



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

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

NOV 16 2004

Theodore D. Head
Nufarm, Inc.
1333 Burr Ridge Parkway, Suite 125A
Burr Ridge, IL 60521

Dear Mr. Head:

Subject: Increase Application Rate from 1 to 2 pints
Nufarm Maestro D Herbicide
EPA Registration No. 71368-39
Your Submission Dated November 3, 2004

The amendment referred to above, submitted in connection with registration under section 3(c)(7)(A) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), is acceptable provided that you:

1. Submit/cite all data required for registration/reregistration of your product under FIFRA section 3(c)(5) or 4(a) when the Agency requires all registrants of similar products to submit such data.

2. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:

- If the Precautionary Statements do not appear on the front panel add a referral statement similar to the following:

See back panel for additional precautionary statements.

3. Submit one (1) copy of your final printed labeling before you release the product for shipment. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

278

-2-

If you have any questions concerning this letter, please contact Mr. James Stone at 703-305-7391.

Sincerely yours,

JS

Joanne I. Miller
Product Manager (23)
Herbicide Branch
Registration Division (7505C)

Enclosure

3 7 8

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

NOV 16 2004

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

71368-39



Maestro™ D

Herbicide

For Control of Listed Broadleaf Weeds in Wheat, Barley, Oats, Triticale and Rye

ACTIVE INGREDIENT:

Octanoic acid ester of bromoxynil (3,5-dibromo-4-hydroxybenzotrile)* 30.1%*

Isocetyl (2-ethylhexyl) Ester of 2,4-Dichlorophenoxyacetic Acid** 31.2%**

INERT INGREDIENTS: 38.7%

TOTAL: 100.0%

Contains xylene range/petroleum distillates.

*Bromoxynil octanoate equivalent to 20.69% of bromoxynil or not less than 2.0 pounds of bromoxynil per gallon.

**2,4-Dichlorophenoxyacetic acid equivalent to 20.69% or not less than 1.9 pounds per gallon. Isomer specific by AOAC method.

EPA Reg. No. 71368-39

EPA Est. No. 228-IL-1

**KEEP OUT OF REACH OF CHILDREN
CAUTION - CAUCION**

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.)

For Chemical Spill, Leak, Fire, Exposure or Accident, Call CHEMTREC (800) 424-9300.
For Medical Emergencies Only, Call 877-325-1840.

NET CONTENTS _____ GALLONS

Manufactured By:
Nufarm, Inc.
Burr Ridge, IL

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FIRST AID	
IF IN EYES	<ul style="list-style-type: none"> • 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 SWALLOWED	<ul style="list-style-type: none"> • Immediately call a poison control center or doctor. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give any liquid to the person. • Do not give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or a doctor for treatment advice.
IF INHALED	<ul style="list-style-type: none"> • Remove victim to fresh air. • If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
HOT LINE 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 1-877-325-1840 for emergency medical treatment information.	
NOTE TO PHYSICIAN	
This product may pose an aspiration pneumonia hazard. Contains petroleum distillates.	

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

CAUTION

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

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Some materials that are chemical resistant to this product are listed below. If you want more options, follow the instructions for category G on an EPA chemical resistant category selection chart.

Applicators and other handlers must wear a long-sleeved shirt and long pants, chemical resistant gloves such as barrier laminate or viton gloves, a chemical resistant apron when cleaning equipment, mixing, or loading, protective eyewear, and shoes plus socks.

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

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.

If you will handle a total of 60 gallons or more of this product per day, you must use a mechanical transfer system for all mixing and loading operations. If this product is packaged in a 30 gallon drum, you must use a mechanical transfer system which terminates in a drip-free hard coupling which may be used only with a spray or mix tank which has been fitted with a compatible coupling. If you do not presently own or have access to a mechanical transfer system with this type of coupling, contact your dealer for information on how to obtain such a system or to modify your present system. When using a mechanical transfer system, do not remove or disconnect the pump or probe from the container until the container has been emptied and rinsed. The pump or probe system must be used to rinse the empty container and to transfer the rinsate directly to the mixing or spray tank.

To reduce exposure to residues, wash the spray rig, tractor, and all other equipment used to handle or apply this product with water daily or before using the equipment for any other purpose.

APPLICATION BY CHEMIGATION must be done by fixed pipe, overhead sprinkler systems or hand moved pipe. If hand moved pipe is used for chemigation, the pipe must not be handled in any way until 24 hours after chemigation has been completed and residues have been flushed from the system. When applying by chemigation, no person may enter the application site unless in an enclosed vehicle.

DURING AERIAL APPLICATION, human flaggers are prohibited unless in enclosed vehicles. Aerial application is prohibited within 300 feet of residential areas (e.g., homes, schools, hospitals, shopping areas, etc.)

