

17-JAN-1997

((PAIL LABEL))

Avenge (R) 640

Difenzoquat Soluble Powder

Postemergence Wild Oat Herbicide

For control of wild oats in

SPRING WHEAT,+ BARLEY, TRITICALE,++, WINTER WHEAT,++
FALL RYE, ++ CANARY GRASS and UNDERSEEDED FORAGES++

+ (Neepawa, Glenlea, Selkirk, Chester, Canuck, Benito,
Columbus, Fielder, Leader, Katepwa, Conway, Kenyon, Lancer, Oslo,
Genesis, Pasqua, Bluesky, Wildcat, Biggar and HY320, Makwa,
Teal and Cutler varieties only)

++(*For specific varieties see attached pamphlet)

AGRICULTURAL

CYANAMID

GUARANTEE: difenzoquat...640g/L
(PRESENT AS METHYL SULFATE)

REGISTRATION No. 18787 PEST CONTROL PRODUCTS ACT

WARNING

POISON

IN CASE OF EMERGENCY ENDANGERING LIFE OR PROPERTY
INVOLVING THIS PRODUCT, CALL DAY OR NIGHT
1-800-454-2673

KEEP OUT OF REACH OF CHILDREN

READ THE LABEL AND ATTACHED BROCHURE BEFORE USING

CONTENTS: 8.85 Kg

CYANAMID CROP PROTECTION
Division of Wyeth-Ayerst Canada, Inc.
Markham, Ontario,
L3R 6E6

22927-06

* Registered trademark of American Cyanamid Co.

BEFORE USING ANY PESTICIDE STOP READ THE LABEL

PRECAUTIONS:

KEEP OUT OF REACH OF CHILDREN.

HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH THE SKIN.

CORROSIVE, CAUSES EYE IRRITATION.

Avoid contact with eyes, skin and clothing.

Wear goggles or face shield and rubber gloves when handling.

Wash thoroughly with soap and water after handling.

Do not contaminate and feed products.

FIRST-AID INSTRUCTIONS:

IF SWALLOWED: Drink one or two 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. Get medical attention.

IN CASE OF CONTACT: Immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control centre. Wash clothing before re-use.

TOXICOLOGICAL INFORMATION:

If swallowed, evacuate stomach immediately.

Symptoms of poisoning - lethargy, diuresis, diarrhea and prostration.

STORAGE AND DISPOSAL:

Rinse the emptied container thoroughly and add the rinsings to the spray mixture in the tank.

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

Follow provincial instructions for any required additional cleaning of the container prior to its disposal. Make the empty container unsuitable for further use. Dispose of the container in accordance with provincial requirements. For information on the disposal of unused, unwanted product and the cleanup of spills contact the Provincial Regulatory Agency or the Manufacturer.

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.

((PAMPHLET))

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DIRECTIONS FOR USE:

STAGE OF WILD OAT GROWTH:

AVENGE herbicide should give successful wild oat control during an extended period from the 3-4 leaf stage to the 5th leaf stage.

Early Treatments: AVENGE herbicide should be applied when a majority of the wild oats are in the 3-4 leaf stage to minimize early wild oat competition and provide maximum yield increases. AVENGE herbicide will not control wild oat plants that are in the 1-2 leaf stage.

Later Treatments: AVENGE herbicide, applied at the 4-5 leaf stage will give very good control but yield increases may be reduced.

NOTE: Maximum wild oat control and yield increase of crop are obtained under conditions of strong crop competition. Early treatments will promote stronger crop competition than later treatments. For best results, AVENGE herbicide should be applied when the crop and wild oats are growing vigorously.

AVENGE herbicide controls wild oats by stopping their growth. Obvious signs of plant death may not be seen for 3 to 4 weeks but the competitive effect of these plants will have been removed.

