEASE CONTROL OR CROP INJURY.

Do not apply this product in such a manner as to directly or through drift expose workers or other persons except those knowingly involved in the application. The area being treated must be vacated by unprotected persons.

Reentry Statement

Do not enter treated areas without protective clothing until dust has settled.

Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agricultural for further information.

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. Oral warnings must inform workers of areas or fields that may not be entered without specific protective clothing until dust has settled, and appropriate actions to take in case of accidental exposure, as described under Precautionary Statements on this label. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information: "CAUTION. Area treated with Subdue Granular Fungicide on (date of application). Do not enter without appropriate protective clothing until dust has settled. In case of accidental exposure, flush eyes or skin with plenty of water. Call physician if irritation persists. Remove and wash contaminated clothing before reuse."

General Information

Subdue Granular Fungicide is a systemic fungicide for use in ornamentals, turf, vegetable plant beds, nonbearing citrus, conifers and nonbearing deciduous fruit and nut trees in nurseries.

Note: 1) Subdue is a systemic fungicide having a specific mode of action. Use of Subdue could result in development of resistant strains of fungi. Development of resistance cannot be predicted. Therefore, CIBA-GEIGY cannot assume liability for crop damage resulting from resistant strains of fungi. Consult with your State Agricultural Experiment Station or Extension Service Specialist for guidance and ways to control any possible Subdue resistant strains of fungi which may occur. 2) To help increase the chance of downy mildew resistance, do not use Subdue for control of downy mildew diseases, except for use in turf. Use Subdue only as a soil application for control of soil-borne diseases.

### Calibration Instructions

It is important to calibrate the granule applicator before use. Even after calibration, it is best to check the actual application rate under your operating conditions. Application rates can vary due to changing moisture conditions, equipment wear, normal variation in product bulk density and particle size distribution.

Generally, calibrating a granule applicator can be done by following these simple steps:

1. Mark off a known area, usually 1,000 square feet.
2. At normal walking speed, simulate an application over the 1,000 square foot area and record the time taken to accomplish this.
3. Fill the applicator hopper with product. Set the applicator meter at a random setting.
4. Operate the applicator for the amount of time obtained in step 2 and collect the output of granules in a plastic bag, catch pans or other collection device.
5. Weigh the granules collected in ounces and compare this weight with the required application rate in ounces per 1,000 square feet from the product label. Repeat steps 1-4 until the correct meter setting is found that will deliver the required application rate.

Ornamentals

For control of damping-off, and root and stem rot diseases caused by Pythium and Phytophthora, use Subdue Granular Fungicide on container, bench, or bed-grown ornamentals in greenhouses or outdoor nurseries, and for professional use on ornamentals grown for indoor and outdoor landscaping. Use this product either as a soil surface application or soil mix on ornamentals at the time of seeding and transplanting. Within a rate range given for a specific group of ornamentals, use the lower rate for the shortest interval listed and the higher rate for the longest interval. Under severe disease conditions, use the highest rate and the shortest interval specified.

When applying Subdue Granular Fungicide to the soil surface, irrigate with enough water to completely wet the root zone after application. Do not exceed recommended rates or apply more frequently than directed, or plant injury may occur.

Notice to User: Plant tolerances to Subdue have been found to be acceptable for the specific genera and species listed on this label. 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. Neither the manufacturer nor the seller has determined whether or not Subdue can be used safely on ornamentals and nursery plants not specified on this label. The professional user should determine if Subdue can be used safely prior to commercial use. In a small area, test the recommended rates for a particular group of unlabeled plants, i.e., foliage plants, bedding plants, etc., for plant tolerance prior to widespread use.

When applying Subdue Granular Fungicide as a soil mix, components in the soil mix should be dry and free of lumps to ensure thorough mixing of the granules throughout the media. When making subsequent applications at the designated intervals, other registered Subdue formulations may be used. Refer to the respective product label for rates, precautions, and limitations relative to its use.

<p><u>Foliage Plants</u></p> <p>Aglaonema  Aphelandra  Dieffenbachia  Peperomia  Philodendron*  Pothos  Schefflera  Sedum  Sempervivum  Zygocactus</p>	<p><u>SOIL SURFACE APPLICATION:</u> Distribute 20-40 oz. uniformly over 1,000 sq. ft. of bed or bench area. Irrigate with enough water to thoroughly wet the root zone after application. Repeat applications at two to three month intervals if necessary.</p> <p>*On Philodendron, use 30-60 oz. per 1,000 sq. ft.</p> <p><u>Precaution:</u> To minimize the potential for injury to Pothos, do not use more than 22 oz. and do not apply more frequently than once every three months.</p> <p><u>SOIL MIX:</u> Thoroughly mix 4-8 oz./cu. yd. of soil or soil mix. After transplanting, irrigate with sufficient water to thoroughly wet the root zone. After a two to three month interval, Subdue Granular Fungicide may be reapplied as a soil surface application.</p>
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Bedding Plants