Apply to non-residential turf only. Do not apply to residential, playground, or schoolyard turf. Do not apply with backpack or hand-held application equipment.

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.
- 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 pesticide is toxic to wildlife, fish and aquatic invertebrates. Use with care when applying to areas frequented by wildlife or adjacent to any body of water. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from target areas. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D have been associated with mixing/loading and disposal sites. Caution should be exercised when handling 2,4-D pesticides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Read entire label before using this product.

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) and restricted-entry intervals. 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). For all crops on this label the REI is 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 coveralls over long-sleeved shirt and long pants, chemical resistant gloves such as nitrile, viton or barrier laminate, chemical-resistant footwear plus socks, chemical-resistant headgear for overhead exposure and protective eyewear.

PHYSICAL AND CHEMICAL HAZARDS

Do not use or store near heat or open flame.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Do not store near fertilizers or seeds. Store at temperatures above 32° F. If allowed to freeze, remix before using.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

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

RETURNABLE -- REFILLABLE CONTAINERS: This material may be repackaged in 15 or 30 gallon returnable-refillable containers by Nufarm or a registered establishment under contract to Nufarm. After use, return the container to the point of purchase or designated locations. This container must only be refilled with Maestro D Herbicide. DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE. Prior to refilling, inspect thoroughly for damage such as cracks, punctures, abrasions and damaged or worn out threads on closure devices. Do not refill or transport damaged or leaking containers. Check for leaks after refilling and before transportation. If the container is not being refilled, return it to the point of purchase.

GENERAL INFORMATION

Maestro D is formulated as an emulsifiable concentrate of octanoic acid ester of bromoxynil containing the equivalent of 2 pounds of bromoxynil per gallon and 2,4-Dichlorophenoxyacetic acid containing the equivalent of 1.9 pounds per gallon.

Maestro D is a selective postemergence herbicide for control of important broadleaf weeds infesting small grains wheat, barley, oats, rye and triticale. Optimum weed control is obtained when Maestro D is applied to actively growing weed seedlings. Maestro D contains a contact herbicide and a systemic herbicide, therefore thorough coverage of the weed seedlings is essential for optimum control.

Maestro D has little residual activity. Therefore subsequent flushes of weeds will not be controlled by the initial treatment. Generally crops that form a good canopy will help shade subsequent weed flushes. However, certain crops or short-straw varieties, for example Yaccora Rojo wheat, may not develop the crop canopy fast enough to shade the subsequent flushes of weeds.

Occasional transitory leaf burn may occur. The temporary leaf burn is similar to that seen with liquid fertilizer. Recovery of the crop is generally rapid with no lasting effect. Frequency and amount of leaf burn may be greater when crops are stressed by abrasive winds, cool to cold evening temperatures or mechanical injury, such as that caused by hail, sleet or insect feeding. To reduce the potential for temporary leaf burn, applications should be made to dry foliage in the recommended spray volumes per acre when weather conditions are not extreme.

GROUND APPLICATION

Use a standard herbicide boom sprayer that provides uniform and accurate application. Sprayer should be equipped with screens no finer than 50 mesh in the nozzle tips and in-line strainers.

Select a spray volume and delivery system that will ensure thorough and uniform spray coverage. For optimum spray distribution and thorough coverage use of flat fan nozzles (maximum tip size 8008) with a spray pressure of 40-60 psi are recommended. Other nozzle types and lower spray pressures that produce coarse spray droplets may not provide adequate coverage of the weeds to ensure optimum control. Raindrop® nozzles and flood nozzles are not recommended as weed control with Maestro D may be reduced.

In general, a spray volume of 10 to 20 gallons per acre (GPA) is recommended for optimum spray coverage. A minimum of 5 GPA with a minimum spray pressure of 50 psi and a maximum ground speed of 10 mph may be used with higher speed, low volume ground application if ground terrain, crop and weed density allow effective spray distribution. When using higher speed equipment, a maximum ground speed of 10 mph is suggested if field conditions cause excessive boom movement during application which results in poor spray coverage. Ground applications made when dry, dusty field conditions exist may provide reduced weed control in wheel track areas. Applications using less than 10 gallons per acre may result in reduced weed control.

When weed infestations are heavy, use of higher spray volumes and spray pressure will be helpful in obtaining uniform weed coverage. When corn or grain sorghum are large enough to interfere with the spray pattern, drop nozzles should be used to obtain uniform weed coverage. If you are unsure of the infestation level or size of crop, consult your local extension service.

Do not apply when winds are gusty or when other conditions favor poor spray coverage and/or off target spray movement.

