

64137-5

10/30/2009

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Washington, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

OCT 30 2009

Kim Davis  
RegWest Company  
Verdera Oy  
30856 Rocky Road  
Greeley, CO 80631-9375

RE: Amendment to Confidential Statement of Formula (CSF) dated January 20, 2009  
and Label  
EPA Regulatory Number: 64137-5  
Product Name: Mycostop Biofungicide  
OPP Decision Number: D-398607  
PRIA Category: B680

Dear Ms. Davis:

The label and confidential statement of formula referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, are acceptable.

Submit two (2) copies of the final printed labeling prior to releasing the product for shipment. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA § 6(e). A stamped copy of the label is enclosed for your records.

Please be advised that the nomenclature of *Streptomyces* Strain K61 may be subject to further evaluation during the Registration Review process. Please contact Susanne Cerrelli at 703.308.8077, if you have questions concerning this letter.

Sincerely,

*Sheryl K. Reilly*  
Sheryl K. Reilly, Ph.D.  
Chief

Biopesticides and Pollution Prevention Division  
Microbial Pesticides Branch (7511P)

		CONCURRENCES					
SYMBOL	Enclosure 7511P	7511P					
SURNAME	S. Cerrelli	Reilly					
DATE	10/29/09	10/30/09					

# Mycostop® Biofungicide

FOR TURF and AGRONOMIC, VEGETABLE AND ORNAMENTAL CROPS

**Active Ingredients:**

Dried spores and mycelium of ray fungus (*Streptomyces* Strain K61)\* ..... 35%  
**Other Ingredients** ..... 65%

\*Contains a minimum of 10<sup>8</sup> cfu (colony forming units) per 1g of product Total ..... 100%

**Keep Out of Reach of Children**

### CAUTION

See back panel for First Aid and additional Precautionary Statements.

EPA Reg. No. 64137-5 EPA Est. 64137-FI-1



# ACCEPTED

OCT 30 2009

Under the Federal Insecticide, Fungicide,  
and Rodenticide Act, as amended, for  
the pesticide registered under  
EPA Reg. No. 64137-5

**Net Weight:**

- 0.07 oz. (2g)
- 0.176 oz. (5g)
- 0.88 oz. (25g)
- 3.53 oz. (100g)

{Back Panel}

### First Aid

<b>If Inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth to mouth if possible.</li> </ul>
<b>If on Skin or Clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Immediately rinse skin with plenty of water for 15-20 minutes.</li> </ul>
<b>If in Eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> </ul>
<p>Call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment. [You may also contact 1-800-424-9300 for emergency medical treatment information.]</p>	

{Note: The first aid statements' grid format will be used if market label space permits; otherwise a paragraph format will be used.}

### [Emergency Information

For spill, leak, fire, exposure or accident call CHEMTREC at 1-800-424-9300.]

## MYCOSTOP® BIOFUNGICIDE

### PRECAUTIONARY STATEMENTS

#### Hazards to Humans and Domestic Animals

**CAUTION:** Harmful if inhaled. Avoid breathing dust or spray mist. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. 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. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

**Personal Protective Equipment**

Applicators and other handlers must wear: Long-sleeved shirt and long pants. Waterproof gloves. Shoes plus socks. Dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C) or a NIOSH-approved respirator with any approval number prefix N-95, R-95 or P-95 or HE filter. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions are given for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**User Safety Recommendations**

- Users should immediately remove clothing if pesticide gets inside, then thoroughly wash and put on clean clothing.
- Immediately remove personal protective equipment after handling this product. If gloves are worn wash the outside of gloves before removing. As soon as possible thoroughly wash and change into clean clothing.

**Environmental Hazards**

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 by disposal of equipment wash waters or rinsate.

ACCEPTED

**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 exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. 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 4 hours. Exception: If the product is soil injected or soil incorporated, 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.

