



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

JUL 21 1999

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Mr. Richard Pence
Senior Regulatory Manager
Novartis Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419-8300

Dear Mr. Pence:

Subject: EPA Reg. No. 100-758
Maxim® 4FS
Label Amendment
Your Submission dated October 29, 1998

The amendments referred to above, submitted in connection with the registration under Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, are acceptable provided that you:

1. Delete "Okra" on page 6 from the label. Okra is not included in any of the crop groups (40 CFR §180.41), where tolerances for fludioxonil have been established. To add okra to the label, a new tolerance petition is required. However, no additional residue chemistry data will be needed; the required residue data will be translated from available fruiting and/or cucurbit vegetables to okra.
2. Put a comma (,) between Jojoba and Lesquerella on page 9.
3. Submit one (1) copy of your final printed labeling before you release the product for shipment. A stamped copy of the label is enclosed for your records.

Should you have any questions, do not hesitate to contact Mr. S. (Oonni) Oonnithan at 703-605-0368.

Sincerely,

Mary L. Waller
Product Manager 21
Fungicide Branch
Registration Division (7505C)

Encl.

10/29/98 29/14

Master Booklet

Maxim® 4FS

FUNGICIDE

A seed treatment product for control of certain seed and seedling diseases of crop plants. For use only in commercial seed treatment plants.

Active Ingredient:	
Fludioxonil (CAS No. 131341-86-1)	40.3%
Other Ingredients:	59.7%
Total:	100.0%

Maxim 4FS contains 4 lbs. active ingredient per gallon.

One Gallon
U.S. Standard Measure

KEEP OUT OF REACH OF CHILDREN.

CAUTION

See storage, disposal and precautionary statements in the end of the booklet.

EPA Reg. No. 100-758

EPA Est. 5905-GA-01

NCP

**ACCEPTED
with COMMENTS
In EPA Letter Dated:**

JUL 21 1999

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

100-758

DIRECTIONS FOR USE AND CONDITIONS OF SALE AND WARRANTY

IMPORTANT: Read the entire **Directions for Use** and the **Conditions of Sale and Warranty** before using this product. If terms are not acceptable, return the unopened product container at once.

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 should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application all of which are beyond the control of Novartis Crop Protection, Inc. or the Seller. All such risks shall be assumed by the Buyer.

Novartis 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. **Novartis makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall Novartis or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product.** Novartis 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 Novartis.



DIRECTIONS FOR USE

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

Not for use on agricultural establishments in hopper-box, planter-box, slurry-box, or other seed-treatment applications at or immediately before planting.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR DISEASE CONTROL, AND/OR ILLEGAL RESIDUES.

Treatment of highly mechanically scarred or damaged seed, or seed known to be of low vigor and poor quality, except for the purpose of curative control of existing disease pests, may result in reduced germination and/or reduction of seed and seedling vigor. Treat using equipment similar to that planned for treating the total seed lot. Conduct germination tests on a small portion of seed before committing the total seed lot to a selected seed treatment. Due to seed quality and seed storage conditions beyond the control of Novartis, no claims are made to guarantee the germination of carry-over seed or propagating material for all crop seed.

GENERAL INFORMATION

Maxim 4FS is a seed treatment fungicide which controls soil-borne and seed-borne disease of crop plants. Maxim 4FS is active against *Fusarium*, *Rhizoctonia*, *Helminthosporium*, and weakly pathogenic fungi such as *Aspergillus* and *Penicillium*. When rate ranges are given, use higher rate when disease pressure is expected to be severe.

Mixing Procedures

Apply Maxim 4FS as a water-based slurry utilizing standard slurry seed treatment equipment which provides uniform seed coverage. Uneven or incomplete seed coverage may not give the desired level of disease control. Thoroughly mix the recommended amount of Maxim 4FS into the required amount of water for the slurry treater and dilution rate to be used. Follow the manufacturer application instructions for the seed treatment equipment being used. Maintain constant agitation of the slurry during the treatment. Allow seed to dry before bagging.

Federal law requires that bags containing treated seed shall be labeled with the following information: "This seed has been treated with fludioxonil or fludioxonil and mefenoxam fungicide." Do not use for feed, food, or oil purposes. Store away from feed and foodstuffs. Forage may

not be grazed until 30 days after planting." Use an EPA-approved dye or colorant that imparts an unnatural color to the seed.

