

1001-72

5/13/2014

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

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

Carrie M. Tackema  
Nufarm Americas Inc.  
4020 Aerial Center Parkway, Suite 101  
Morrisville, SC 27560

**MAY 13 2014**

SUBJECT: Spectro 90 WDG  
EPA Reg. No.1001-72  
Notification Dated April 17, 2014  
Decision Number 490703

Dear Ms. Tackema

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10. The Registration Division (RD) has conducted a review of this request to add two optional marketing claims: "Nufarm Grow a Better Tomorrow" and "Grow a Better Tomorrow" for applicability under 98-10 and finds that the label change(s) requested falls within the scope of PRN 98-10.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions, please call Rose Kearns at 703-305-5611 or you may call me at 703-308-9443.

Sincerely,

A handwritten signature in black ink that reads "Tony Kish".

Tony Kish  
Product Manager (22)  
Fungicide Branch  
Registration Division (7504P)

	United States <b>Environmental Protection Agency</b> Washington, DC 20460	<input type="checkbox"/> Registration <input type="checkbox"/> Amendment <input checked="" type="checkbox"/> <b>Other:</b>	OPP Identifier Number
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**Application for Pesticide - Section I**

1. Company/Product Number <b>1001-72</b>	2. EPA Product Manager <b>Tony Kish</b>	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) <b>Spectro 90 WDG</b>	PM# <b>22</b>	
5. Name and Address of Applicant (Include ZIP Code) <b>Cleary Chemicals, LLC.</b> <b>11901 S. Austin Ave.</b> <b>Alsip, IL 60803</b> <i>Please send all correspondence to "contact point" listed below</i>  <input checked="" type="checkbox"/> Check if this is a new address		6. <b>Expedited Review.</b> In accordance with FIFRA Section 3(c)(3) (b)(I), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____

**Section - II**

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below

**Explanation:** Use additional page(s) if necessary. (For Section I and Section II.)

**NOTIFICATION PER PRN 98-10**

This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

**CONTACT:** Carrie M. Tackema (919) 379-2528 or [carrie.tackema@us.nufarm.com](mailto:carrie.tackema@us.nufarm.com)  
 Nufarm Americas, Inc.  
 4020 Aerial Center Parkway, Suite 101  
 Morrisville, NC 27560

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If "Yes" Unit Packaging wgt.    No. per container	If "Yes" Package wgt.    No. per container	<input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input checked="" type="checkbox"/> Paper <input checked="" type="checkbox"/> Other foil laminate
*Certification must be submitted					
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container <b>1 GAL, 2.5 GAL</b>		5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On labeling accompanying product	
6. Manner in Which Label is Affixed to Product		<input checked="" type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled		<input checked="" type="checkbox"/> Other <u>crack/peel booklet</u>	

**Section - IV**

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application)		
Name <b>Carrie M. Tackema</b>	Title <b>Regulatory Manager</b>	Telephone No. (Include Area Code) <b>(919) 379-2528</b>
<b>Certification</b> I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)  
2. Signature 	3. Title <b>Regulatory Manager</b>	
4. Typed Name <b>Carrie M. Tackema</b>	4. Date <b>April 17, 2014</b>	

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4020 Aerial Center Parkway, Suite 101  
Morrisville, NC 27560  
[www.nufarm.com](http://www.nufarm.com)

**Via Courier Delivery**

April 17, 2014

Mr. Tony Kish, PM #22  
Document Processing Desk (NOTIF)  
Office of Pesticide Programs (7504P)  
U. S. Environmental Protection Agency  
Room S-4900, One Potomac Yard  
2777 S. Crystal Drive  
Arlington, VA 22202-4501

**RE:                               NOTIFICATION(s) per PRN 98-10  
  Spectro 90 WDG, EPA Reg. 1001-72**

Dear Mr. Kish:

Enclosed please find an application for pesticide registration – NOTIFICATION for the above-referenced product. The purpose of this NOTIFICATION is to include two (2) optional marketing claims:

*Nufarm Grow a better tomorrow  
Grow a better tomorrow*

This NOTIFICATION is consistent with PRN 98-10, specifically, II N. In support of this NOTIFICATION enclosed are the following:

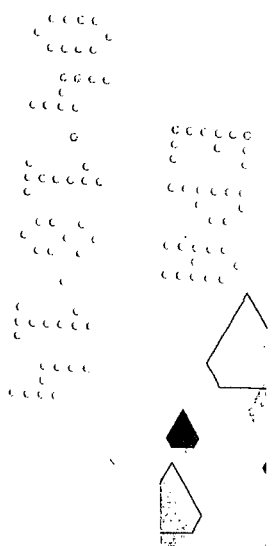
- EPA form 8570-1 Application for Pesticide Registration – NOTIFICATION;
- Two (2) copies of proposed product labeling, one with changes highlighted.

