



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

OFFICE OF
CHEMICAL SAFETY
AND POLLUTION PREVENTION

18 July 2014

VIA EMAIL

Amy Dugger-Ronyak
BASF Corporation
26 Davis Drive
P.O. Box 13528
Research Triangle Park, NC 27709

Subject: Label Amendment to add minor label revisions
Xemium® 2.78 Fungicide ST
EPA Reg. No. 7969-307
Your Submission Dated May 09, 2014
Decision No: 492019

Dear Ms. Dugger-Ronyak:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable. Two (2) copies of the finished labeling must be submitted prior to releasing the product for shipment. A stamped copy of the label is enclosed for your records.

If you have any questions regarding this letter, please contact Driss Benmhend at (703) 308-9525.

Sincerely,

A handwritten signature in black ink that reads "Mark ES".

Mark Suarez, Product Manager 13
Insecticide Branch
Office of Pesticide Programs

Enclosure: *Label stamped "Accepted"*



The Chemical Company

ACCEPTED

Jul 18, 2014

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 7969-307

Group **7** Fungicide

Xemium® 2.78

fungicide ST

For commercial and on-farm use

Seed treatment for barley, corn, cotton, dried shelled peas and beans, edible podded legume vegetables, oat, peanut, rye, sorghum, soybean, sunflower, wheat and triticale

Xemium® 2.78 fungicide ST is not for sale, distribution, or use in Nassau and Suffolk counties in New York State.

Powered by **Xemium® fungicide**

Active Ingredient:

fluxapyroxad*: 1*H*-Pyrazole-4-carboxamide, 3-(difluoromethyl)-1-methyl-N-(3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)- 28.78%

Other Ingredients: 71.22%

Total: 100.00%

*Equivalent to 2.78 pounds of active ingredient per gallon

EPA Reg. No. 7969-307

EPA Est. No.

KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCION

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, Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).

Net Contents:

BASF Corporation
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 by a poison control center or doctor.
- **DO NOT** give anything to an unconscious person.

HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact BASF Corporation for emergency medical treatment information: 1-800-832-HELP (4357).

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION. Harmful if swallowed.

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
- Shoes plus socks

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

Engineering Controls Statement

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

This pesticide is toxic to fish. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. **DO NOT** contaminate water when disposing of equipment washwaters or rinsate.

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, 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 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), notification to workers, 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**.

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:

- Long-sleeved shirt and long pants
- Shoes plus socks

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.

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 representatives at the nearest EPA Regional Office for guidance.

Container Handling

Nonrefillable Container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Triple rinse containers too large to shake (capacity > 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

(continued)

STORAGE AND DISPOSAL (continued)

Container Handling (continued)

Refillable Container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

Triple rinse as follows: To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transport. **DO NOT** transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with state and local regulations.

In Case of Emergency

In case of large-scale spillage regarding this product, call:

- CHEMTREC 1-800-424-9300
- BASF Corporation 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF Corporation 1-800-832-HELP (4357)

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

- 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.
- Dike and contain the 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 the spill out of all sewers and open bodies of water.

Product Information

Xemium® 2.78 fungicide ST is a broad-spectrum fungicide that provides preventive seed and seedling protection from several seed and soilborne diseases. Make all applications according to the use directions in this label. Use the higher rates of **Xemium 2.78** when disease pressure is expected to be high.

Resistance Management

Fluxapyroxad, the active ingredient of **Xemium 2.78**, belongs to the group of respiration inhibitors classified by the U.S. EPA and Canada PMRA as a target site of action **Group 7** fungicide. Due to the minimal amounts of **Xemium 2.78** applied to the seed, the potential for development of resistance is low. Seed treatments of **Xemium 2.78**, therefore, can be followed by foliar use, and resistance management guidelines of foliar use fungicides containing fluxapyroxad as specified on the respective labels should be followed.

Application Instructions

For use in commercial seed treatment facilities and on-farm systems.

Xemium 2.78 is a suspension concentrate (SC) formulation and contains a red dye. This dye will impart an unnatural color to the seed for the purpose of preventing accidental use as food for man or feed for animals.

Apply **Xemium 2.78** 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 **Xemium 2.78**. The required amount of **Xemium 2.78** must then be diluted with the specified 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 must be of a good quality and well cleaned prior to treatment.

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 **Xemium 2.78**. Prepare no more mixture of **Xemium 2.78** than is needed for immediate treating. Add 3/4 of the required volume of water to the mix tank. With agitation running, add the required amount of **Xemium 2.78** in the tank along with other seed treatment components. Add the remaining 1/4 amount of the required volume of water. Use the mixing sequence that follows. Agitate thoroughly before and during application.

Xemium 2.78 With Tank Mix Partners

Xemium 2.78 mixes easily with water and other water-

based seed treatments. When using **Xemium 2.78** in a tank mixture with 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. Label dosage or application rate must not be exceeded, and the most restrictive label precautions and limitations must be followed. **Xemium 2.78** must not be mixed with any product that prohibits such mixing. All applications must be made according to the use directions.