CROPS:

SPRING WHEAT: Neepawa, Glenlea, Selkirk, Chester, Canuck, Benito, Columbus, Fielder, Leader, Katepwa, Conway, Kenyon, Lancer, Oslo, Genesis, Pasqua, Bluesky, Wildcat, Biggar and HY320, Makwa, Teal and Cutler varieties only.

BARLEY: All varieties.

TRITICALE: Welsh, Carman.

WINTER WHEAT: Norstar, Sundance.

FALL RYE: Cougar, Puma, Frontier, Rymin, Kodiak

CANARY GRASS: Seed used as feed for song birds

FORAGES: Alfalfa, Red Clover, Sweet clover, Birdsfoot trefoil,
 underseeded to BARLEY or WHEAT Creeping Red fescue, Red fescue, Meadow fescue, Bromegrass, Timothy, Crested wheatgrass, Orchardgrass, Russian wildrye grass, Reed canarygrass, Kentucky bluegrass.

NOTE: DO NOT treat forages without a companion crop. DO NOT treat the wheat and barley companion crops and the underseeded forages if the forages are to be grazed or harvested for feed during the year of seeding. Rotation to other crops can be made the following season. AVENGE herbicide may shorten wheat straw slightly but this does not affect the crop yield.

AERIAL APPLICATION:

Application Rates

TO TREAT 1 HA:

WILD OAT INFESTATION	TOTAL WATER VOLUME/HA	AMOUNT OF AVENGE 640/HA	AMOUNT + OF SURFACTANT REQUIRED/HA
201 or more wild oat plants per m2	20-50 L	1.3 kg (850 g active)	0.12 L - 0.30 L AGRAL 90 (1) AG-SURF (2) 0.10 L - 0.25 L TRITON XR (3) COMPANION (4)
1-200 wild oat plants per m2	20-50 L	1.1 kg (700 g active)	0.12 L - 0.30 L AG-SURF 0.10 L - 0.25 L TRITON XR COMPANION

8.85 KG PAIL TREATS:

WILD OAT INFESTATION	TOTAL WATER VOLUME	HECTARES TREATED	AMOUNT + OF SURFACTANT REQUIRED
201 or more wild oat plants per m2	135-340 L	6.8	0.8 L - 2.0 L AGRAL 90 AG-SURF 0.7 L - 1.7 L TRITON XR COMPANION

1-200 wild oat plants per m2	160-400 L	8.0	1.0 L - 2.4 L AGRAL 90 AG-SURF 0.8 L - 2.0 L TRITON XR COMPANION
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+ 0.6% (v/v) AGRAL 90, AG-SURF; or +0.5% (V/V) TRITON XR or COMPANION SURFACTANT MUST BE ADDED.

APPLY AVENGE herbicide at the recommended rates in 20-50 litres water per hectare.

DO NOT apply when the wind velocity exceeds 15 km/h. Application should be made as close to the growing crop as feasible.

DO NOT permit spray drift to contaminate crops other than those being sprayed. It is recommended that a flagman be located at each end of the field or that an automatic mechanical flagging unit be attached to the aircraft to ensure uniform aerial application and to avoid overlapping.

Most infested fields have more than 200 wild oat plants per m2 and require the 1.3 L/ha rate. The lower rates may be adequate in following years when the wild oat population has been reduced.

DO NOT make more than one application of AVENGE per growing season.

GROUND APPLICATION:

Application Rates

TO TREAT 1 HA:

WILD OAT INFESTATION	TOTAL WATER VOLUME/HA	AMOUNT OF AVENGE 640/HA	AMOUNT + OF SURFACTANT REQUIRED/HA
201 or more wild oat plants per m2	100 L	1.3 kg (850 g active)	0.6 L AGRAL 90 AG-SURF 0.5 L TRITON XR COMPANION
1-200 wild oat plants per m2	100 L	1.1 kg (700 g active)	0.6 L AGRAL 90 AG-SURF 0.5 L TRITON XR COMPANION