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
- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks
- Dust/mist filtering respirator with MSHA/NIOSH-approval number prefix TC-21C or a NIOSH-approved respirator with any approval number prefix N-95, R-95 or P-95 or HE filter.

**Non-Agricultural Use Requirements**

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries and greenhouses. Do not enter treated area without protective clothing until sprays have dried.

**MIXING INSTRUCTIONS**

To make a suspension of Mycostop, mix in a small volume of water, such as 0.25-1.0 gallon, and let stand for approximately 30 minutes. Agitate as needed to evenly disperse Mycostop before diluting to final volume. Do not tank mix Mycostop with any pesticides or with concentrated fertilizers.

**ORNAMENTAL, VEGETABLE AND FOREST SEEDLING USES**

Mycostop is used for the control of seed rot, root and stem rot and wilt caused by *Fusarium*, *Alternaria* and *Phomopsis* of container grown ornamentals, vegetables and tree and forest seedlings. Mycostop has also shown suppression of *Botrytis* Gray Mold and root rots of *Pythium*, *Phytophthora* and *Rhizoctonia* in the greenhouse.

Use Mycostop as a seed treatment for seed or soil-borne damping off and early root rot of vegetables, herbs and ornamentals planted in the field or greenhouse.

{Inside Top Panel}

**Disease Control**

[Refer to the table below for specific application rates.]

Application	Target	Unit of Measure	Value for Given Unit of Measure per Mycostop package Mycostop Package Size			
			0.07 oz. (2 g)	0.176 oz. (5 g)	0.88 oz. (25 g)	3.53 oz. (100 g)
Dry seed treatment	Lettuce	Pound seeds	2	5	25	100
	Ornamentals, dill, leguminous plants, parsley, root crops, spinach, tomatoes, corn, trees and conifers		1	2	10	40
	Brassica species (Cole crops), herbs, leeks and onions		0.5	1.5	7.5	30
Seed soak and transplant or cutting dip	Seeds, transplants and cuttings	Gallon water	0.5-5	1.25-12.5	6.25-62.5	25-250
Incorporation	Growing medium	Cubic Yard	1-2	2.5-5	12.5-25	50-100
Soil spray or drench	Bedding plants, foliage plants, flowering plants, trees, conifers, forest seedlings, woody ornamentals, vegetable transplants or vegetables grown for production	Square foot	100-200	250-500	1250-2500	5000-10000
	Small seedlings		400-800	1000-2000	5000-10000	20000-40000
	Band or in-furrow application and side-dress application		200-400	500-1000	2500-5000	10000-20000
Drip irrigation	Ornamental and vegetable plants	Square foot	100-200	250-500	1250-2500	5000-10000
		Plant number	80-400	200-1000	1000-5000	4000-20000
Spray to suppress <i>Botrytis</i>	Ornamental and vegetable plants	Gallon water	5	12.5	62.5	250
Spray for potential growth enhancement/yield increase*	Ornamental and vegetable plants	Square foot	1000	2500	12500	50000

\*Except in California

### Seed Treatment

- Mycostop can be applied as a seed treatment in vegetables, herbs, ornamentals, trees and conifers.
- Mycostop may be mixed with seed in a planter box. As a planter box treatment, fill box half full of seed, add half the required amount of Mycostop and thoroughly mix with a stick or paddle. Add remainder of seed and Mycostop and thoroughly mix.
- To mix in a small container such as a jar, add the required amount of Mycostop, shake until the seeds become coated with powder, then pour into planter box.
- Sow treated seed without delay, but at least within a week if kept cool and dry.
- Do not treat damp or wet seed with Mycostop powder.
- Do not treat seeds of Dusty Miller or melons with Mycostop.

Mycostop has also been proven effective when used as a 0.01% to 0.1% by weight seed soak where soaking seed for 5-15 minutes immediately prior to planting is practical. Because many ornamentals and vegetables have not been tested using a seed soak, the grower should first check emergence on a small quantity of seed.