Please contact me at directly at (919) 379-2528 or by email at [carrie.tackema@us.nufarm.com](mailto:carrie.tackema@us.nufarm.com) if you have any questions regarding this action.

Sincerely,

Carrie M. Tackema  
Regulatory Manager

Enclosure(s)



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For Professional Use

# SPECTRO 90 WDG

## Turf and Ornamental Fungicide

For the prevention and control of fine turf diseases and diseases of annual and perennial flowers, bedding plants, foliage plants, ground covers, plus deciduous and evergreen trees and shrubs.

[Optional marketing claims:

- New Extruded Granule
- New Extruded Granule Process
- Extruded Granule]

**NOTIFICATION**

**MAY 13 2014**

### Active ingredients:

Chlorothalonil (tetrachloroisophthalonitrile)	72%
Thiophanate-methyl (dimethyl 4,4-o-phenylenebis-(3, thioallophanate))	18%

### Other Ingredients:

	<u>10%</u>
<b>Total:</b>	<b>100%</b>

**NET CONTENTS:** 5 pounds (2.27 kg) and 12.5 lbs (5.67 kg)

**MANUFACTURED FOR**  
Cleary Chemicals, LLC  
11901 S. Austin Ave  
Alsip, IL 60803

EPA Reg. No. 1001-72

EPA Est. No.

[Nufarm Grow a better tomorrow]

[Grow a better tomorrow]

**Keep Out Of Reach Of Children**  
**Danger - Peligro**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

'See side panel for additional precautionary statements.'

OR (for use with booklet label):

"See booklet label for additional precautionary statements and directions for use."

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## 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 by mouth-to-mouth, if possible. Call a poison control center or doctor for further 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 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.

**Note to physicians:** Probable mucosal damage may contraindicate the use of gastric lavage. No specific antidote is available. All treatments should be based on observed signs and symptoms of distress in the patient. Overexposure to materials other than this product may have occurred. Persons having temporary skin irritation may respond to treatment with antihistamines or steroid creams and/or systemic steroids.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

For 24-Hour Emergency Assistance Call Chemtrec 1-800-424-9300

## PRECAUTIONARY STATEMENTS

### Hazards to humans and domestic animals.

Danger - Corrosive, causes irreversible eye damage. May be fatal if inhaled. Harmful if swallowed or absorbed through skin. May be a potential skin sensitizer. Do not get in eyes or on clothing or skin. Wear goggles or face-shield when handling. Wear a respirator as specified below under Personal Protection Equipment (PPE). Do not breathe dust or spray mist. Avoid prolonged contact with skin. 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.

Note to User: This product may produce mild bronchial irritation and temporary irritation of the skin characterized by redness or rash on exposed skin areas. Affected persons should consult a physician.

### Personal Protection Equipment (PPE):

Mixers, Loaders, Applicators and all other handlers must wear:

- Long sleeved shirt and long pants,
- Shoes plus socks,
- Protective eyewear (goggles or face shield)
- Respirator with an organic-vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval prefix TC-14G), or a NIOSH approved respirator with an organic-vapor (OV) cartridge or canister with any N, P, R, or HE prefilter.

In addition, chemical-resistant gloves (made out of any waterproof material, selection category A) must be worn by:

- (1) Mixers/loaders
- (2) Other handlers exposed to concentrate

- (3) Cleaners/repairers of equipment
- (4) Applicators using airblast equipment for golf course applications
- (5) Applicators using handheld equipment.

Some materials that are chemical-resistant to this product are barrier laminate, butyl rubber (14 mil or thicker), nitrile rubber (14 mil or thicker), neoprene rubber (14 mil or thicker), natural rubber (14 mil or thicker), polyethylene (14 mil or thicker), polyvinyl chloride, viton (14 mil or thicker). If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

**User Safety Requirements**

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

**User Safety Recommendations**

Users should:

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

**Environmental Hazards**

This pesticide is toxic to aquatic invertebrates and wildlife. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash water or rinsate.

This chemical is known to leach through soil into groundwater under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

This chemical can contaminate surface water through spray drift. Under some conditions, it may also have a high potential for runoff into surface water for several days to weeks after application. These include poorly drained or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlaying extremely shallow groundwater, areas with infield canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-laying tile drainage systems that drain to surface water.