When mixing **Xemium 2.78** with seed treatment products, test the 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 3/4 of the required amount of water to the mix tank and turn on the agitation. Mechanical agitation is preferred.
2. Use the following mixing sequence: wettable powders, soluble powders, flowable formulations, emulsifiable concentrates, and remaining 1/4 of the required water. The 1/4 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.

SEED LABELING NOTE: Federal law requires that bags of treated seed shall be labeled with the following: "**This seed has been treated with Xemium® 2.78 fungicide ST containing fluxapyroxad. DO NOT use for food, feed or oil purposes. Store away from food and feed-stuffs.**"

The seed label should also include the following: "**When opening this bag or loading, pouring, or handling the treated seed wear long-sleeved shirt, long pants, shoes, and socks. After the seeds 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.**"

"**Excess treated seed may be used for ethanol production only if (1) by-products are not used for livestock feed and (2) no measurable residues of pesticide remain in ethanol by-products that are used in agronomic practice.**"

Xemium® 2.78 fungicide ST Crop-specific Use Directions for Seed Treatment

Crop	Target Disease	Product Use Rate ml/100 kg seed (gram ai/100 kg seed)	Product Use Rate fl ozs/100 lbs seed (lb ai/100 lbs seed)
Barley	Seed and seedling disease (damping-off) caused by <i>Rhizoctonia solani</i> Suppression of seed and seedling disease caused by <i>Fusarium</i> spp. and <i>Microdochium</i> spp.	15 to 31 (5 to 10)	0.23 to 0.46 (0.005 to 0.01)
	Early Season suppression of powdery mildew (<i>Blumeria graminis</i>), rust (<i>Puccinia</i> spp.), net blotch (<i>Pyrenophora teres</i>) and scald (<i>Rhynchosporium secalis</i>)	77 to 153 (25 to 50)	1.15 to 2.30 (0.025 to 0.05)
Corn (field, pop, corn for seed production)	Seed and seedling disease (damping-off) caused by <i>Rhizoctonia solani</i> Suppression of seed and seedling disease caused by <i>Fusarium</i> spp.	15 to 31 (5 to 10)	0.23 to 0.46 (0.005 to 0.01)
	Early season suppression of common rust (<i>Puccinia sorghi</i>), corn gray leaf spot (<i>Cercospora zea-maydis</i>), Northern leaf blight (<i>Exserohilum turcicum</i>) and Southern leaf blight (<i>Bipolaris maydis</i>)	77 to 153 (25 to 50)	1.15 to 2.30 (0.025 to 0.05)
Corn (sweet)	Seed and seedling disease (damping-off) caused by <i>Rhizoctonia solani</i> Suppression of seed and seedling disease caused by <i>Fusarium</i> spp.	31 to 61 (10 to 20)	0.46 to 0.92 (0.01 to 0.02)
	Early season suppression of common rust (<i>Puccinia sorghi</i>), corn gray leaf spot (<i>Cercospora zea-maydis</i>), Northern leaf blight (<i>Exserohilum turcicum</i>) and Southern leaf blight (<i>Bipolaris maydis</i>)	77 to 153 (25 to 50)	1.15 to 2.30 (0.025 to 0.05)
Cotton	Seed and seedling disease (damping-off) caused by <i>Rhizoctonia solani</i>	31 to 61 (10 to 20)	0.46 to 0.92 (0.01 to 0.02)

(continued)

Xemium® 2.78 fungicide ST Crop-specific Use Directions for Seed Treatment *(continued)*

Crop	Target Disease	Product Use Rate ml/100 kg seed (gram ai/100 kg seed)	Product Use Rate fl ozs/100 lbs seed (lb ai/100 lbs seed)
<p>Dried shelled peas and beans (except soybean)</p> <p>Broad bean Chickpea Guar Lablab bean Lentil Pigeon pea</p> <p><u>Lupinus spp.</u> Grain lupin Sweet lupin White lupin</p> <p><u>Phaseolus spp.</u> Field bean Kidney bean Lima bean Navy bean Pink bean Pinto bean Tepary bean</p> <p><u>Pisum spp.</u> Field pea</p> <p><u>Vigna spp.</u> Adzuki bean Blackeyed pea Catjang Cowpea Crowder pea Moth bean Mung bean Rice bean Southern pea Urd bean</p>	<p>Seed and seedling disease (damping-off) caused by <i>Rhizoctonia solani</i></p> <p>Suppression of seed and seedling disease caused by <i>Fusarium</i> spp.</p> <p>Suppression of seedborne infection of lentils by <i>Ascochyta lentis</i> and <i>Ascochyta rabiei</i></p>	<p>15 to 31 (5 to 10)</p>	<p>0.23 to 0.46 (0.005 to 0.01)</p>

(continued)