Maxim 4FS does not control diseases caused by *Pythium* spp. or *Phytophthora* spp. If these diseases are expected to be a problem, apply Maxim 4FS tank mixed with Apron XL™ LS. If Apron XL LS is not registered on that crop, apply Maxim as a tank mix with another labeled seed treatment product that has activity against these diseases. Consult the label for appropriate use rate and follow all use instructions for the products.

Follow the label directions for the most restrictive of label precautions and limitations. This product cannot be mixed with any product containing a label prohibition against such mixing.

ROOT AND TUBER VEGETABLES

Arracacha, arrowroot, artichoke (Chinese and Jerusalem), beet (garden and sugar), burdock (edible), canna (edible), carrot, cassava (bitter and sweet), celery root, chayote, cervil, chicory, chufa, dasheen, ginger, ginseng, horseradish, leren, parsley, parsnip, potato (0.08 fl. oz. only), radish (including oriental), rutabaga, salsify (oyster, black and spanish), skirret, sweet potato, tanier, turmeric, turnip, yam bean (jicama, maonic pea), and true yam.

For control of seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08-0.16 fl. oz. of Maxim 4FS per 100 lbs. of seed or propagating root or tuber material.

LEAVES OF ROOT AND TUBER VEGETABLES

Beet (garden and sugar), burdock (edible), carrot, cassava (bitter and sweet), chervil (turnip rooted), chicory, dasheen (taro), parsnip, radish (including oriental), rutabaga, salsify (black), sweet potato, tanier, turnip, and true yam.

For control of seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08-0.16 fl. oz. of Maxim 4FS per 100 lbs. of seed or propagating root or tuber material.

BULB VEGETABLES

Garlic (including great headed), leek, onion (dry bulb and green), onion welch, and shallot.

For control of seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08-0.16 fl. oz. of Maxim 4FS per 100 lbs. of seed or propagating material.

LEAFY VEGETABLES EXCEPT BRASSICA

Amaranth (leafy, chinese spinach, tampala), arugula, cardoon, celery (including Chinese), celtuce, chervil, chrysanthemum (edible-leaved and garland), corn salad, cress (garden and upland), dandelion, dock, endive, fennel (finocchio), lettuce (head and leaf), orach, parsley, purslane (garden and winter), radicchio, rhubarb, spinach (including New Zealand and vine), and swiss chard.

For control of seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08-0.16 fl. oz. of Maxim 4FS per 100 lbs. of seed.

BRASSICA (COLE) LEAFY VEGETABLE GROUP

Broccoli (including chinese and raab), brussels sprouts, cabbage (including chinese bok choy, chinese napa, and chinese mustard), cauliflower, cavalo broccola, collards, kale, kohlrabi, mizuna, mustard greens, mustard spinach, and rape greens.

For control of seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08-0.16 fl. oz. of Maxim 4FS per 100 lbs. of seed.

LEGUME VEGETABLES (SUCCULENT OR DRY)

Bean (*Lupinus* spp. - includes grain lupin, sweet lupin, and white lupin), bean (*Phaseolus* spp. - includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, and wax bean), Bean (*Vigna* spp. - includes adzuki bean, asparagus bean, blackeyed pea, catjang, chinese longbean, cowpea, crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean and yardlong bean), broad bean, chickpea, guar, jackbean, lablab bean, lentils, pea (dwarf, edible-pod, English, field, garden, green, snow, sugar snap), pigeon pea, soybean, soybean (immature), and sword bean.

For control of seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08-0.16 fl. oz. of Maxim 4FS per 100 lbs. of seed or propagating root or tuber material.

FOLIAGE OF LEGUME VEGETABLES

Any cultivar of bean (*Phaseolus* spp.), pea (*Pisum* spp.), and soybean.

For control of seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08-0.16 fl. oz. of Maxim 4FS per 100 lbs. of seed.

FRUITING VEGETABLES EXCEPT CUCURBITS

Eggplant, groundcherry, pepino, pepper (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper), tomatillo, and tomato.

For control of seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08-0.16 fl. oz. of Maxim 4FS per 100 lbs. of seed.

