7969-240



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

01/08/2009

WASHINGTON, D.C. 20460

OFFICE OF PREVENTION, PESTICIDES AND TOXIC SUBSTANCES

Charlotte Sanson BASF Corporation 26 Davis Drive Research Triangle Park, North Carolina 27709

JAN 8 2009

Subject:

BAS 500 ST Seed Treatment Fungicide EPA Registration No. 7969-240

Decision D384981: Label amendment dated October 10, 2007 to add new seed treatment uses for cotton; edible podded legume vegetables; fruiting vegetables; leafy vegetables; leaves of root and tuber vegetables; root vegetables (except sugar beets); succulent shelled peas and beans; tuberous and corm vegetables subgroup.

Dear Ms.Sanson:

We have reviewed the subject amended labeling, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended. The amended labeling is acceptable, provided you make the following label changes and submit a final printed label within 45 days.

1. On page one add "fruiting vegetables" to the crop listing.

2. On page 2 in the "Personal Protective Equipment (PPE)" subsection of the "PRECAUTIONARY STATEMENTS" section, after the first paragraph, add a paragraph (bulleted, if desired) that reads "Applicators and other handlers of tuberous and corm vegetable seed pieces must wear: coveralls (all day, including during clean-up), chemical-resistant gloves made of any waterproof material, shoes plus socks, and a dust/mist respirator with PF10."

3. On the page 4 "NOTE:" change "treated seeds" to "treated seeds and seed pieces". Also add "When opening this bag or loading, pouring, or handling the treated seed or seed pieces, wear long-sleeved shirt, long pants, shoes, socks, and chemical-resistant gloves made of any water-proof material. After the seeds and/or seed pieces have been planted in soil or other planting media, do not enter or allow worker entry into areas with treated seeds for 12 hours, except that workers may enter the areas with treated seeds without restriction if there will be no worker contact with the soil/media subsurface."

4. On page 9 in the "Application Instructions for Sugar Beet:" add the active ingredient use rates (in pounds) per unit of 100,000 seeds.

Enclosed please find a copy of the label stamped "Accepted With Comments", along with the risk assessments. If you have any questions about this letter, please contact John Bazuin at (703) 305-7381 or email at bazuin.john@epa.gov.

Sincerely yours, Tony Kish

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Product Manager (22) Fungicide Branch Registration Division (7505P)

Enclosures: Label stamped "Accepted with comments" Risk Assessments



Group

Fungicide

ACCEPTED with COMMENTS In EPA Letter Dated

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JAN 8 2009 Under the Federal hasotticide, Fradicide, and Rodenticide Act as amended, for the posticide registered under EFA Rog. No. 7469-340

BAS 500 ST seed treatment fungicide

For seed treatment use in barley, brassicas, bulb vegetables, corn, cotton, cucurbits, dried shelled peas and beans, edible podded legume vegetables, leafy vegetables, leaves of root and tuber vegetables, peanut, root vegetables, rye, soybean, succulent shelled peas and beans, sugar beet, sunflower, tuberous and corm vegetables and wheat.

Active Ingredient:

pyraclostrobin: (carbamic acid, [2-[[[1-(4-chlorophenyl)-1H-pyrazol-3-	
yl]oxy]methyl]phenyl]methoxy-, methyl ester)	20.0%
Other Ingredients:	80.0%
Total:	100.0%

EPA Reg. No. 7969-240

EPA Est. No.

KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCIÓN

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 inside for complete First Aid, Precautionary Statements, Directions For Use, and Conditions of Sale and Warranty.

Net Contents:

BASF Corporation, Agricultural Products 26 Davis Drive, Research Triangle Park, NC 27709

	FIRST AID
If swallowed	 Call a 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 a poison control center or doctor. DO NOT give anything by mouth to an unconscious person.
lf on skin or clothing	 Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.
lf in eyes	 Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eyes. 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.
	HOT LINE NUMBER

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

Caution: Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing.

