

90.03.16

(LABEL)

ATRAZINE 600

Keep Out Of Reach Of Children

10 Litres

Flowable - Agricultural

Agricultural Herbicide for broad spectrum weed control in corn and for total weed control and bare ground maintenance on non-crop land

GUARANTEE Atrazine.....	582 g/L
Related active triazines.....	18 g/L
TOTAL TRIAZINES.....	600 g/L

REGISTRATION NO. 19160 PEST CONTROL PRODUCTS ACT

READ THE LABEL AND ATTACHED BROCHURE BEFORE USING

COOPER MILL LTD.  
Agricultural Division  
R.R.3, Madoc, Ontario,  
Canada, K0K 2K0

#### Precautions

Harmful if swallowed. Do not inhale vapours or spray mist. Avoid contact with eyes and prolonged contact with skin. Do not contaminate foods or feeds. Do not contaminate any body of water. Store in a dry place. Do not reuse empty container.

#### First Aid

Wash eyes immediately following any eye contact. Wash skin with soap and water following skin contact. If swallowed, induce vomiting. Get medical attention.

#### Disposal

1. Rinse the emptied container thoroughly and add the rinsings to the spray mixture in the tank.
2. Follow Provincial instructions for any required additional

- cleaning of the container prior to its disposal.
3. Make the empty container unsuitable for other use.
  4. Dispose of the container in accordance with Provincial requirements.
  5. For information on the disposal of unused, unwanted product and the cleanup of spills, contact the regional office of Conservation and Protection, Environment Canada.

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.

(PAMPHLET)

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#### GENERAL DIRECTIONS

##### WEEDS CONTROLLED

Atrazine 600 will effectively control a wide range of annual grasses and broadleaf weeds such as:

Mustards	Lamb's Quarters**
Purslane	Redroot Pigweed**
Ragweed	Volunteer Clover
Smartweed	Barnyard Grass
Lady's Thumb	Foxtail (green)*
Wild Buckwheat	Foxtail (yellow)
Wild Oats	Old Witchgrass

\*Green Foxtail is best controlled by a post-emergent treatment

\*\*Certain species of annual broadleaf weeds have exhibited tolerance to Atrazine 600 applications. Post-emergent sprays of 2, 4-D will adequately control these weeds. For further information regarding control of these particular weeds in your area, consult your local agricultural authorities.

For control of Quackgrass, Canada Thistle and Nutgrass Atrazine 600 will not control established perennials at rates recommended for annual broadleaf weed and grass control in corn, but will kill perennial species freshly starting from seed. Atrazine 600

used in a pre-emergent application acts mainly through root absorption: consequently, rainfall or irrigation is needed to move it into the root zone. If no injury to the weeds is immediately apparent and if they continue to grow, as may occur under dry or minimal moisture conditions, a shallow cultivation or rotary hoeing will keep them in check until moisture conditions improve.

#### TIMING OF APPLICATION

Atrazine 600 may be applied to corn land prior to planting (pre-plant treatment after planting but prior to emergence of weeds and corn(pre-emergent treatment) or after emergence of weeds and corn (post-emergent treatment).

PRE-PLANT TREATMENT: (incorporated or non-incorporated)  
Broadcast in the Spring at the rate indicated in the table below during or after final seedbed preparation. For incorporation, set equipment to maximum 10 cm depth. If further tillage is intended after spraying, do not incorporate Atrazine 600 deeper than 2.5 cm.

PRE-EMERGENT TREATMENT: The seedbed must be firm and free from large air spaces. Apply the Atrazine 600 spray during or shortly after planting prior to weed emergence. DO NOT USE ATRAZINE 600 ON LOOSE AND TOUGH SEEDBEDS. POST-EMERGENT TREATMENT USING

ATRAZINE 600 IN OIL-WATER EMULSION: The post-emergent activity of Atrazine 600 is increased when applied in an oil-water emulsion. This combination produces satisfactory control of seedling broadleaf weeds up to 10 cm high and of annual grasses up to 2.5 cm high in the 1 or 2 leaf stage. The combination of Atrazine 600 in oil-water emulsion has been particularly useful following periods of hot dry weather, when weeds are more difficult to kill.

NOTE: Some injury to corn can occur with Atrazine 600 applied in oil-water emulsions, especially during cold, backward weather. There is no risk of corn injury when Atrazine 600 is applied in water alone. Do not add hormone-type weed killers such as 2,4-D, 2,4-DB, MCPA, MCPB and dicamba or other herbicides to combinations of oil-water emulsions and Atrazine 600. The risk of damage to other vegetation from spray drift is increased with the use of Atrazine 600 in an oil-water emulsion.

#### LIQUID FERTILIZERS

For pre-plant and pre-emergence application, nitrogen solutions or complete Liquid Fertilizers may replace all or part of the water as a carrier for Atrazine 600. CAUTION: Do not apply after the corn has emerged as there is danger of Liquid Fertilizer causing crop injury. If there is any doubt about compatibility of a particular fertilizer formulation, check by mixing a small amount of Atrazine 600 with the Liquid Fertilizer.

