

27-FEB-1998

(( LABEL ))

DUAL(R) 480

FOR CUSTOM APPLICATION TO DRY FERTILIZER ONLY

HERBICIDE

AGRICULTURAL

NET CONTENTS: \*

Solution for Selective Weed Control

GUARANTEE:

metolachlor ..... 480 g/L

READ THE LABEL AND ATTACHED BOOKLET BEFORE USING

REGISTRATION NO.: 22,852  
PEST CONTROL PRODUCTS ACT

Novartis Crop Protection Canada Inc.  
140 Research Lane  
Research Park, University of Guelph  
Guelph, Ontario  
N1G 4Z3

LABEL FOR: \* 1100 L and Bulk Container

NOTICE TO USER:

This control product is to be used only in accordance with the directions on this label. It is an offence under the PEST CONTROL PRODUCTS ACT to use a control product under unsafe conditions.

NOTICE TO BUYER:

Seller's guarantee shall be limited to the terms set out on the label and subject thereto, the buyer assumes the risk to persons or property arising from the use or handling of this product and accepts the product on that condition.

FIRST AID:

This product contains a petroleum distillate. If swallowed, do not induce vomiting. Obtain prompt medical attention or contact a poison control centre. If in eyes, splash repeatedly with large amounts of clean water for at least 15 minutes. Obtain medical attention or contact a poison control centre. If on skin, wash thoroughly with soap and water. If irritation occurs, obtain medical attention or contact a poison control centre.

NOTE: Metolachlor may cause skin sensitization reactions in certain individuals.

PRECAUTIONS:

KEEP OUT OF THE REACH OF CHILDREN. Harmful if swallowed. Avoid contact with eyes or prolonged contact with skin. Avoid inhalation of vapours or spray mist. Do not contaminate food, feed, domestic or irrigation water supplies, lakes, streams and ponds.

CAUTION: Do not graze treated immature crops or cut for hay; Sufficient data are not available to support such use.

DECONTAMINATION AND DISPOSAL:

For information on the disposal of unused, unwanted product, and the cleanup of spills, contact the Provincial Regulatory Agency or the manufacturer.

CONTAINER REFILLING OR DISPOSAL:

If the container is to be refilled, do not rinse with any material or introduce any pesticide other than Dual(R) 480. Reseal and return to the point of purchase for refilling. Before refilling, inspect thoroughly for damage such as cracks, punctures, bulges, dents, abrasions, and damaged or worn threads on closure devices. Check for leaks after filling and before transportation. Do not refill or transport damaged or leaking containers. If the container is not being refilled return to point of purchase.

IN CASE OF EMERGENCY INVOLVING A MAJOR SPILL, FIRE OR POISONING CALL 1-800-267-6351

(R) Dual is a registered trademark of Novartis Crop Protection Canada Inc.

(( PAMPHLET ))

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INTRODUCTION

Dual 480 is a liquid formulation designed specifically for impregnation on dry fertilizer. It will not mix with water or liquid fertilizer. Dual 480 can be used in both bulk blenders and on-board fertilizer impregnation systems. This special low viscosity formulation adsorbs quickly and thoroughly to dry fertilizer and improves the flowability of the fertilizer/herbicide mixture under varying temperature and moisture conditions.

DO NOT USE IN COASTAL B.C.

CROP INFORMATION:

Dual 480 provides selective weed control in:  
Corn (hybrid, silage, seed, sweet)  
Soybeans

WEEDS CONTROLLED:

American Nightshade  
Eastern Black Nightshade  
Fall Panicum  
Crabgrass (smooth, hairy) Foxtail (green, yellow, giant)  
Old Witchgrass  
Barnyard Grass

Yellow Nutsedge: Extended periods of dry weather following application may result in reduced nutsedge control.

APPLICATION INFORMATION

PREPLANT INCORPORATION:

- Immediate incorporation is not necessary
- Incorporation equipment should include rolling or western harrows
- On sandy soils, heavy rainfall following an incorporated treatment may cause leaching of the herbicide.

INCORPORATION INSTRUCTIONS		
TYPE OF EQUIPMENT	MAXIMUM WORKING DEPTH	MINIMUM SPEED
"S"-Tine (Danish Cultivator)	10 cm	10 km/hr
"C"-Tine Cultivator with overlapping sweeps	10 cm	10 km/hr
Tandem disc (maximum 18 cm spacing between discs)	10 cm	6 km/hr
Power driven cultivator	5 cm	any
Mulch Master	5 cm	10 km/hr

CAUTION:

Do not apply to soils that contain less than 1 % or more than 10%

organic matter. Winter cereals may be planted 4 1/2 months following application. If drought conditions persist after a preplant incorporated application, annual grass control may not be adequate.

**DRY BULK GRANULAR FERTILIZERS:**

Many dry bulk granular fertilizers may be impregnated with Dual 480 for preplant incorporated application to control weeds in corn and soybeans. Dual 480 can be applied to dry fertilizer in a bulk fertilizer blender or applied through an on-board injection system.