8.85 KG PAIL TREATS:

WILD OAT INFESTATION	TOTAL WATER VOLUME	HECTARES TREATED	AMOUNT + OF SURFACTANT REQUIRED
201 or more wild oat plants per m2	680 L	6.8	4.0 L AGRAL 90 AG-SURF 3.4 L TRITON XR COMPANION
1-200 wild oat plants per m2	800 L	8.0	4.8 L AGRAL 90 AG-SURF 4.0 L TRITON XR COMPANION

+ 0.6% (v/v) AGRAL 90, AG-SURF; or +0.5% (V/V) TRITON XR or COMPANION SURFACTANT MUST BE ADDED.

VOLUME of spray per hectare: A uniform spray of 100 litres per hectare which thoroughly covers the wild oat plants must be used. See chart for amounts of water to be added when a 8.85 kg pail of AVENGE herbicide is being used. See chart for tips and tip pressures.

DO NOT apply when the wind velocity exceeds 15 km/h. Application should be made as close to the growing crop as feasible.

DO NOT permit spray drift to contaminate crops other than those being sprayed.

MOST infested fields have more than 200 wild oat plants per square metre and require the 1.3 kg/ha rate. The lower rates may be adequate in following years when the wild oat population has been reduced.

DO NOT make more than one application of AVENGE per growing season.

Sprayer Information

TIPS For 100 L rate	TRACTOR Speed	TIP PRESSURE	DIRECTION of spray
Tee Jet 6502 or 8002	8 km/h	For all tips 275 kPa	For all tips 45' forward
Tee Jet 8001 LP	6.5 km/h		
Delavan LF 2 65 or 80	8 km/h		

Flat fan spray tips are recommended over cone tips.

Pressure at nozzle tips should be 275 kPa, lower pressures may result in poor control.

Tilt spray boom forward 45' if flat fan nozzle tips are used.

Wash sprayer thoroughly after spraying has been completed.

MIXING

Fill the spray tank 3/4 full with clean, filtered water then add required quantity of AVENGE and surfactant. Add additional water required. Circulate the spray mixture in the tank for 5 minutes before spraying begins to ensure thorough mixing.

FOAMING

AVENGE herbicide may cause foaming in certain types of water. If this occurs agitation should be kept to a minimum and a silicone anti-foaming agent added.

WARNINGS

Use ONLY on the crop varieties listed in this pamphlet. (See Directions for Use).

DO NOT apply after 6-leaf stage of barley, wheat and canary grass.

Under cool weather conditions, or under high humidity the crop may show some initial burning on lower leaves, however, there will be no adverse effects on crop maturity or yield.

DO NOT apply AVENGE if the crop is under extreme drought stress or is showing effects of excessive moisture (poor drainage).

DO NOT make more than one application of AVENGE per growing season.

DO NOT allow livestock to graze treated crops within 8 weeks of treatment. Straw from treated fields can be fed to livestock 8 weeks after application.

DO NOT treat the wheat and barley companion crops and underseeded forages if the forages are to be grazed or harvested for feed during the year of seeding.

As AVENGE herbicide is highly water soluble, do not spray if crop plants are wet with heavy dew or rain.

DO NOT spray if rain is forecast within 6 hours!

DO NOT spray in winds over 15 kilometers per hour or reduced wild oat control will result. DO NOT let spray drift into adjacent fields.

Keep out of lakes, streams and ponds.

DO NOT spray if freezing temperatures are forecast.

DO NOT use felt-type filter elements because they cause pressure restrictions and cannot be easily cleaned.

Use a 50 mesh stainless screen element in the main "line strainer"

unit.

Use a 50 mesh screen on nozzle strainers when applying 100 litres of solution per hectare.

HOW TO USE AVENGE WILD OAT HERBICIDE PLUS BROADLEAF HERBICIDES.