### Incorporation in Potting Media

Mycostop can be mixed into potting media. Apply Mycostop in a concentrate spray to the growth media when the media is being mechanically blended or rake in by hand in beds. It is important that Mycostop be evenly incorporated to assure best performance. Use potting media containing Mycostop within 2 days after incorporation. Do not store above 85°F. A drench or spray application of Mycostop is recommended within 2-6 weeks as described below under *Soil Spray or Drench Applications*.

### Transplant Dip or Cutting Dip

Mycostop may be applied by dipping roots of transplants or cuttings (including bare root seedlings) such as carnations, in a suspension shortly before planting. A suspension of 0.01% to 0.1% by weight is recommended. Use the higher rate for high disease pressure.

### Soil Spray or Drench Applications

Mycostop may be applied to bedding plants, foliage plants, flowering plants, trees, conifers, forest seedlings, woody ornamentals, vegetable transplants or vegetables grown for production. Examples of ornamental crops include carnation, gerbera, African violet, cyclamen, geranium, pine and others. Examples of vegetable crops include cabbage, cucumbers, melons, peppers, tomatoes and others.

- **Soil Spray/Drench** – Uniformly apply Mycostop over the area to be treated. For example, use 0.176 oz./1.3 gal./400 sq.ft. Follow with normal irrigation or sufficient water (1/8-1/4 inch) within 6 hours to move Mycostop into the plant root zone.
- **Small Seedling Production** – Uniformly apply Mycostop over the area to be treated. Repeat spray or drench application every 2-6 weeks as needed for disease control. Use the higher rate and more frequent application for high disease pressure and for larger plants.

### Band or In-Furrow Application

Apply Mycostop shortly before or at the time of planting in 0.5-1 pints of water/treated 100 sq.ft. A 7-inch band is recommended for banded applications. Lightly incorporate into the top 2-3 inches of soil. An in-furrow application of Mycostop may also be made at the same rates. Spray all the soil that surrounds and covers the seed.

### Side-Dress Application

Apply Mycostop in 0.5-1 pints of water/treated 100 sq.ft. as a side-dress application to the plant bed. Direct spray to base of plant and root zone. Repeat treatment every 2-4 weeks or as needed.

**Botrytis Suppression**

A 0.1% by weight Mycostop spray will help suppress *Botrytis* infection. Direct spray to susceptible leaves, flowers and fruits to the point of run-off. Apply every 2-3 weeks or as needed depending on disease pressure.

**Potential Growth Enhancement/Yield Increase\***

Mycostop has been shown to promote the growth and yield of plants even in healthy crops. Repeat the treatment monthly during the life of the crop. \*Except in California.

**FIELD CROP USES**

Mycostop is used for the control of seed rot, root and stem rot and wilt diseases caused by *Fusarium*, *Alternaria* and *Phomopsis* in field crops such as cotton, corn, soybeans, wheat, sorghum, beans, peas and tree and forest seedlings.

[Refer to the table below for specific application rates.]

Application	Target	Unit of Measure	Value for Given Unit of Measure per Mycostop package Mycostop Package Size			
			0.07 oz. (2 g)	0.176 oz. (5 g)	0.88 oz. (25 g)	3.53 oz. (100 g)
Dry seed treatment	Field crops (such as cotton, corn, soybeans, wheat, sorghum, beans, peas)	Pound seeds	1	2	10	40
Soil spray or drench	Band or in-furrow application	Square foot	200-400	500-1000	2500-5000	10000-20000
	Turf		400-500	1000-1200	5000-6000	20000-24000
Drip irrigation	Field crops (such as cotton, corn, soybeans, wheat, sorghum, beans, peas and tree and forest seeds)	Square foot	100-200	250-500	1250-2500	5000-10000

**Seed Treatment**

- Apply Mycostop as a planter box treatment by mixing it with the seed before planting. For best results, fill planter box half full of seed, add half the required amount of Mycostop and thoroughly mix with a stick or paddle. Add remainder of seed and Mycostop and thoroughly mix.
- Good results can also be obtained by mixing Mycostop with seed in a separate container, then pouring into planter box.
- Sow treated seed without delay, but at least within a week, if kept cool and dry.