Personal Protective Equipment (PPE)

Some materials that are chemically resistant to this product are listed below. For more options, refer to **Category A** on an EPA chemical-resistance category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material (such as nitrile, butyl, neoprene and/or barrier laminate)
- Shoes plus socks

Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations

Users Should:

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

Environmental Hazards

This product is toxic to fish and aquatic invertebrates. **DO NOT** discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit, and the permitting authority has been notified in writing prior to discharge. **DO NOT** discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or the Regional Office of the EPA. **DO NOT** contaminate water when disposing of equipment washwaters.

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. 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.

Storage and Disposal

DO NOT contaminate water, food, or feed by storage or disposal.

Pesticide Storage: Store in original containers only. Keep container closed when not in use. **DO NOT** store near food or feed. In case of spill on floor or paved surfaces, mop and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to label.

Pesticide Disposal: Wastes resulting from using this product may be disposed of on-site or at an approved waste disposal facility. If these wastes cannot be disposed of 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: Triple rinse (or equivalent). Puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

In Case of Spill

In case of large-scale	spillage regarding this product, call:
CHEMTREC	1-800-424-9300
BASF Corporation	1-800-832-HELP (4357)

Steps to be taken in case this material is released or spilled:

Dike and contain spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal. Remove contaminated clothing and wash affected skin areas with soap and water. Wash clothing before reuse. Keep spill out of all sewers and open bodies of water.

General Information

This package contains **BAS 500 ST seed treatment fungicide**, a water-dispersible granule (EG). **BAS 500 ST** is a broad-spectrum fungicide that provides preventive seed and seedling protection against seedborne fungi causing seed decay and the soilborne pathogen *Rhizoctonia solani*. **BAS 500 ST** may be applied in conjunction with application of other registered seed treatment products. Make all applications according to the use directions in this label. Use the higher rates of **BAS 500 ST** when disease pressure is expected to be high.

Resistance Management

The active ingredient in **BAS 500 ST**, pyraclostrobin, belongs to the group of respiration inhibitors classified by the EPA as **Quinone Outside Inhibitors (Qol)** or **Target Site of Action Group 11** fungicides. Due to the minimal amounts of **BAS 500 ST** applied to the seed that relocate to the upper parts of the plant, the potential for development of resistance is extremely low. Seed treatments of **BAS 500 ST** can, therefore, be followed by foliar use and resistance management guidelines of foliar use fungicides containing pyraclostrobin (**Cabrio[®] EG**, **Headline[®]**, or **Pristine[®] fungicides**) as specified on the respective labels.

Application Instructions

For use on "crop" seed at commercial treatment facilities. Not for use on farm.

Apply **BAS 500 ST** as a water-based mixture using standard slurry or mist-type seed treatment application equipment. The exact amount of water needed to provide the mixture or slurry rate (ml/100 kg or oz/cwt of seed) for optimum coverage is difficult to predict because weather conditions (hot or cold), seed type and surface, and equipment used all have a bearing on coverage. Consult a seed treatment specialist regarding slurry rates recommended for the crop seed to be treated with **BAS 500 ST**. The required amount of **BAS 500 ST** should then be diluted with the recommended amount of water that will provide uniform and complete coverage on the seed surface. Uniform application on seed and complete seed coverage are necessary for seed safety and best disease protection.

Seed should be sound and well cleaned prior to treatment. The purchaser of **BAS 500 ST** is responsible for ensuring that all seeds treated with this product are adequately dyed with a suitable color to prevent its accidental use as food for man or feed for animals. Refer to 21CFR, Part 2.25. Use an EPA-approved dye or colorant that imparts an unnatural color to the seed. Any dye or colorant added to treated seed must be cleared for use under 40CFR, Part 180.900,

"Exemptions from the requirement of a tolerance". Federal regulations have established official tolerances or exemptions from tolerances for residues on food and forage crops that should not be exceeded when the product (dye or colorant) is used at recommended rates.