- Select the proper AVENGE herbicide application rate as described in the DIRECTIONS FOR USE TABLE.
- DO NOT apply AVENGE tank-mix combinations under stress conditions.
- In order to assure optimum broadleaf weed control, follow label recommendations of the broadleaf herbicides used with AVENGE.
- When tank-mixing broadleaf herbicides use only on barley, canary grass and wheat and apply only those listed below following the mixing instructions.
- When tank-mixing follow the most restrictive precautions, directions and cropping rotation limitations that appear on both products labels.
- 0.6% (V/V) AGRAL 90, AG-SURF; or 5% (V/V) TRITON XR or COMPANION SURFACTANT MUST BE ADDED.

TANK MIX	NOTE
MCPA ester Bromoxynil (PARDNER(3)) (See Note 1)	(1) DO NOT APPLY BY AIR.
2,4-D ester (See Note 2)	(2) DO NOT apply to Canary grass
MCPA ester plus bromoxynil (BROMINAL M(3) BUCTRIL M(3); BROMOX 450 M(3); BROMOX 720 M(3)); SABRE(3)).	(3) Wheat and barley only. DO NOT apply when underseeded to legumes.
2,4-DB(EMBUTOX 625(3); COBUTOX 400(2); 2,4-D Butyric 400) (See Note 2)	
SEE 2,4-D/2,4-DP5	
CleanCrop SEE DIPHENOPROP 600(6), ESTAPROP(3), TURBOPROP 600(3), DICHLORPROP-D(2) (See Note 3)	
Apply the above tank mix combination at a rate of 100 litres spray per hectare by ground equipment or 20 to 50 litres per hectare by aircraft where acceptable.	

LASER (4)	Use only Hard Red Spring wheat. Use ground equipment only. Will control wild oats and green foxtail.
ALLY (5) REFINE (5) REFINE EXTRA	Use AVENGE 640 at 1.3 kg/ha in tankmix only on wheat and barley grown in soils with a pH of 7.5 or lower. DO NOT apply to Canary grass. DO NOT add surfactant. DO NOT apply by aircraft.

Apply the above tankmix combinations at a rate of 100 litres spray per hectare by ground equipment or 20 to 50 litres per hectare by aircraft where acceptable.

Mixing Note: AVENGE and dry flowable herbicides

When tank-mixing a dry flowable herbicide such as ALLY, REFINE or REFINE EXTRA with AVENGE:

Make sure the dry flowable is thoroughly dissolved in the water before adding AVENGE herbicide. On repeated tank-loads, if any tank-mix solution remains in the tank, prepare a dry flowable/water slurry and add it to the required water volume in the spray tank prior to adding AVENGE.

CAUTION:

DO NOT mix AVENGE herbicide with formulation containing MCPA amine, 2,4-D amine, BANVEL(8), TARGET(9) or any herbicide other than those listed above as crop injury or reduced weed control may result.

DO NOT tank-mix AVENGE with ANY broadleaf herbicide, except 2,4-DB, for use on Underseeded Forages.

MIXING INSTRUCTIONS FOR AVENGE WITH BROADLEAF HERBICIDES

1. Fill tank one-half to three-quarters full with clean water and start agitating.
2. Add the broadleaf herbicide to the partially filled tank while agitating.
3. Add AVENGE herbicide when tank is three-quarters filled while agitating. Fill tank and agitate, or, recycle for at least five minutes before spraying.
4. Continue agitation until spraying is completed.

A RECOMMENDED SURFACTANT MUST BE ADDED.

The amount of surfactant required varies with water volume applied per

hectare. Please refer to the label.

One 8.85 kg pail treats 6.8 - 8.0 hectares.

- 1 Registered trademark of Zeneca.
- 2 Registered trademark of Interprovincial Co-op.
- 3 Registered trademark of Rhone-Poulenc.
- 4 Registered trademark of Rohm & Haas.
- 5 Registered trademark of Agroliz, Inc.
- 6 Registered trademark of United Agri Products.
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