CUCURBIT VEGETABLES

Chayote, chinese waxgourd, citron melon, cucumber, gherkin, gourd edible (includes hyotan, cucuzza, hechima, chinese okra), momordica, all muskmelon, pumpkin, all squash and watermelon.

For control of seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08-0.16 fl. oz. of Maxim 4FS per 100 lbs. of seed.

OKRA

For control of seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08-0.16 fl. oz. of Maxim 4FS per 100 lbs. of seed.

CEREAL GRAINS (INCLUDES FORAGE AND SILAGE)

Barley, buckwheat, corn (field corn, popcorn, and sweet corn), millet (pearl and proso), oats, rice, rye, sorghum, teosinte, triticale, wheat, and wild rice.

Corn (Field Corn and Popcorn): For control of seed-borne and soil-borne fungi which cause seed decay, damping-off, and seedling blights,

apply 0.08-0.16 fl. oz. of Maxim 4FS per 100 lbs. of seed.

Apply Apron XL LS seed treatment in combination with Maxim 4FS for control of *Pythium* spp. Apply Apron XL LS at 0.0425 fl. oz. per 100 lbs. of seed tank mixed with the recommended rates of Maxim 4FS. Follow application and other instructions found on the Apron product label.

Grain Sorghum: For control of seed-borne and soil-borne fungi which cause seed decay, damping-off, and seedling blights, apply 0.08-0.16 fl. oz. of Maxim 4FS per 100 lbs. of seed.

Apply Apron XL LS in combination with Maxim 4FS for control of damping-off due to *Pythium* spp. Apply Apron XL LS at 0.32-0.64 fl. oz. per 100 lbs. of seed tank mixed with recommended rates of Maxim 4FS.

For systemic downy mildew control on cultivars which possess sorghum downy mildew resistance, apply Apron XL LS at 0.64 fl. oz. per 100 lbs. of seed as a tank mix with recommended rates of Maxim 4FS. To those cultivars which do not possess resistance to a particular race of sorghum downy mildew grown in areas with recent history of severe disease, apply 1.28 fl. oz. of Apron XL LS tank mixed with recommended rates of Maxim 4FS. Follow application and other instructions found on the Apron label.

Note: Seed treated with the 1.28 fl. oz. of Apron XL LS should be planted and not stored or carried over to the following year. Only high quality sorghum seed ($\geq 90\%$ germ) should be treated with Apron products.

Sweet Corn: For control of seed-borne and soil-borne fungi which cause seed decay, damping-off, and seedling blights, apply 0.08 fl. oz. of Maxim 4FS per 100 lbs. of seed.

Apply Apron XL LS seed treatment product in combination with Maxim 4FS for control of damping-off due to *Pythium* spp. Apply Apron XL LS at 0.32 oz. per 100 lbs. of seed tank mixed with the recommended rates of Maxim 4FS. For control of systemic downy mildew of sweet corn, apply Apron XL LS at 1.28 fl. oz. per 100 lbs. of seed tank mixed with recommended rates of Maxim 4FS. Follow application and other instructions found on the Apron product label.

For all other cereal crops: For control of seed-borne and soil-borne fungi which cause seed decay, damping-off, and seedling blights, apply 0.08-0.16 fl. oz. of Maxim 4FS per 100 lbs. of seed.

Important: (1) Do not use treated seed for feed, food, or oil.
(2) Cereal forage may not be grazed until 30 days after planting.



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GRASS FORAGE, FODDER, AND HAY

All grasses (including turfgrass, bermudagrass, bluegrass, and fescue or bromegrass), Gramineae family (either green or cured) except sugarcane and those included in the cereal grains group, that will be fed to or grazed by livestock, all pasture and range grasses and grasses grown for hay or silage.

For control of seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08-0.16 fl. oz. of Maxim 4FS per 100 lbs. of seed or propagating root or tuber material.

Important: Forage may not be grazed until 30 days after planting.

PEANUTS

For control of seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08-0.16 fl. oz. of Maxim 4FS per 100 lbs. of seed.

NONGRASS ANIMAL FEEDS (FORAGE, FODDER, STRAW, AND HAY)

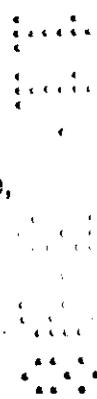
Alfalfa, bean (velvet), clover, kudzu, lespedeza, lupin, sainfoin, trefoil, vetch (including crown vetch and milk vetch).

