

Actinovate[®] Lawn and Garden

biological
fungicide

PROD. # 5000-XXX

	% w/w
ACTIVE INGREDIENT	
<i>Streptomyces lydicus</i> WYEC 108*	00.0371%
OTHER INGREDIENTS	<u>99.9629%</u>
Total	100.0%

*End-use product contains not less than 1×10^7
CFU/g *Streptomyces lydicus* WYEC 108

KEEP OUT OF REACH OF CHILDREN CAUTION

Fight lawn & garden diseases such
as summer patch, dollar spot,
damping off and root rot.

For use with hose-end sprayer,
pump-up sprayer or watering can.

See attached booklet for additional First
Aid, Precautionary Statements, Complete
Directions for Use and Warranty.

Net contents

0.7 oz (20 g)

USA

Batch code and expiration date:

FPO



novozymes[®]

Rethink Tomorrow

Novozymes BioAg Inc.
3101 W. Custer Ave.
Milwaukee WI 53209
1-800-245-4104

OMRI[®]
Listed

Actinovate[®] Lawn and Garden is for
organic use under the guidelines of the
USDA's National Organics Program (NOP).

US Patent Number: 5,403,584
EPA Registration Number: 73314-1
EPA Establishment Number: 73314-TX-001
Made in the USA. Information regarding
the contents and levels of metals in this
product is available on the internet
<http://www.aapfco.org/metals.htm>
96-80 11.15 2621-XXX-1015

FIRST AID

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 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 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 advice

IF SWALLOWED:

- Call a poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person

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 information on this pesticide product (including health concerns, medical emergencies, or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378, 6:30 AM to 4:30 PM Pacific Time (PT), seven days a week. During other times, call the poison control center at 1-800-222-1222

Precautionary statements

Hazards to humans and domestic animals. CAUTION.

Avoid contact with skin, eyes, or clothing. Avoid breathing dust or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

User safety recommendations

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing

Environmental hazards:

To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide of the treatment area. Rinsing application equipment over the treated area will help avoid runoff to water bodies or drainage systems.

Directions for use

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

Product information

Actinovate® Lawn and Garden is a biological fungicide for the suppression/control of root rot and damping-off fungi and the suppression/control of foliar fungal pathogens. The active ingredient

in Actinovate® Lawn and Garden is a patented bacterium that, when applied, grows around the root system (when soil drenched) and foliage of the plant (when sprayed on). Actinovate® Lawn and Garden uses several novel modes of antifungal action to protect plants and lawns. Actinovate® Lawn and Garden may be used on all vegetables, fruits, and nuts including tomatoes, peppers, melons, carrots, broccoli, lettuce, onions, apples, pears, and walnuts in addition to annual and perennial bedding plants and flowers, roses, potted flowers, foliage plants, trees, shrubs and lawns located in homes, greenhouses, and home landscapes.

In addition, when applied to the soil, Actinovate® Lawn and Garden also breaks down minerals and micronutrients making them more available to plants resulting in increased size and vitality. Plants and turf treated with Actinovate® Lawn and Garden as a soil drench will become hardier, more vigorous, and will have a robust and protected root system.

Diseases controlled/ suppressed

Soil diseases (when applied as a drench) (when watered in):

- Root Rot and Damping Off in ornamentals & vegetables (*Pythium*, *Phytophthora*, *Rhizoctonia*, *Fusarium* et.al)
- Turf Brownpatch (*Rhizoctonia*)
- Turf Dollarspot (*Sclerotinia*)
- Turf Take-all Patch (*Gaeumannomyces graminis*)
- Club Root (*Piasmodiophora brassicae*)
- Grey Snow mold (*Typhula* spp.)
- Pink Snow mold (*Microdocium nivale*)

Foliar diseases (when applied as a spray) (when sprayed):

- Powdery and Downy Mildew
- Grey Mold (*Botrytis*)

- Black Spot (*Diplocarpon rosae*)
- Leaf Spots and Rusts
- Fire Blight (*Erwinia*)
- Walnut Blight (*Xanthomonas arboricola* pv. *juglandis*)
- Bacterial Spot (*Xanthomonas perforans*)
- Citrus Canker (*Xanthomonas axonopodis* pv. *citri*)
- Bacterial Blast (*Pseudomonas syringae*)
- Peach Leaf Curl (*Taphrina deformans*)

Application directions (how to apply)

Soil application

Dissolve 1–2 teaspoons (4–8 grams) of Actinovate® Lawn and Garden per 2 gallons of water to create a solution.

For more severe disease pressure or likelihood of disease pressure, use higher label rate. Apply solution to pot, base of plant, or roots of plant by watering until soil is completely saturated without creating runoff. One cup of solution usually treats about one 6" pot or its equivalent. For best results, apply to damp soil and/or apply in conjunction with a wetting agent. Pre-dampened soil will allow the Actinovate® Lawn and Garden microorganism to work to the root system of the plant much more easily. Apply Actinovate® Lawn and Garden at any stage of the crop life. For best results, apply as early as possible such as at seeding, transplant or potting stage. Reapply every 2–12 weeks as needed. Apply product with watering can, hose end sprayer or similar devices.