Ageratum  
 Algerian Ivy  
 Artemisia  
 Aster  
 Begonia  
 Caladium  
 Carnation  
 Chrysanthemum  
 Coleus  
 Daisy, Shasta  
 English ivy  
 Foxglove  
 Gaillardia  
 Geranium  
 Impatiens  
 Marigold  
 Pansy  
 Petunia  
 Phlox  
 Pinks  
 Primrose  
 Prostrate Rose-  
     mary  
 Salvia  
 Snapdragon  
 Verbena  
 Vinca  
 Zinnia

SOIL SURFACE APPLICATION:

At Transplanting (Soil 2-3 inches deep):  
 Uniformly apply 15-30 oz. to 1,000 sq.  
 ft. of bed area. Irrigate with enough  
 water to thoroughly wet soil after appli-  
 cation. Repeat applications at one to  
 two month intervals if necessary. Do  
 not apply rates of 22 oz. more than once  
 every six weeks.

SOIL MIX: Thoroughly mix 4-8 oz./cu. yd.  
 of soil or soil mix. After transplant-  
 ing, irrigate with sufficient water to  
 thoroughly wet the root zone. Subdue  
 Granular Fungicide may be reapplied after  
 six to eight weeks as a soil surface  
 application.

Precaution: Do not apply to English ivy  
more than once every six months, or in-  
jury may occur.

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<p><u>Flowers</u></p> <p>African violet  Anthurium  Baby's breath  Carnation  Chrysanthemum  Columbine  Delphinium  Easter lily  Geranium  Gloxinia  Poinsettia  Rose</p>	<p><u>SOIL SURFACE APPLICATION:</u> Uniformly apply 30-60 oz./1,000 sq. ft. Repeat application at one to two month intervals if necessary. Irrigate with enough water to thoroughly wet soil after application. Do not apply rates of 37 oz. more often than every six weeks.</p> <p><u>Precaution:</u> Do not apply more than 30 oz. to Easter lilies and only make one at-planting application.</p> <p><u>SOIL MIX:</u> Thoroughly add 4-8 oz./cu. yd. of soil or soil mix. After transplanting, irrigate with sufficient water to thoroughly wet the root zone. Subdue Granular Fungicide may be reapplied after six to eight weeks as a soil surface application.</p> <p><u>Precaution:</u> Do not use a soil mix application in Easter lilies.</p>
<p><u>Azalea</u></p>	<p><u>SOIL SURFACE APPLICATION:</u> Phytophthora root and crown rot - Uniformly apply 37-75 oz./1,000 sq. ft. of bed area. Irrigate with enough water to thoroughly wet the soil after application. Repeat applications at two to four month intervals if necessary.</p> <p><u>SOIL MIX:</u> Thoroughly mix 4-10 oz./cu. yd. of soil or soil mix. After transplanting, irrigate with sufficient water to thoroughly wet the root zone. After a two to four month interval, Subdue Granular Fungicide may be reapplied as a soil surface application.</p> <p><u>Precautions:</u> (1) To minimize the potential for injury to azaleas, do not apply repeat applications at rates greater than 75 oz. closer than every three months, and do not exceed a total of 125 oz. in six months. (2) Use the lower rate for "Coral Bell" variety.</p>

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<u>Woody Ornamentals</u> <u>Other Than Azalea</u>	<u>SOIL SURFACE APPLICATION:</u> Uniformly apply 62-125 oz./1,000 sq. ft. Irrigate with enough water to thoroughly wet soil after application. Repeat applications at two to three month intervals if necessary. Do not apply rates greater than 100 oz. more often than once every ten weeks.
<u>Aucuba japonica</u> Arborvitae Boxwood Ceanothus Cotoneaster Dogwood Ficus "Halls" Honeysuckle Ilex <u>Juniperus spp</u> Photinia <u>Pieris japonica</u> <u>Pinus spp.</u> Pittosporum Rhododendron White cedar White pine Yew	<u>SOIL MIX:</u> Thoroughly mix 4-12.5 oz./cu. yd. of soil or soil mix. After transplanting, irrigate with sufficient water to thoroughly wet the root zone. After a two to three month interval, Subdue Granular Fungicide may be reapplied as a soil surface application.
	<u>Precaution:</u> Do not apply to <u>Euonymus</u> or <u>injury may occur.</u>

Citrus in Nurseries (Nonbearing)

Use Subdue Granular Fungicide on nonbearing citrus for control of citrus foot rot, root rot, and trunk canker caused by Phytophthora spp. Apply to the soil as a broadcast application under the canopy of the trees. If rain is not expected within three days of application, water in with 1/2 inch of irrigation. For banded applications, use the formula below for calculating the amount of Subdue Granular Fungicide needed per acre of trees.