For control of seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08-0.16 fl. oz. of Maxim 4FS per 100 lbs. of seed.

Important: Forage may not be grazed until 30 days after planting.

HERBS AND SPICES

All spice, angelica, anise, anise(star), annatto, balm, basil, borage, burnet, camomile, caper buds, caraway, caraway black, cardamom, cassia bark, cassia buds, catnip, celery seed, chervil, chive, chinese chive, cinnamon, clary, clove buds, coriander (Chinese parsley or cilantro), costmary, culantro (seed), cumin, curry (leaf), dill seed and dill weed, common fennel and florence fennel, fenugreek, grains of paradise, horehound, hyssop, juniper berry, lavender, lemongrass, lovage, lovage seed, mace, marigold, marjoram, mustard (seed), nasturtium, nutmeg, parsley (dried), pennyroyal, pepper (black and white), poppy seed, rosemary, rue, saffron, sage, savory (summer and winter), sweet bay, tansy,



tarragon, thyme, vanilla, wintergreen, woodruff, wormwood.

For control of seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08-0.16 fl. oz. of Maxim 4FS per 100 lbs. of seed or propagating root or tuber material.

FLAX, COTTON, CRAMBE, JAJOBA LESQUERELLA, RAPE, SAFFLOWER, SUNFLOWER

For control of seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08-0.16 fl. oz. of Maxim 4FS per 100 lbs. of seed.

SEED TREATMENT - EXPORT USE

FOR TREATMENT OF THE SEED FOR EXPORT ONLY TO COUNTRIES REQUIRING TREATMENT WITH MAXIM 4FS AND APRON XL LS BEFORE IMPORTATION. User should verify actual registered rate in country of destination and/or use.

Seed treated in accordance with the export use pattern must be labeled as follows: TREATED SEED: FOR EXPORT ONLY - NOT FOR DOMESTIC SALE OR USE.

STORAGE AND DISPOSAL

Pesticide Storage and Disposal

Store in a cool, dry place. Do not contaminate water, food, or feed by storage, disposal, or cleaning of equipment. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. If these wastes cannot be used 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 in proper disposal methods.

Container Disposal

Triple rinse (or equivalent), then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill, or by incineration, or by open burning, if allowed by state and local authorities. If burned, keep out of smoke.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Harmful if inhaled or absorbed through skin. Avoid contact with eyes, skin, or clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

Statement of Practical Treatment

If in eyes: Flush with plenty of water. Call a physician if irritation persists.

If on skin: Wash with plenty of soap and water. Get medical attention.

If swallowed: Immediately drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person. Call a physician or Poison Control Center.

If inhaled: Move to fresh air.

Note to Physician: There is no specific antidote if Maxim 4FS is ingested. Induce emesis or lavage stomach. Treat symptomatically.

Note: Workers must wear long pants, long sleeve shirts, and chemical-resistant gloves when applying Maxim 4FS as a seed treatment.

Environmental Hazards

This product is toxic to fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsates.

Apron XL™ and Maxim® trademarks of Novartis
U.S. Patent Nos. 4,151,299; 4,705,800

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Novartis Crop Protection, Inc.
Seed Treatment Products
Greensboro, North Carolina 27419

NCP

Initial Registration:



13044

Pressure-Sensitive Label
(For One Gallon)

Maxim® 4FS

FUNGICIDE

A seed treatment product for control of certain seed and seedling diseases of crop plants. For use only in commercial seed treatment plants.

Active Ingredient:	
Fludioxonil (CAS No. 131341-86-1)	40.3%
Other Ingredients:	59.7%
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See storage and disposal statements in the enclosed booklet.

One Gallon
U.S. Standard Measure

KEEP OUT OF REACH OF CHILDREN.

CAUTION

Precautionary Statements

Hazards to Humans and Domestic Animals

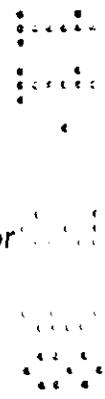
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EPA Est. 5905-GA-01

Maxim® trademark of Novartis

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Novartis Crop Protection, Inc.
Seed Treatment Products
Greensboro, North Carolina 27419

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[QUARK/MAXIM 4FS/N-MAXIM4FS-B] - ccg - 10/22/98