**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, or animals, either directly or through drift. **Do not** graze animals on treated turf or feed clippings to livestock or poultry. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

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**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 statements 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 12 hours.

**Personal Protective Equipment (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 over long sleeved shirt and long pants
- chemical-resistant gloves made of any waterproof material
- chemical-resistant footwear plus socks
- chemical-resistant headgear for overhead exposures
- protective eyewear

**Special Eye Irritation Provisions:** This product is a severe eye irritant. Although the restricted entry interval (REI) expires after 12 hours, for the next 6 ½ days entry is permitted only when the following safety measures are provided:

- 1) At least one container designed specifically for flushing eyes must be available in operating condition at the WPS required decontamination site intended for workers entering the treated area.
- 2) Workers must be informed, in a manner they can understand;
  - a) That residues in the treated area may be highly irritating to their eyes.
  - b) That they should take precautions, such as refraining from rubbing their eyes, to keep the residues out of their eyes.
  - c) That if they do get residues in their eyes, they should immediately flush their eyes using the eye flush container that is located at the decontamination site or using other readily available clean water.
  - d) How to operate the eye flush container.

**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, or greenhouses.

Do not enter or allow others to enter the treated area until sprays have dried.

**General Information:**

Cleary's SPECTRO may be applied with ground equipment using sufficient volume of spray to provide thorough coverage. Add required amount of SPECTRO to a partially filled tank, agitate by mechanical or hydraulic means and then add remaining required amount of water. Continuous agitation is required to keep the material in suspension. Do not tank mix with copper-containing materials or with highly alkaline pesticides such as Bordeaux mixture of lime sulfur. Do not combine SPECTRO with other pesticides, surfactants, or fertilizers, unless your prior use has shown the combination is physically compatible, effective, and non-injurious under your conditions of use. In general, add insecticide and fertilizer products last. No claim of compatibility with other pesticides is implied. Do not combine SPECTRO with Dipel 4L, Foil, Triton Ag-98, Triton B-1956, Latron B-1956 or Latron AG-98 as phytotoxicity may result from the combination when applied

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to some species on this label. **Do not** graze animals on treated turf or feed clippings to livestock or poultry.

**GENERAL PRECAUTIONS AND RESTRICTIONS**

**Do not use on home lawns and turf sites associated with apartment buildings, daycare centers, playgrounds, playfields, recreational park athletic fields, athletic fields located on or next to schools (i.e., elementary, middle and high school), campgrounds, churches, and theme parks.** This product must not be applied within 150 ft (for air-blast) or 25 feet (for ground applications) of marine/estuarine water bodies unless there is an untreated buffer area of that width between the area to be treated and the body of water. Do not apply with fixed wing or rotary aircraft.

**Storage and Disposal**

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

**Storage:** Store in a cool, dry area in original unopened container. Store in a secured area unavailable to unauthorized persons.

**Pesticide Disposal:** Pesticide wastes are toxic. Improper disposal of excess pesticide, pesticide sprays or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental control Agency, or the Hazardous waste representative at the nearest EPA Regional Office for guidance.

**Container Disposal:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Completely empty bag into application equipment. Then dispose of empty in a sanitary landfill or by incineration or as allowed by State and local authorities by burning. If burned, stay out of smoke.

**TURF APPLICATIONS**

For use only by certified applicators or those under their immediate supervision. For use on fine turf applications of cool season and warm season grasses (such as Bentgrasses, Bermudagrasses, Bluegrasses, Fescues, Ryegrasses, St. Augustine grasses, and Zoysia) or their mixtures, except where prohibited below. Cleary's SPECTRO is not phytotoxic to any of the above mentioned grasses when used in accordance with the label. SPECTRO is to be used for the prevention and control of the diseases mentioned below. It can provide both curative and protective action. For best results use spray mixture the same day it is prepared. Spray uniformly over the area to be treated with a properly calibrated power sprayer. Begin applications when conditions favor disease development and repeat applications as long as these conditions persist. Treatments should be applied using 14 - 21 day intervals as indicated. When treating golf greens, always treat aprons and approaches. Use the highest recommended rate and shortest application interval under conditions of severe disease pressure. Refer to Table 1 and Table 2 rate and interval instructions and Table 3 for proper use. Apply recommended amounts in sufficient water to obtain thorough coverage (2-4 gallons suggested per 1,000 square feet). Cleary's SPECTRO should always be used in conjunction with good turf management practices. Apply after mowing or avoid mowing twelve hours after application. Do not mow or water after treatment until spray deposited on turfgrass is thoroughly dry (unless directed specifically by use directions).