**TURF**

Use Mycostop for the control of seed rot, root rot and stem rot and wilt diseases caused by *Fusarium* in turf. Apply Mycostop in 1-3 pints of water/100 sq.ft. Repeat treatment every 4 to 6 weeks as needed depending on disease pressure.

**Band or In-Furrow Application**

Apply Mycostop shortly before or at the time of planting in 0.5-1 pints of water/treated 100 sq.ft. A 7-inch band is recommended for banded applications. Lightly incorporate into the top 2-3 inches of soil. An in-furrow application of Mycostop can also be made at the same rates. Spray all the soil that surrounds and covers the seed.

### Integrated Disease Control Programs

Mycostop may be used in integrated disease control programs. However, it should not be tank mixed with any pesticide. Mycostop may be used the same day, if registered and if not prohibited, with thiophanate methyl, metalaxyl, vinclozolin, fosetyl-Al and propamocarb hydrochloride. Pesticides not compatible with Mycostop have a 4-day interval between applications.

### DRIP IRRIGATION - CHEMIGATION

#### General

1. Apply Mycostop only through drip irrigation system(s). Do not apply Mycostop through any other type of irrigation system.
2. A pesticide supply tank is recommended. Continuous agitation of Mycostop in the supply tank is required. Begin application of Mycostop during the beginning of irrigation.

#### For Agronomic Crops

- Apply in sufficient water to move into root zone.
- Repeat every 2-6 weeks as needed for disease control

#### For Vegetable and Ornamental Crops

- Use higher rate and more frequent application for large plants and pots, and for high disease pressure.
  - Apply in sufficient amount of water to move into root zone. Repeat every 2-6 weeks as needed for disease control.
3. Crop injury, lack of effectiveness or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.
  4. If you have any questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
  5. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of a responsible person, shall shut the system down and make necessary adjustments should the need arise.

*(Inside Bottom Panel)*

### DRIP IRRIGATION – CHEMIGATION (continued)

#### Special Instructions for Use of Public Water Sources

1. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices from public water systems are in place.
2. 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.
3. 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, the 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.
4. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
5. 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.
6. 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.
7. 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.

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### Special Instructions for Drip Irrigation (Chemigation) Systems

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 a functional interlocking control 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 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.

### Storage and Disposal

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

**Pesticide Storage:** Mycostop consists of living microbes that are packed in moisture- and air-proof unit packages. Store in a cool (below 46°F, 8°C), dry place. Use all contents in packet the same day. Do not store opened packets since product will lose its activity. **Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site using all the material in this container by application according to label directions or at an approved waste disposal facility. **Container Disposal:** Non-refillable container; do not reuse or refill this container. Completely empty packet into application equipment, then offer container for recycling, if available; otherwise, dispose of empty packet in a sanitary landfill, by incineration or by other procedures allowed by state and local authorities.

Lot Number: \_\_\_\_\_

### NOTICE TO USER

Verdera Oy warrants only that this product conforms to the product description on this label and is reasonably fit for the purposes set forth in the Directions for Use when used in accordance with them. However, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the use, storage or handling of the product contrary to the label instructions, all of which are beyond the control of Verdera Oy. To the extent permitted by applicable law: a) All such risks shall be assumed by the user; b) In no case shall Verdera Oy be liable for indirect or consequential damages resulting from the use, storage or handling of this product; and c) VERDERA OY MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

### Use Before {Date}

Verdera Oy  
Luoteirsrinne 2  
P.O. Box 5  
FI-02271 Espoo, FINLAND

EPA Reg. No. 64137-5  
EPA Est. 64137-FI-1  
Made in Finland  
{Code}



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[ ] Denotes optional/alternate language  
{ } Denotes language that does not appear on the market labeling