When using Dual 480 in a bulk blender, ensure uniform application and mixing in the fertilizer. Dual 480 contains a blue dye. Visually inspect the fertilizer/herbicide mixture to ensure that thorough mixing has occurred. If the herbicide/fertilizer mixture in a bulk blender is too wet, the use of a highly absorptive powder (generally less than 2% by weight) such as Microcel E, diatomaceous earth or finely powdered clay is recommended.

When using Dual 480 in on-board impregnation systems use only high quality fertilizer with a minimum of fines. Absorptive powder is not recommended for use with Dual 480 in on-board impregnation systems.

For best results, apply Dual 480 /fertilizer mixtures uniformly to the soil with properly calibrated equipment immediately after blending and incorporate according to label directions.

Note: Apply a minimum of 100 kg per hectare of dry granular fertilizer impregnated with recommended rates of Dual alone or Dual Tank Mixtures.

Do not impregnate Dual 480 alone or in combination with other herbicides onto nitrate fertilizers, superphosphates, or limestone.

**CORN**

**DUAL 480 ALONE:**

WEEDS CONTROLLED	TIMING	RATE PER HECTARE*
Annual Grasses and Nutsedge	Preplant Incorporated	4 - 5.5 L

**HERBICIDE COMBINATIONS (EASTERN CANADA ONLY):**

NOTE: Apply the herbicides listed below onto the fertilizer in a

separate operation.

WEEDS CONTROLLED	TIMING	RATE PER HECTARE DUAL 480*	RATE PER HECTARE/ COMBINATION PARTNER**
Nutsedge, Annual Grasses and Broadleaf Weeds	Preplant Incorporated	4.0-5.5L	+ 1.1 - 1.7 kg AAtrex(R) Nine-0(R) or 2.1 - 3.1 L AAtrex Liquid 480 or 2.0 - 3.0 kg Bladex(R) Nine-T(R) or 3.75 - 5.5 L Bladex Liquid

HERBICIDE COMBINATIONS (PRAIRIES AND INTERIOR B.C. ONLY):

NOTE: Apply the herbicides listed below onto the fertilizer in a separate operation.

WEEDS CONTROLLED	TIMING	RATE PER HECTARE DUAL 480*	RATE PER HA/ COMBINATION PARTNER**
Green and Yellow Foxtail, Barnyard Grass and Broadleaf Weeds	Preplant Incorporated	4.0 - 5.5 L	+ 1.1 - 1.7 kg AAtrex Nine-0 or 2.1 - 3.1 L AAtrex Liquid 480 or 2.25 - 2.75 kg Bladex Nine-T or 4.25 - 5.0 L Bladex Liquid

\* Use the higher rate of DUAL 480 for heavier weed problems.

\*\* Consult the labels of the product to be applied with DUAL 480 for specific instructions regarding soil-type variations and other restrictions.

#### SOYBEANS

DUAL 480 ALONE:

WEEDS CONTROLLED	TIMING	RATE PER HECTARE*
Annual Grasses and Nutsedge	Preplant Incorporated	3.5 - 5.5 L

TANK MIXTURES:

NOTE: Apply the herbicides listed below onto the fertilizer in a separate operation. DO NOT USE IN COASTAL B.C.

WEEDS CONTROLLED	TIMING	RATE PER HECTARE DUAL 480*	RATE PER HA/ COMBINATION PARTNER**
Nutsedge, Annual Grasses and Broadleaf Weeds including Nightshade***	Preplant Incorporated	3.5 - 5.5 L	+ 550 - 750 g Sencor(R) 75DF or 850 mL - 1.75 L Sencor 500F or 540 g - 640 g Lexone(R) DF

\* Use the higher rate of Dual 480 for heavier weed problems.

\*\* Consult the labels of the product to be applied with Dual 480 for specific instructions regarding soil-type variations and other restrictions.

\*\*\* For optimum nightshade control, use the higher rate of Dual 480 and choose a combination partner which is also registered for the control of nightshade.

CAUTION: Soybeans should be seeded at least 4 cm deep or crop injury may result. Do not apply Dual 480 if soybeans have emerged. Consult the labels of the products to be applied with Dual 480 for specific crop recommendations.

ADHERE TO THESE PRODUCT LABELS FOR PRECAUTIONS, WARNINGS, RESTRICTIONS, TANK MIXING AND SPRAYING INSTRUCTIONS, ROTATIONAL CROPS AND DETAILED DIRECTIONS FOR USE REGARDING DOSAGE VARIATIONS ACCORDING TO SOIL TYPE.

(R) AAtrex, Nine-0, Nine-T and Dual are registered trademarks of Novartis Crop Protection Canada Inc.  
Sencor is a registered trademark of Bayer AG.  
Lexone and Bladex are registered trademarks of E.I. duPont de Nemours and Company



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