**Not for homeowner use. Not for use on turf being grown for sale or commercial use as sod. Do not use on home lawns and turf sites associated with apartment buildings, daycare centers, playgrounds, playfields, recreational park athletic fields, athletic fields located on or next to schools (i.e., elementary, middle and high school), campgrounds, churches, and theme parks.**



**Table 1: Maximum seasonal application rates.** Do not exceed the following amounts per Acre.

Use Site(s)	Lbs Spectro 90 WDG	Ounces Spectro 90 WDG
Golf Course – Greens	101	37.25 oz / 1000 sq. ft.
Golf Course – Tees	72	26.50 oz / 1000 sq. ft.
Golf Course – Fairways - Except Florida	30.2	12 oz / 1000 sq. ft.
Golf Course – Fairways - Florida Only	15.1	5.56 oz / 1000 sq. ft.

**Table 2: Maximum individual application rates and minimum re-treatment intervals.** Do not exceed the amounts per acre or reduce the re-treatment interval indicated below.

Use site	Maximum individual application rate Lbs Spectro 90 WDG	Minimum re-treatment interval (days)	Remarks
Golf course – Greens and Tees	15.7 (5.76 oz / 1000)	14	
Golf course – Fairways - Except Florida	15.7 (5.76 oz / 1000)	14	One application only at max rate.
Golf course – Fairways Florida Only	15.1 (5.56 oz / 1000)	14	

**Table 3: Turf Disease Control**

Disease(s) controlled	Application Interval (days)	Application Rate (oz/1000)
Anthracnose (foliar and basal rot) <i>Colletotricum graminicola</i> (a)	14	3 – 5.76
Brown patch <i>Rhizoctonia solani</i> , <i>R. zeae</i> , <i>R. cerealis</i>	14-21	3 – 5.76
Copper spot <i>Gloeocercospora sorghi</i>	14	3 - 5.76
Dollar spot <i>Sclerotinia homeocarpa</i> , <i>Lanzia</i> or <i>Moellerodiscus</i> spp.	14-21	3.72 - 5.76
Gray leaf spot <i>Pyricularia grisea</i> , <i>P. oryzae</i>	14	3.72 - 5.76
Leaf spot, melt-out <i>Helminthosporium</i> spp., <i>Dreschlera</i> spp., <i>Bipolaris</i> spp., <i>Curvularia</i> spp.	14	3.72 - 5.76
Red thread <i>Laetisaria fuciformis</i>	14	3.72 - 5.76
Snow mold, gray <i>Typhula</i> spp. (b)	14	3.72 - 5.76
Snow mold, pink <i>Fusarium nivale</i> , <i>Microdochium nivale</i> (b)	14	3.72 - 5.76
Bluegrass stem rust	14	3.72 - 5.76
Powdery mildew	14	3.72 - 5.76
Downy mildew	14	3.72 - 5.76
Fusarium blight	14	3.72 - 5.76
Fusarium patch	14	3.72 - 5.76
Dichondra leaf spot	14	3.72 - 5.76
Bentgrass dead spot ( <i>Ophiosphaerella agrostis</i> )	14	3.72 - 5.76

**Special Instructions:**

- (a) Irrigate/syringe lightly (0.1 - 0.25 inches of water) after 8-12 hours. Take care not to move material below root zone of turf in treatment area.
- (b) Apply before turf has stopped all growth activity and before snow cover. If snow cover is intermittent or lacking, additional applications may be made at monthly intervals in areas of suspected or historic gray snow mold activity. In areas of predominantly pink snow mold, application should be made during the reproductive (fruiting) period of the pathogen for best results. Consult with your local extension service for

this information.

**Algae Control:**

For the prevention of algal scum of turfgrasses caused by cyanobacteria of the genus Lyngbia, apply Spectro 90 WDG at a rate of 2 – 3.72 ounces per 1000 square feet on a minimum retreatment interval of 14 days. When algae scum is well established, every attempt should be made to dry out the afflicted area. Once dry, spiking or verticutting should be done to enhance turfgrass recovery in conjunction with Spectro 90 WDG applications at the rate of 3.72 – 5.76 ounces per 1000 square feet on a minimum retreatment interval of 14 days. Several applications of Spectro 90 WDG at the high rate may be necessary for turfgrass recovery. Refer to Table 1 and Table 2 rate and interval instructions for proper use. Only a preventative spray program with Spectro 90 WDG will prevent a recurrence of the algae when environmental conditions are favorable for algal growth.