Consult the seed treatment specialist for calibration and operation procedures of the seed treatment equipment being used. Mechanical agitation is required for proper mixing of **BAS 500 ST**. Prepare no more mixture of **BAS 500 ST** than is needed for immediate treating. Add ¾ of the required volume of water to the mix tank. With agitation running, add the required amount of **BAS 500 ST** in the tank along with other seed treatment components. Add the remaining ¼ amount of the required volume of water. Follow the mixing sequence listed below. Agitate thoroughly before and during application.

BAS 500 ST With Tank Mix Partners

BAS 500 ST mixes easily with water and other water-based seed treatments manufactured by BASF Corporation. When using **BAS 500 ST** in a tank mixture with other seed treatment products, observe all directions for use, crops/sites, use rates, dilution ratios, precautions, and limitations that appear on the tank mix partner label. **DO NOT** exceed label dosage or application rate, and follow the most restrictive label precautions and limitations. **DO NOT** mix **BAS 500 ST** with any product that prohibits such mixing. Make all applications according to the use directions.

When mixing **BAS 500 ST seed treatment fungicide** with products from other manufacturers, test compatibility prior to use by conducting a jar test as follows:

- 1. Mix all intended seed treatments with the appropriate amount of water in a clear glass container.
- 2. Mix well and allow to sit for 1 hour.
- 3. Remix and observe for incompatibility.

Physical compatibility is only part of compatibility. Testing also needs to be done with the seed to make sure the combination of products does not have detrimental effects on the seed.

Tank Mixing Instructions

1. Add ¾ of the required amount of water to the mix tank and turn on the agitation. Mechanical agitation is preferred.

- 2. Follow the mixing sequence: dye or colorant, wettable powders, soluble powders, flowable formulations, emulsifiable concentrates, and remaining ¼ of the required water. The ¼ of the required water as the last item for addition to the premix tank can be used as rinsate for the chemical container or to adjust the total slurry to compensate for water displacement by powdered products.
- 3. Maintain agitation until the entire slurry mixture has been used.
- 4. Ensure that seed is dry prior to bagging.

NOTE: Federal law requires that bags of treated seeds shall be labeled with the following: "This seed has been treated with pyraclostrobin fungicide. **DO NOT** use for food, feed or oil purposes. Store away from food and feedstuffs. Use with an EPA-approved dye that imparts an unnatural color to the seed."

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Сгор	Target Disease	Product Use Rate in oz/100 lbs Seed (lb ai/100 lbs seed)
Barley	Seed and seedling disease (damping-off) caused by <i>Rhizoctonia solani</i> , seedborne fungi causing seed decay, seedling damping-off	0.4 to 0.8 (0.005 to 0.01)
Brassica vegetables (includes head and stem and brassica leafy greens) Broccoli Broccoli, Chinese Broccoli, raab	Seed and seedling disease (damping-off) caused by <i>Rhizoctonia solani</i> , and other seedborne fungi causing seed decay, seedling damping-off	0.8 to 2.4 (0.01 to 0.03)
Brussels sprouts Cabbage Cabbage, Chinese Cabbage, Chinese mustard Cauliflower Cavalo broccolo		
Collards Kale Kohlrabi Mizuna Mustard greens Mustard spinach Rape greens		
Bulb vegetables	Suppression of seed and seedling dis-	0.8 to 2.4
Garlic Leek Onions (all varieties) Shallot	ease (damping-off) caused by seedborne fungi causing seed decay, seedling damping-off	(0.01 to 0.03)
Corn	Seed and seedling disease (damping-off)	0.4 to 0.8
(field, pop, sweet, corn for seed production)	caused by <i>Rhizoctonia solani</i> , seedborne fungi causing seed decay, seedling damping-off	(0.005 to 0.01)
,		
Cotton	Seed and seedling disease (damping-off) caused by <i>Rhizoctonia solani</i> , seedborne fungi causing seed decay; seedling damping-off	0.8 to 2.4 (0.01 to 0.03)