Foliar spray

Dissolve 1–2 teaspoons (4–8 grams) of Actinovate® Lawn and Garden per 2 gallons of water to create solution. For more severe disease pressure or likelihood of disease pressure, use higher rates. Spray leaves, stems, and new shoots to runoff

providing complete coverage of entire plant. For best results, apply product prior to disease development or at the first sign of infection. Repeat at 7-day intervals to protect new foliage. Under conditions of heavy rainfall, it may be necessary to reapply the product after the rain has stopped. Do not water foliage within 4 hours of application. Use a pump bottle, handheld pump, backpack or similar type of spray equipment.

For best results, use a spreader-sticker (a product designed to break the surface tension of water and evenly spread it over the surface of the foliage) in conjunction with application. Consult your garden center or dealer for specific product suggestions. (Examples of spreader-stickers include Weather Shield®, Agri-2®, Plant Camel® and yucca extract.)

Hydroponics and indoor garden use

For root rot diseases:

Dissolve Actinovate® Lawn and Garden directly into nutrient water tank. Use ½ – 1 teaspoon per gallon (6–12 oz per 100 gallons). Reapply each time nutrient water is changed. Actinovate® Lawn and Garden may also be applied to each plant's root system individually. To do this, dissolve ½ – 1 teaspoon into a gallon of water to create solution. Apply solution as a watering directly to the plants' base so as to water in to the roots. Reapply every 2–6 weeks.

For foliar diseases:

Use as directed under above section titled "Foliar Spray."

Lawn treatment

Use direct watering, a Pump-Up Sprayer or Hose-End Sprayer to apply solution until soil is saturated. Reapply at

maintenance rate every 4–8 weeks. For best results, use a wetting agent such as yucca extract, Coco-Wet®, Plant Camel® or Mega Wet® in conjunction with Actinovate® Lawn and Garden in order to help move product to the root system of the lawn. Consult your garden center or dealer for specific product suggestions.

Direct lawn watering:

Mix 10 teaspoons of product in 5 gallons of water and apply to 1,000 sq ft of lawn. Thoroughly soak turf so as to move the solution to the root system. Avoid excess runoff or leaching.

Pump-Up sprayer lawn application

Initial Application: Mix 2 teaspoons Actinovate® Lawn and Garden per gallon of water to create spray solution. Apply spray solution at 1 gallon per 200 sq ft of lawn. Thoroughly soak turf so as to move the solution to the root system. Avoid excess runoff or leaching.

Maintenance Application: Use 0.5 teaspoons Actinovate® Lawn and Garden per gallon of water to create spray solution. Apply spray solution at 1 gallon per 200 sq ft of lawn. Thoroughly soak turf so as to move the solution to the root system. Avoid excess runoff or leaching.

Hose-End Sprayer settings for lawns

Make a liquid concentrate from the Actinovate® Lawn and Garden powder as follows:

Initial Application

Area Covered	Actinovate® Lawn and Garden	Water	Hose-end Setting
200 sq ft	2 tsp	4 oz	4 oz
1,000 sq ft	9 tsp	20 oz	4 oz

Maintenance Application

Area Covered	Actinovate® Lawn and Garden	Water	Hose-end Setting
200 sq ft	0.5 tsp	4 oz	4 oz
1,000 sq ft	3 tsp	20 oz	4 oz

Storage and disposal

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

Pesticide storage

Store in a dry, cool area inaccessible to children and out of direct sunlight and away from heat sources. Keep from overheating and freezing. Optimum storage temperature is 40°F to 85°F.

Pesticide disposal and container handling

Nonrefillable container. Do not reuse or refill this container. **If empty:** Place in trash or offer for recycling if available. **If partly filled:** Call your local solid waste agency or (800) 858-7378 (National Pesticide Information Center) for disposal instructions. Never place unused product down any indoor or outdoor drain.

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. Novozymes BioAg warrants that at the time of the first sale of this product it conforms to the chemical description on the label and when used according to the label directions under normal growing conditions is reasonably fit for the purposes referred to above. Buyers/Users of this product assume full risk for any use contrary to the specified directions. If this product does not perform as warranted above and to the extent consistent with applicable law, customer's sole remedy for breach of warranty shall be replacement of the product or refund of the purchase price paid, at the option of Novozymes BioAg.

EXCEPT AS PROVIDED ELSEWHERE IN WRITING CONTAINING AN EXPRESSED REFERENCE TO THIS WARRANTY AND LIMITATION OF DAMAGES, SELLER MAKES NO OTHER EXPRESSED OR IMPLIED WARRANTY OR GUARANTEE TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, INCLUDING ANY OTHER EXPRESSED OR IMPLIED WARRANTY OF FITNESS OR OF MERCHANTABILITY, AND NO AGENT OF SELLER IS AUTHORIZED TO DO SO.

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