**HORTICULTURAL APPLICATIONS**

**Nursery, Greenhouse, Landscape, and Interiorscape**

Annual and perennial flowers, bedding plants, foliage plants, ground covers, plus deciduous and evergreen trees and shrubs.

Apply Cleary's SPECTRO at a rate of 1.0 to 2.0 pounds per 100 gallons of water unless other directions are given in the information below. For best results use spray mixture the same day it is prepared. Spray uniformly over the area to be treated with a properly calibrated power sprayer, apply as a full coverage spray to run-off when conditions are favorable for disease development. Refer to Table 4 and Table 5 rate and interval instructions for proper use. Application should be made to plants when both foliage and flowers are dry, or nearly dry. SPECTRO can provide both curative and protective action. Use the highest recommended rate and shortest application interval under conditions of severe disease pressure. Do not use mistblower or high pressure (greater than 400 psi) spray equipment when making applications in greenhouses. Do not use fruit, nuts or sap from treated trees for food or feed.

**Table 4: Maximum seasonal application rates.** Do not exceed the following amounts per acre.

Use Site(s)	Lbs Spectro 90 WDG	Remarks
Ornamentals	50.6	Field Grown Only
Roses	50.6	Field Grown Only
Pachysandra	50.6	Field Grown Only
Conifers	22.9	

**Table 5: Maximum individual application rates and minimum re-treatment intervals.** Do not exceed the amounts per acre or reduce the re-treatment interval indicated below.

Use site	Maximum individual application rate Lbs Spectro 90 WDG	Minimum re-treatment interval (days)	Remarks
Ornamentals	2.15 lbs / Acre	7	
Roses	1.53 lbs / Acre	7	
Pachysandra	4.31 lbs / Acre	7	
Conifers	5.7 lbs / Acre	21	
Conifers Seed Beds	5.7 lbs / Acre	7	Seed Beds Only

**Table 6: Horticultural Disease Control**

**1. Leaf Spots/Foliar Blights**

*Actinopelte* leaf spot  
*Alternaria* leaf spot, leaf blight  
 Anthracnose  
*Ascochyta* blight  
*Bipolaris* (*Helminthosporium*) leaf spot  
 Black spot of rose  
*Blumeriella* spp.  
*Botrytis* leaf spot, leaf blight  
*Cephalosporium* leaf spot  
*Cercospora* leaf spot  
*Cercosporidium* leaf spot  
*Coccomyces* spp.  
*Colletotrichum* leaf blotch, leaf spot, blights  
*Corynespora* leaf spot  
*Coryneum* blight, shothole  
*Curvularia* leaf spot, tan leaf spot  
*Cylindrosporium* leaf spot  
*Dactylaria* leaf spot  
*Didymellina* leaf spot  
*Diplodia* spp.  
*Drechslera* leaf spot, ink spot  
*Exobasidium* leaf blister

*Entomosporium* (*Fabraea*) leaf spot  
*Fusarium* leaf spot  
*Gloeosporium* black leaf spot  
*Marssonina* leaf spot  
*Monilinia* blossom blight, twig blight  
*Mycosphaerella* ray blight  
*Myrothecium* leaf spot, brown rot  
*Nematostoma* leaf blight  
*Phoma* spp.  
*Phylloticta* leaf spot  
*Physalospora* spp.  
*Phytophthora* aerial blight  
*Ramularia* leaf spot  
*Rhizoctonia* web blight  
*Schizothyrium* spp.  
*Septoria* leaf spot  
*Sphaceloma* spp.  
*Sphaeropsis* leaf spot  
*Stagonospora* leaf scorch  
*Taphrina* leaf blister  
*Volutella* leaf blight

**2. Flower Spots/Blights**

*Botrytis* flower spot, flower blight  
*Curvularia* flower spot  
*Monilinia* blossom blight

*Ovulinia* flower blight  
*Rhizopus* blossom blight  
*Sclerotinia* flower blight

**3. Powdery Mildews**

*Erysiphe* spp.  
*Microsphaera* spp.  
*Phyllactinia* spp.

*Podosphaera* spp.  
*Oidium* spp.  
*Sphaerotheca* spp.

**4. Rusts**

*Gymnosporangium* spp.  
*Puccinia* spp.

*Uromyces* spp.

**5. Scabs**

*Venturia* spp.

**6. Stem Rots/ Crown Rots**

*Bipolaris* (*Helminthosporium*) spp.  
*Botrytis* spp.  
*Cylindrocladium* stem canker  
*Fusarium* spp.  
*Gliocladium* spp.