#### MIXING INSTRUCTIONS

WATER/FERTILIZER SOLUTIONS: Atrazine 600 may be mixed with water or fertilizer solutions and applied as a spray. Prepare the spray by pouring the liquid into the tank during filling with carrier. Bypass agitation is sufficient to keep the material in suspension if the return lines discharge near the bottom of the tank. MIXING ATRAZINE 600 WITH EMULSIFIED OIL IN WATER: Use 2.7 to 3.75 L of Atrazine 600 plus 17 L of an emulsifiable crop oil in 150-350 L of water per hectare. The higher rate of Atrazine 600 should be used where annual grasses are a problem. Use only oils which are emulsifiable, non-herbicidal crop oils labelled for use with atrazine. Oils contaminated with water or other materials can cause either compatibility problems or crop injury, or both.

Follow Proper Mixing Steps:

1. Use 16 mesh or coarser suction screen and 50 mesh or coarser in-line and tip screens. Thoroughly clean sprayer prior to use.
  2. Fill spray tank from 1/4 - 1/3 full with carrier.
  3. Engage the agitation system and pour in the required amount of Atrazine 600.
  4. Continue agitation while adding the remainder of the carrier.
  5. Finally, add the emulsifiable oil or product to be tank mixed with Atrazine 600. The mixture can now be applied.
  6. Before refilling, empty the tank as completely as possible to prevent a buildup of oil in the tank. If any spray mixture remains in the tank, keep the agitation system in operation to avoid a separation of the oil from the water.
  7. If an oil film starts to build up in the tank, drain and clean it with a strong detergent solution or solvent.
  8. Immediately after use, thoroughly clean the sprayer by flushing the system with water containing a detergent.
- SPRAYING: Spraying should be done at a pressure of 200-300 kPa per hectare.

#### METHOD OF APPLICATION

Atrazine 600 may be applied either as an overall spray or as a band treatment. Band treatments are desirable where cultivation is intended to alleviate hard soil conditions or to control troublesome perennial weeds. For overall application, apply Atrazine 600 either pre-plant incorporated or pre-emergence in 100- 350 L/ha or post-emergence in 170-350 litres per hectare of spray. For banding use proportionately less product and spray per hectare.

#### APPLICATION RATES

The rates given below are calculated on the basis on 1000 mL = 1L  
NOTE: The rates shown in the table do not apply to Quackgrass and Nutgrass. For control of these weeds see separate directions

below.

SOIL TYPE		OVERALL SPRAY
	Rate per hectare	Crop hectares treated per 10 L of Atrazine 600
Light and Sandy (see Note A)	2.7 L	3.7 ha
Loams and Clays	3.75 L	2.7 ha
Muck Soils (see Note B)	5.6 L	1.8 ha

NOTE (A): The rated for loams and clays should be used on light and sandy soils where annual grass weeds predominate or where an unusually heavy infestation of broadleaf weeds is expected.

NOTE (B): Muck soils are highly absorptive and may interfere with the uptake of Atrazine 600 by weed roots following pre-emergent treatment. Therefore, a firm level seedbed is particularly important and unless this can be achieved, an early post-emergent spray is preferable to a pre-emergent treatment.

#### QUACKGRASS, CANADA THISTLE AND NUTGRASS CONTROL

QUACKGRASS (COUCHGRASS) AND CANADA THISTLE: Make an application to Quackgrass foliage or areas infested with Canada Thistle in the Fall or early Spring using 3.75 L of Atrazine 600 in 170 - 350 litres of water per hectare. Plough or cultivate one to three weeks later. Make a second application after planting the corn using 3.75 L of Atrazine 600 per hectare as an early post-emergent spray. The addition of 17 L of an emulsifiable oil or Surfactant Oil concentrate (2,75 - 5.50 L) to this second treatment will increase the speed of kill of the Quackgrass and Canada Thistle foliage. Row cultivation will increase the effectiveness of this treatment.

When the use of the split application of Atrazine 600 described above, has not been possible and sever Quackgrass or Canada Thistle infestation develops in established corn, and "emergency treatment" should be considered. Apply 7.7 L of Atrazine 600 plus 17 L of emulsifiable oil in 170 - 350 L of water per hectare. Some temporary injury to the corn may occur, however, such injury is usually offset by increased yields due to control of Quackgrass and Canada Thistle. It usually takes several annual applications of Atrazine 600 to eliminate Canada Thistle, however, one season's treatment gives good economic control.

NUTGRASS (NUTSEDGE): Apply 3.75 L of Atrazine 600 to the soil in the Spring before the Nutgrass shoots emerge and work in to a

depth of 5-7.5 cm by discing and harrowing. Plant the corn and make a second application of 3.75 L of Atrazine 600 per hectare in an oil- water emulsion when the Nutgrass is in the early post-emergent (spike) stage. Row cultivation may be necessary to obtain good control.

NOTE: When either the split application or the "emergency treatment " of Atrazine 600 has been used, corn must be grown on the land for two successive years.