Make the first application of Subdue Granular Fungicide at the time of planting and make two additional applications at three-month intervals throughout the growing season. Apply 200 lbs./A as a broadcast or banded application to the seedbeds, liners or bedded stock. For banded applications, use a band wide enough to cover the root systems of the plants. Follow the application with 1/2 inch of irrigation if rainfall is not expected within three days.

Calculate the amount of Subdue Granular Fungicide needed for band treatment by the formula:

$$\frac{\text{band width in inches}}{\text{row spacing in inches}} \times \text{broadcast rate per acre} = \text{amount needed per acre of field}$$

Conifers in Nurseries

Subdue Granular Fungicide provides control of Phytophthora root rot of conifers.

Seedbeds and Plug-Plantings	Uniformly apply 31 lbs./A in the spring and again in the fall.
2-0 Transplants	Uniformly apply 62.5 lbs./A in the spring and again in the fall.

Deciduous Fruits and Nuts in Nurseries (Nonbearing)

Subdue Granular Fungicide provides control of Pythium root rot and Phytophthora root, crown, and collar rot of nonbearing deciduous fruits and nuts.

Make the first application of Subdue Granular Fungicide at the time of planting. Additional applications should be made at three-month intervals throughout the growing season.

Apply 200-400 lbs./treated acre (4.75-9.25 lbs./1,000 sq. ft.) uniformly under the canopy of the trees. Treat sufficient surface area in nurseries to cover the root zone of the trees. Use the high rate in areas known to be infested with Phytophthora.

Note: Do not apply to trees that will bear harvestable fruit within 12 months of application, or illegal residues may result.

Turf

Subdue Granular Fungicide controls Pythium blight and Pythium damping-off in turf, yellow tuft (downy mildew) in bluegrass, and downy mildew in St. Augustinegrass. Within the rate range given for turf, use the lower rate for the shortest interval listed and the higher rate for the longest interval. Under severe disease conditions, use the highest rate and shortest interval specified.

<u>Established Turf:</u> Pythium Blight Yellow Tuft Downy Mildew	Uniformly apply as a preventative treatment at 12.5-25 oz./1,000 sq. ft. Re-treat at 10-14 day intervals during periods favorable for disease development. <u>Irrigate with 1/4-1/2 inch water after application.</u>
<u>Newly Seeded Areas:</u> Pythium Damping-Off Pythium Blight Yellow Tuft Downy Mildew	Uniformly apply 12.5-25 oz./1,000 sq. ft. immediately after seeding. <u>Irrigate with 1/4-1/2 inch water. Re-treat at 7-14 day intervals if conditions remain favorable for disease.</u>

Precaution: To minimize the potential for resistance, (1) Make no more than three applications of Subdue Granular Fungicide per season and (2) Apply an alternate EPA-registered fungicide for Pythium control at least once during the season.

Vegetable Bedding Plants (Broccoli, Cabbage, Cauliflower, Tomatoes, Cucumbers, Lettuce, Melons, Spinach and Squash)

Pythium Damping-Off of Broccoli, Cabbage, Cauliflower, Tomatoes, Cucumbers, Lettuce, Melons, Spinach and Squash

Uniformly apply 25-50 lbs./A as a preplant broadcast application (12.5-25 oz. per 150 square yards of bed) before or at the time of seeding to the surface of the beds and lightly incorporate or follow with one-half inch sprinkler irrigation water.

Note: Do not use Subdue Granular Fungicide for disease control in vegetable plants grown in enclosed environments, i.e., greenhouse, glasshouse, etc.

Rotational Crops

Do not plant any food crop which is not registered for use with metalaxyl in metalaxyl-treated soil for a period of 12 months.

Storage and Disposal

Pesticide Storage and Disposal

Store in a dry place. Do not contaminate water, food or feed by storage, disposal, or cleaning of equipment. Open dumping is prohibited. Wastes resulting from the use of this product are toxic. Improper disposal of unused pesticide is a violation of federal law. Pesticide that cannot be used according to label instructions must be disposed of according to federal, state or local procedures. For guidance in proper disposal methods, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office.

Container Disposal

Completely empty bag into application equipment. Dispose of empty bag in a sanitary landfill or by incineration, or by open burning, if allowed by state and local authorities. If burned, keep out of smoke.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire or other emergency, call (919) 292-7100 day or night.

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Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION

Harmful if inhaled or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing dust. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

Statement of Practical Treatment

If in eyes: Flush eyes with plenty of water. Call a physician if irritation persists.

If inhaled: Remove victim to fresh air.

If on skin: Wash with plenty of soap and water.

Note to Physician: If Subdue Granular Fungicide is ingested, induce vomiting or lavage stomach. Treat symptomatically.

Environmental Hazards

Do not apply to water or wetlands (swamps, bogs, marshes, potholes). Do not contaminate water when disposing of equipment wash waters.

Subdue® trademark of CIBA-GEIGY for metalaxyl  
U.S. Patent No. 4,151,299

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Metalaxyl FRSTR

LABELS-S.1 - SUBD/GR/F2