*Myrothecium* spp.  
*Ramularia* spp.  
*Rhizoctonia* spp.  
*Sclerotinia* spp.

**Table 7: Ornamentals Suggested For Treatment**

Note: The following listing of plants reflect the cumulative inputs from both historical field use and product testing programs. However, it is impossible to test this product on all species and cultivars. This list is provided as a general guide. A preliminary trial is suggested on a small scale before a full treatment is applied to any plant type not shown on this label but found in a similar use site with a listed disease problem Wait 5-7 days after treatment to evaluate trial results for possible phytotoxic responses. This product is not recommended for the following plants: Swedish Ivy (*Plectranthus australis*), Boston Fern (*Nephrolepis exhaltata*), and Easter Cactus (*Hatiora gaertneri*).

Note: Numbers following plant names refer to disease categories.

**Trees and Shrubs**

- Andromeda (*Pieris*) - 1
- Ash (*Fraxinus*) - 1, 3, 4, 6
- Aspen (*Populus*) - 1, 3, 6
- Azalea (*Rhododendron*) - 1, 2, 3, 6
- Buckeye, Horsechestnut (*Aesculus*) - 1, 3, 4, 6
- Cherry-Laurel (*Prunus*) - 1, 2, 3, 5, 6
- Conifers - see Special Instructions below
- Crabapple (*Malus*) - 1, 2, 3, 4, 5, 6
- Cherry, Sand (*Prunus*) - 1, 2, 3, 5, 6
- Dogwood (*Cornus*) - 1, 2, 3, 4, 5, 6
- Eucalyptus - 1, 3, 6
- Euonymus - 1, 3, 6
- Firethorn (*Pyracantha*) - 1, 3, 5, 6
- Hawthorn (*Crataegus*) - 1, 3, 4, 5, 6
- Holly (*Ilex*) - 1, 2, 3, 6
- Lilac (*Syringa*) - 1, 2, 3, 5, 6
- Magnolia - 1, 3, 5, 6
- Maple (*Acer*) - 1, 3, 5, 6
- Mountain Laurel (*Rhododendron*) - 1, 2, 3, 6

- Norfolk Island Pine - see Special Instructions below
- Oak (*Quercus*) - 1, 3, 6
- Oregon-grape (*Mahonia*) - 1, 2, 3, 4, 6
- Ornamental Almond (*Prunus*) - 1, 2, 3, 5, 6
- Ornamental Cherry (*Prunus*) - 1, 2, 3, 5, 6
- Ornamental Peach (*Prunus*) - 1, 2, 3, 5, 6
- Ornamental Plum (*Prunus*) - 1, 2, 3, 5, 6
- Ornamental Quince (*Chaenomeles*) - 1, 2, 3
- Photinia - 1, 3, 4, 6
- Poplar (*Populus*) - 1, 3, 6
- Privet (*Ligustrum*) - 1, 3, 6
- Rhododendren - 1, 2, 3, 6
- Sequoia - 1, 6
- Spirea (*Spiraea*) - 1, 3
- Sycamore, Planetree (*Platanus*) - 1, 3, 6
- Viburnum - 1, 2, 3, 4, 6
- Walnut (*Juglans*) - 1, 3, 4, 6

**Ornamental Plants, Bulbs, and Ground Covers**

- Arabian Violet (*Exacum*) - 1, 2, 6
- Aster - 1, 2, 3, 4, 6
- Begonia - 1, 2, 3, 6
- Bleeding heart (*Dicentra*) - 1, 6
- Camellia - 1, 2, 6
- Carnation (*Dianthus*) - 1, 2, 3, 4, 6
- Chrysanthemum (*Dendranthemum*) - 1, 2, 3, 4, 6
- Crocus - 6
- Croton (*Codiaeum*) - 1, 6
- Daffodil (*Narcissus*) - 1, 2, 6
- Daisy (*Chrysanthemum*) - 1, 2, 3, 4, 6
- Geranium (*Pelargonium*) - 1, 2, 3, 4, 6
- Gerbera Daisy (*Gerbera*) - 1, 2, 3, 6
- Gladiolus - 1, 2, 6
- Flame violet (*Episcia*) - 1, 6
- Gypsophila - 1, 2, 6
- Hollyhock (*Alcea*) - 1, 3, 4, 6