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Сгор	Target Disease	Product Use Rate in oz/100 Ibs Seed (Ib ai/100 lbs seed)
Cucurbits Includes all types and hybrids of: Cantaloupe Chayote Chinese waxgourd Citron melon	Seed and seedling disease (damping- off) caused by <i>Rhizoctonia solani</i> , seedborne fungi causing seed decay, . seedling damping-off	0.8 to 2.4 (0.01 to 0.03)
Cucumber Edible gourds Gherkin Muskmelon Pumpkin Summer squash Watermelon Winter squash		
Zucchini <i>Momordi</i> ca spp. (such as) Balsam apple Balsam pear Bitter melon Chinese cucumber	· · · · · · · · · · · · · · · · · · ·	
Dried shelled peas and beans Broad bean, Chickpea, Guar, Lablab bean, Lentil, Pigeon pea	Seed and seedling disease (damping- off) caused by <i>Rhizoctonia solani</i> , seedborne fungi causing seed decay, seedling damping-off	0.4 to 1.6 (0.005 to 0.02)
<i>Lupinus</i> spp.: Grain lupin, Sweet lupin, White lupin		
<i>Phaseolus</i> spp.: Field bean, Kidney bean, Pink bean, Lima bean, Navy bean, Pinto bean, Tepary bean		
<i>Vigna</i> spp.: Adzuki bean, Black-eyed pea, Catjang, Cowpea, Crowder pea, Moth bean, Mung bean, Rice bean, Southern pea, Urd bean		
Pisum spp.: Field pea		
Edible Podded Legume Vegetables	Seed and seedling disease (damping-off) caused by <i>Rhizoctonia solani</i> ,	0.4 to 1.6 (0.005 to 0.02)
Jack bean, Pigeon pea, Soybean (immature seed), Sword bean	seedborne fungi causing seed decay, seedling damping-off	
<i>Phaseolus</i> spp.: Runner bean, Snap bean, Wax bean		
<i>Vigna</i> spp.: Asparagus bean, Chinese longbean, Moth bean, Yardlong bean		
<i>Pisum</i> spp.: Dwarf pea, Edible-podded pea, Snowpea, Sugar snap pea		

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Сгор	Target Disease	Product Use Rate in oz/100
		lbs Seed (lb ai/100 lbs seed)
Fruiting vegetables	Seed and seedling disease (damping-	0.8 to 2.4
Eggplant	off) caused by Rhizoctonia solani, seed-	(0.01 to 0.03)
Ground cherry	borne fungi causing seed decay,	
Pepino	seedling damping-off	
Pepper (all varieties)		
Tomatillo		
Tomato		
Leafy vegetables	Seed and seedling disease (damping-	0.8 to 2.4
Amaranth	off) caused by Rhizoctonia solani, seed-	(0.01 to 0.03)
Arugula	borne fungi causing seed decay,	
Cardoon	seedling damping-off	
Celery		
Celery (Chinese)		
Celtuce		
Chervil		•
Chrysanthemum (edible-leaved		
and garland)		
Corn salad		
Cress (garden and Upland)		
Dandelion		
Dock		
Endive	·	
Fennel (Florence)		
Lettuce (head and leaf)	· · · ·	
Orach		
Parsley		
Purslane (garden and winter)		
Radicchio (red chicory)		
Rhubarb		
Spinach		
Spinach (New Zealand and vine)		
Swiss chard	:	
Leaves of root and tuber	Coord and coording discose (demping	0.8 to 2.4
vegetables	Seed and seedling disease (damping- off) caused by <i>Rhizoctonia solani</i> , seed-	(0.01 to 0.03)
Black salsify	borne fungi causing seed decay,	
Carrot	seedling damping-off	
Celeriac	seeding damping-on	
Celenac Chervil (turnip-rooted)		
Chicory		
Edible burdock		
Garden beet,	,	
Oriental radish		
Parsley (turnip-rooted)		
Parsnip		
Radish		
Rutabaga		
Skirret Turnip		
	I Contraction of the second seco	1