Xemium® 2.78 fungicide ST Crop-specific Use Directions for Seed Treatment *(continued)*

Crop	Target Disease	Product Use Rate ml/100 kg seed (gram ai/100 kg seed)	Product Use Rate fl ozs/100 lbs seed (lb ai/100 lbs seed)
<p>Edible podded legume vegetables</p> <p>Jack bean Pigeon pea Soybean (immature seed) Sword bean</p> <p><u>Phaseolus spp.</u> Runner bean Snap bean Wax bean</p> <p><u>Pisum spp.</u> Dwarf pea Edible-podded pea Snowpea Sugar snap pea</p> <p><u>Vigna spp.</u> Asparagus bean Chinese longbean Moth bean Yardlong bean</p>	<p>Seed and seedling disease (damping-off) caused by <i>Rhizoctonia solani</i></p> <p>Suppression of seed and seedling disease caused by <i>Fusarium</i> spp.</p>	<p>15 to 31 (5 to 10)</p>	<p>0.23 to 0.46 (0.005 to 0.01)</p>
<p>Oat</p>	<p>Seed and seedling disease (damping-off) caused by <i>Rhizoctonia solani</i></p> <p>Suppression of seed and seedling disease caused by <i>Fusarium</i> spp.</p>	<p>15 to 31 (5 to 10)</p>	<p>0.23 to 0.46 (0.005 to 0.01)</p>
<p>Peanut</p>	<p>Seed and seedling disease (damping-off) caused by <i>Rhizoctonia solani</i></p>	<p>15 to 31 (5 to 10)</p>	<p>0.23 to 0.46 (0.005 to 0.01)</p>
<p>Rye</p>	<p>Seed and seedling disease (damping-off) caused by <i>Rhizoctonia solani</i></p> <p>Suppression of seed and seedling disease caused by <i>Fusarium</i> spp.</p>	<p>15 to 31 (5 to 10)</p>	<p>0.23 to 0.46 (0.005 to 0.01)</p>
<p>Sorghum</p>	<p>Seed and seedling disease (damping-off) caused by <i>Rhizoctonia solani</i></p> <p>Suppression of seed and seedling disease caused by <i>Fusarium</i> spp.</p>	<p>30 to 61 (10 to 20)</p>	<p>0.46 to 0.92 (0.01 to 0.02)</p>
<p>Soybean (Glycine spp.)</p>	<p>Seed and seedling disease (damping-off) caused by <i>Rhizoctonia solani</i></p> <p>Suppression of seed and seedling disease caused by <i>Fusarium</i> spp.</p>	<p>15 to 31 (5 to 10)</p>	<p>0.23 to 0.46 (0.005 to 0.01)</p>

(continued)

Xemium® 2.78 fungicide ST Crop-specific Use Directions for Seed Treatment *(continued)*

Crop	Target Disease	Product Use Rate ml/100 kg seed (gram ai/100 kg seed)	Product Use Rate fl ozs/100 lbs seed (lb ai/100 lbs seed)
Sunflower	Seed and seedling disease (damping-off) caused by <i>Rhizoctonia solani</i>	30 to 61 (10 to 20)	0.46 to 0.92 (0.01 to 0.02)
Wheat, Triticale	Seed and seedling disease (damping-off) caused by <i>Rhizoctonia solani</i> Suppression of seed and seedling disease caused by <i>Fusarium</i> sp. and <i>Microdochium nivale</i>	15 to 31 (5 to 10)	0.23 to 0.46 (0.005 to 0.01)
	Early Season protection from powdery mildew (<i>Blumeria graminis</i>), brown rust (<i>Puccinia recondita</i>), and Septoria leaf spot (<i>Septoria tritici</i>)	77 to 153 (25 to 50)	1.15 to 2.30 (0.025 to 0.05)

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 BASF CORPORATION ("BASF") 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 WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S EXCLUSIVE REMEDY AND BASF'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF THE PRODUCT.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, EXEMPLARY, SPECIAL OR INDIRECT DAMAGES 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.

ST1108

Xemium® 2.78 fungicide ST is specially formulated and sold by BASF for the control of pests according to the directions on this label. The purchase price of **Xemium 2.78** includes a royalty whereby the purchaser acquires a prepaid license under U.S. Patent No. 5,438,070 and (pending No. 2008/0153707 A1) under which purchaser agrees to employ the purchased quantity of **Xemium 2.78** only for the above-specified uses under BASF's United States patent rights and to provide notice of the terms and conditions of this license to any subsequent purchaser. Uses of **Xemium 2.78** other than those specified on this label are not licensed through the purchase of this product and the use of this product for other purposes may violate this license and patent rights of BASF.

Xemium is a registered trademark of BASF.

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007969-00307.20140423.NVA 2014-04-368-0125

Based on: NVA 2012-04-368-0021

BASF Corporation
26 Davis Drive
Research Triangle Park, NC 27709



The Chemical Company