- Hydrangea (foliage) - 1, 2, 3, 5, 6
- Impatiens - 1, 2, 4, 6
- Iris - 1, 2, 4, 6
- Lily (*Lilium*) - 1, 2, 4, 6
- Marigold (*Tagetes*) - 1, 2, 4, 6
- Narcissus - 1, 2, 6
- Natal plum (*Carissa*) - 1, 3, 6
- Pachysandra - 1, 6
- Pansy (*Viola*) - 1, 2, 3, 4, 6
- Petunia - 1, 2, 3, 4, 6
- Phlox - 1, 2, 3, 4, 6
- Poinsettia (*Euphorbia*) - 1, 2, 3, 4, 6
- Rose (*Rosa*) - 1, 2, 3, 4, 6
- Sansevieria - 1, 6
- Statice (*Limonium*) - 1, 2, 4, 6
- Tulip (*Tulipa*) - 1, 2, 6
- Zinnia - 1, 2, 3, 5

**Foliage Plants**

- Aechmea* - 1, 6
- Aglaonema* - 1, 6
- Aluminum Plant (*Pilea*) - 1, 6
- Artemisia* - 1, 3, 4, 6
- Birdnest Fern (*Asplenium*) - 1, 6
- Bougainvillea* - 1, 6
- Caladium* - 1, 6
- Christmas Cactus (*Schlumbergera*) - 1, 6
- Dumbcane (*Diffenbachia*) - 1, 6
- Dracaena* - 1, 6
- False Aralia (*Dizygotheca*) - 1, 6
- Fatsia* - 1, 6
- Ficus* - 1, 6
- Fittonia* - 1, 6
- Florida Ruffle (*Vittaria*) - 1, 6
- Hollyfern (*Polystichum*) - 1, 6
- Hoya* - 1, 6
- Jade plant (*Crassula*) - 1, 3, 6
- Leatherleaf Fern (*Acrostichum*) - 1

- Lipstick plant (*Aeschynanthus*) - 1, 6
- Ming aralia (*Polyscias*) - 1, 6
- Oyster plant (*Tradescantia*) - 1, 4, 6
- Pachysandra* - 1, 6
- Palms - 1, 6
- Peacock plant (*Calathea, Kaempferia*) - 1, 2, 6
- Peperomia* - 1, 6
- Philodendron* - 1, 6
- Piggyback Plant (*Tolmeia*) - 1, 3, 6
- Pothos (*Epipremnum*) - 1, 6
- Prayer plant (*Maranta*) - 1, 4, 6
- Purple Passion Vine (*Gynura*) - 1, 6
- Staghorn Fern (*Lycopodium*) - 1
- Syngonium* - 1, 4, 6
- Ti (*Cordyline*) - 1, 6
- Venus's Flytrap (*Dionaea*) - 1, 6
- Yucca* - 1, 3, 4, 6
- Zebra plant (*Aphelandra*) - 1, 6

**Note:** Do not apply SPECTRO to either green or variegated Pittosporium or to Schefflera more than once, as multiple applications have been demonstrated to cause phytotoxic responses.

**Table 8: Special Instructions For Conifers**

**Diseases Controlled**

- |   |                              |
|---|------------------------------|
| Diplodia ( <i>Sphaeropsis</i> )Tip blight (b) | Lophoderium needlecasts (b)  |
| Swiss needlecast (a)                          | Rhabdocline needlecast (b)   |
| Scleroderris canker (pines)(a)                | Botrytis seedling blight (c) |
| Sirococcus tip blight(a)                      | Phoma twig blight (c)        |
| Rhizosphaera needlecast (spruces)(a)          | Phomopsis Twig Blight (b)    |
| Scirrhia brown spot (pines)(a)                | Kabatina Twig Blight (b)     |
| Cyclaneusma needlecasts(b)                    |                              |

(a) Make first application is spring when new shoot growth is 1/2 to 2 inches in length. Make additional applications at 3-4 week intervals until conditions no longer favor disease development.

(b) Apply at budbreak and repeat at 2-3 week intervals until needles are fully elongated and conditions no longer favor disease development.

(c) Begin applications in nursery beds when seedlings are 4 inches tall and when cool, moist conditions favor disease development. Make additional applications at 7-14 day intervals as long as disease favorable conditions persist.

**CHEMIGATION - Application through Irrigation Systems**

**Generic Requirements**

1. Apply this product only through a sprinkler including center pivot, lateral move, end tow, side wheel roll, traveler, solid set, hand move, hand held or similar; flood (basin); or drip (trickle) irrigation system. Do not apply this product through any other type of irrigation system.
2. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
3. If you have questions about calibration, you should contact State Extension Service specialists, equipment

manufacturers or other experts.