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Сгор	Target Disease	Product Use Rate in oz/100 Ibs Seed (Ib ai/100 Ibs seed)
Peanut	Seed and seedling disease (damping- off) caused by <i>Rhizoctonia solani</i> , seed- borne fungi causing seed decay, seedling damping-off	0.4 to 1.6 (0.005 to 0.02)
Root vegetables (except sugar beet) subgroup Black salsify Carrot Celeriac Chervil (turnip-rooted)	Seed and seedling disease (damping- off) caused by <i>Rhizoctonia solani</i> , seed- borne fungi causing seed decay, seedling damping-off	0.8 to 2.4 (0.01 to 0.03)
Chicory Edible burdock Garden beet Ginseng Horseradish Oriental radish Parsley (turnip-rooted) Parsnip		
Radish Rutabaga Skirret Spanish salsify Turnip		
Rye	Seed and seedling disease (damping- off) caused by <i>Rhizoctonia solani</i> , seedborne fungi causing seed decay, seedling damping-off	0.4 to 0.8 (0.005 to 0.01)
Soybean (<i>Glycine</i> spp.)	Seed and seedling disease (damping- off) caused by <i>Rhizoctonia solani</i> , seed- borne fungi causing seed decay, seedling damping-off	0.4 to 1.6 (0.005 to 0.02)
Succulent shelled peas and beans Broad bean, Pigeon pea <i>Vigna</i> spp.: Black-eyed pea, Cowpea,	Seed and seedling disease (damping- off) caused by <i>Rhizoctonia solani</i> , seed- borne fungi causing seed decay, seedling damping-off	0.4 to 1.6 (0.005 to 0.02)
Southern pea <i>Pisum</i> spp.: English pea, Garden Pea, Green pea		
Phaseolus spp.: Lima bean, green		

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Сгор	Target Disease	Product Use Rate in oz/100 Ibs Seed (Ib ai/100 lbs seed)
Sugar beet	Application Instructions for Sugar Beet To provide protection from seedling diseases caused by <i>Fusarium</i> spp. and <i>Rhizoctonia</i> spp., apply as a commercial seed treatment at 1.76 to 5.28 ounces of BAS 500 ST in or on a unit of pelleted sugar beet seed with a weight ratio of 2:1 pelleting mixture to raw seed (seed count 100,000 seeds, approximately 1 kilogram by weight).	
Sunflower	Seed and seedling disease (damping- off) caused by <i>Rhizoctonia solani</i> , seedborne fungi causing seed decay, seedling damping-off	0.8 to 2.4 (0.01 to 0.03)
Tuberous and corm vegetables subgroup Arracacha Arrowroot Chinese artichoke Jerusalem artichoke Cassava (bitter and sweet) Chayote (root) Chufa Dasheen Edible canna Ginger Leren Potato Sweet potato Tanier True yam Turmeric Yam bean	Seed and seedling disease (damping- off) caused by <i>Rhizoctonia solani</i> , seedborne fungi causing seed decay, seedling damping-off	0.8 to 2.4 (0.01 to 0.03)
Wheat	Seed and seedling disease (damping- off) caused by <i>Rhizoctonia solani</i> , seedborne fungi causing seed decay, seedling damping-off	0.4 to 0.8 (0.005 to 0.01)

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 must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as the presence of other or untested or unapproved materials, seed of low quality or low vigor or low germination, use of the product in a manner inconsistent with its labeling, misapplication of the product, or weather conditions at planting or environmental conditions during seed storage, all of which are beyond the control of BASE CORPORATION ("BASE") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

BASF 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.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW. BASF MAKES NO OTHER EXPRESS OR IMPLIED WAR-RANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY, BUYER'S EXCLUSIVE REMEDY AND BASF'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL BE LIMITED, TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, TO REPAYMENT OF THE PURCHASE PRICE OF THE PROD-UCT. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAM-AGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. BASF 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 BASF. ST807

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The Chemical Company