USER PRECAUTIONS

Avoid use of small diameter spray nozzles. Avoid spray drifts onto susceptible plants such as vegetables, flowers, tomatoes, beans, sugarbeets, sunflowers, and other legumes. Coarse sprays are less likely to drift. Do not spray at all in the vicinity near susceptible plants to prevent any vapor drift. Local conditions may affect the use of herbicides. State agricultural authorities in many states issue recommendations to fit local conditions. Be sure that the use of this product conforms to all applicable conditions.

If tank mixing, a compatibility test is recommended to ensure satisfactory spray preparation. To test for compatibility, use a small container and mix a small amount (0.5 to 1 quart) of spray combining all ingredients in the same ratio as the anticipated use. If any indications of physical incompatibility develop, do not use this mixture for spraying. Indications of incompatibility usually will appear within 5 to 15 minutes after mixing. To ensure maximum crop safety and weed control, follow all cautions and limitations on this label and the labels of products used in the tank mixture.

AERIAL APPLICATION

Use orifice discs, cores and nozzle types and arrangements that will provide for optimum spray distribution and maximum coverage. In general a minimum spray volume of 5 GPA and a maximum pressure of 40 psi are recommended.

Do not apply during inversion conditions, when winds are gusty or when other conditions favor poor spray coverage and/or off target spray movement. Off target spray movement can be minimized by increasing the spray volume per acre and not applying when winds exceed 10 mph.

SPRAY DRIFT

SENSITIVE AREAS: The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitats for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulation.

1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed. The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information.

INFORMATION ON DROPLET SIZE: (This section is advisory in nature and does not supersede the mandatory label requirements.)

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions below).

CONTROLLING DROPLET SIZE: (This section is advisory in nature and does not supersede the mandatory label requirements)

- Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of nozzles - Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation - Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle Type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

BOOM LENGTH: (This section is advisory in nature and does not supersede the mandatory label requirements)

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

APPLICATION HEIGHT: (This section is advisory in nature and does not supersede the mandatory label requirements)

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

SWATH ADJUSTMENT: (This section is advisory in nature and does not supersede the mandatory label requirements)

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.)

WIND: (This section is advisory in nature and does not supersede the mandatory label requirements)

Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

TEMPERATURE AND HUMIDITY: (This section is advisory in nature and does not supersede the mandatory label requirement)

When applications are made in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

TEMPERATURE INVERSIONS: (This section is advisory in nature and does not supersede the mandatory label requirement)

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

FOR THE CONTROL OF LISTED BROADLEAF WEEDS IN WHEAT, BARLEY OATS, TRITICALE AND RYE

Use 3/4 to 2 pints of this herbicide per acre in enough spray volume to provide uniform coverage of weeds, usually 10-20 gallons per acre by ground equipment and 5 gallons by aircraft. Application should be made to cereal grains from the fully tillered stage of growth but before the jointing stage. Use the 2 pint rate for mustards, pigweed and wild buckwheat. Use the 2 pint rate for kochia and tansy mustard or when weeds are growing under cool dry conditions. Heavy weed populations require a higher rate and complete spray coverage.

This product controls the following weeds: mustards, frenchweed, nightshade, arrowhead, field bindweed, gumweed, pigweed, ragweed, wild buckwheat, plantain, sunflower, canola, cow cockle, Russian thistle, annual smartweed, lambsquarter and other broadleaf weeds. Apply to weeds up to the 4 leaf stage, .2 inches in height or 1 inch in diameter whichever comes first.

RESTRICTIONS AND PRECAUTIONS

Do not permit dairy animals or meat animals being finished for slaughter to forage treated grain fields within 45 days after treatment.

Do not apply when crop canopy covers the weeds as poor weed control will result.

Do not apply when crops are under moisture stress.

Reduced weed control may occur when weeds are stressed from lack of moisture or cold temperatures.

Do not plant rotational crops within 30 days following application.

The total cumulative rate should not exceed 2 lbs. ai. of 2,4-D.

Do not feed treated straw to livestock.

IMPORTANT: READ BEFORE USE

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

CONDITIONS: The directions for use of this product are believed to be adequate and should be followed carefully. All such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: NUFARM, INC. MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, THAT EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. No agent of Nufarm, Inc. is authorized make any warranties beyond those contained herein or to modify the warranties contained herein. This warranty does not extend to the handling or use of this product contrary to label instructions or under abnormal conditions not reasonably foreseeable. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions.

LIMITATIONS OF LIABILITY: THE EXCLUSIVE REMEDY OF THE USER OR BUYER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE PAID, OR AT NUFARM, INC. ELECTION, THE REPLACEMENT OF PRODUCT.

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