- 4. 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 for public water systems are in place.
- 5. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Posting of areas to be chemigated is required when (1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, day care center, hospitals, in patient clinics, nursing homes or any public areas such as schools, parks, playgrounds, or other public facilities not including public roads, or (2) when the chemigated area is open to the public such as golf courses or retail greenhouses.

Posting must conform to the following requirements: Treated areas shall be posted with signs at all usual points of entry and long likely routes of approach from the listed sensitive area. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any other locations affording maximum visibility to sensitive areas. The printed side of the sign should face away from the treated area towards the sensitive area. The signs shall be printed in English. Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period.

All words shall consist of letters 2 1/2 inches tall, and all letters and the symbol shall be a color which sharply contrasts with their immediate background. At the top of the sign shall be the words KEEP OUT, followed by an octagon stop sign at least 8 inches in diameter containing the word STOP. Below the symbol shall be the words PESTICIDES IN IRRIGATION WATER.

**Specific Requirements for Chemigation Systems Connected to Public Water Systems.**

- 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 (RPZ), backflow preventer 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.
- 3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back towards 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 drawn 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 or equivalent, 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.

**Specific Requirements for Sprinkler and Drip/Trickle Chemigation**

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 back flow. (Only required for systems other than public water systems)
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 dosed, 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 pesticide distribution is adversely affected. (Only required for systems other than public water systems)
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."

**Specific Requirements for Flood (basin) Chemigation**

1. Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from back flow if water flow stops.
2. Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:
  - a. 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 back flow.
  - b. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
  - c. 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.
  - d. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
  - e. 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.

f. 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.

**APPLICATION INSTRUCTIONS**

**Hand Held Irrigation**

1. Remove scale, pesticide residue, and other foreign matter from the chemical tank and entire injector system. Flush with clean water.
2. Determine the treatment rate as indicated in the directions for use for crop and pathogen and measure the intended areas of application.
3. Prepare a suspension of product in the mix tank or stock bucket. Fill the tank with 1/2 or 3/4 of the desired amount of water. Start agitation and add the required amount of product to the solution along with the remaining volume of water.
4. Maintain a gentle agitation in the mix tank during application to assure a uniform suspension.
5. Greater accuracy in calibration and distribution will be achieved by injecting a larger volume of a more dilute suspension per unit time. An injection ration of 1:100 is recommended for greenhouse systems.

**INSTRUCTIONS FOR SPRINKLER - (OVERHEAD) IRRIGATION**

Observe the requirements in the System Requirements section above. Do not apply when wind speed favors drift beyond the area intended for treatment. Apply SPECTRO only through systems containing anti-siphon and check valves designed to prevent water source contamination or overflow of the mix tank and containing interlocking controls between the metering device and the water pump to insure simultaneous shut-off. Maintain a gentle continuous agitation in mix tank during mixing and application to assure a uniform suspension. Greater accuracy in calibration and distribution will be achieved by injecting a larger volume of a more dilute suspension per unit time. Application of more than recommended quantities of irrigation water per acre may result in decreased product performance.

Do not apply when wind speed favors drift. When system connections or fittings leak, when nozzles do not provide uniform distribution or when lines containing the product cannot be flushed and must be dismantled and drained in a center pivot system, block the nozzle set nearest the well pivot injection unit to prevent spray being applied to this area. Where sprinkler distribution patterns do not overlap sufficiently, unacceptable disease control may result. Allow sufficient time for pesticides to be flushed through all lines and all nozzles before turning off irrigation water. SPECTRO may be applied in conjunction with chemically neutral liquid fertilizers. Application in conjunction with highly alkaline fertilizers, such as aqueous ammonia, may cause a degradation of the pesticide, resulting in reduced performance and should be avoided. Check local restrictions and requirements regarding sprinkler irrigation applications, as they may vary from state to state. Remove scale, pesticide residues, and other foreign matter from the chemical tank and entire injector system. Flush with clean water. Prepare a suspension of SPECTRO in a mix tank. Fill the tank with 1/2 to 3/4 of the desired amount of water. Start mechanical or hydraulic agitation. Slowly add the required amount of SPECTRO and then the remaining volume of water. Set sprinkler system to deliver 0.1 to 1.25 inches of water per acre. Volumes of water higher than this may reduce efficacy. Start sprinkler and then uniformly inject the suspension of SPECTRO into the irrigation water line so as to deliver the desired rate per acre. The suspension of SPECTRO should be injected with a positive displacement pump into the main line ahead of a right angle turn to insure adequate mixing.



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