#### INDUSTRIAL

##### FOR TOTAL WEED CONTROL AND BARE GROUND MAINTENANCE OF NON-CROP LAND

Used as directed Atrazine 600 kills and prevents growth of most annual and perennial broadleaf weeds and grasses that are found on non-cropped land. Normally, Atrazine 600 is used shortly after the start of growth. It is taken up mainly by weed roots but there may be also some herbicidal effect by absorption through foliage. Lack of precipitation may reduce or delay the effect on weeds especially when the soil is dry at application. Although low solubility Atrazine 600 tends to penetrate well into the soil and it may creep to some extent, especially on sloping ground. Trees, ornamentals or crops are likely to be damaged if their roots extend into the treated zone. Heavy rain falling before Atrazine 600 has penetrated into the ground may wash the chemical off the surface. This risk is normally limited to sloping ground.

RATES OF APPLICATION vary with the type of weeds to be controlled, as specified below:

	PER HECTARE	PER 1000 sqm
Annual weeds and perennial seedlings	16 L	1.6 L
Shallow rooted perennials	23 L	2.3 L
Heavy Perennial growth	31 L	3.1 L

SPOT TREATMENT FOR TOTAL VEGETATION CONTROL: Use 45 mL of Atrazine 600 in 4-7 litres of water and apply to 10 sqm of infested area. This treatment will control most annual and perennial weeds and grasses. Timing of Applications depends mainly on soil moisture and will vary with climatic region. Early application will reduce unsightly and flammable remains of dead weeds.

LOCATION	TIMING
B.C. Pacific Coast	March to July
Prairies, Interior B.C and the Lakehead of Ontario	April and May or August to freeze-up
Ontario and Quebec	May to July
Maritime Provinces	May to August

N.B. - Spring applications in the Prairies, Interior B.C. and the Lakehead of Ontario can be extended into June, sometimes July, if rainfall and soil moisture are plentiful, or if a suitable contact herbicide is used in combination with Atrazine 600.

VOLUME OF SPRAY: The recommended rates of Atrazine 600 should be applied in 200-1800 litres of water per hectare (4-20 litres per 100 sqm). The lower volume should be used only by experienced operators using equipment with an extremely efficient filtration system and where wind conditions permit. Use the higher volume where established or dead vegetation is dense or obstructions frequent.

NOTE: Residual action of Atrazine 600 varies according to climate, soil and rate. Normally, the higher rates will control weeds for two seasons or more in the Prairies. Control may be of shorter duration in wetter areas. Some weeds such as horsetail and milkweed may require more than one treatment to give control. The added use of an appropriate contact or translocated herbicide may also aid in quicker control of these deep rooted perennial weeds. If soil moisture is low, control of dandelion in the Prairies may not be complete until the following year. Under low rainfall conditions, dandelion can be controlled by the added use of translocated type herbicide. Do not spray when ground is frozen or covered with snow. Higher than normal rates may be required on cinders and soils rich in organic matter. After using, wash sprayer thoroughly with clean water.

PRECAUTION: Do not apply to areas where the roots of desirable species extend. Do not apply, or allow drift, to desirable vegetation.

FOR USE ON SILAGE, FIELD AND SWEET CORN		
ATRAZINE 600 TANK MIX COMBINATIONS		
Timing	Combination Rate/Hectare	Weeds Controlled



Pre-plant incorporated Pre-emergent	1.9-2.7 ATRAZINE 600 + 2.0 - 2.75 L DUAL 1.9-2.7 L ATRAZINE 600 + 2.0-2.75 L DUAL	Yellow nutsedge, annual grasses and broad leaf weeds. Annual grasses and broadleaf weeds.
Pre-plant incorporated Pre-plant incorporated	1.9-2.7 L ATRAZINE 600 + 4.25 L SUTAN + 8E 1.9-2.7 L ATRAZINE 600 + 5.5 L SUTAN + 8E	Annual grasses and broadleaf weeds. Yellow nutsedge (nutgrass) annual grasses and broad- leaf weeds.
Pre-emergent Early post emergent (up to 2-leaf stage of weeds and crop is no More than 12.5 cm tall)	1.9-2.7 L ATRAZINE 600  1.9-2.7 L ATRAZINE 600	Annual grasses and broadleaf weeds  Annual grasses and broadleaf weeds
Pre-emergent Early post- emergent (before broadleaf weeds are 5cm and grasses are in the 1-2 leaf stage, with corn up to 7.5cm high)	1.9-2.7 L ATRAZINE 600 + 2.25-2.75 kg BLADEX 80W 1.9L ATRAZINE 600 + 2.25-2.75 kg BLADEX 80W	Annual grasses and broadleaf weeds  Annual grasses and broadleaf weeds.

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SUTAN + is a registered trademark of ICI Ltd.

BLADEX is a registered trademark of Shell Canada-

(registered user of trademark-Ciba Geigy Canada Ltd.)

#### GENERAL

Either for severe infestations of late germinating grasses (e.g. crabgrass) or for the reduction of residues of Atrazine 600 for certain susceptible succeeding crops, the above tank mix combination are recommended.

CAUTION: Do not mix oils, oil concentrates or surfactants or hormone-type herbicides with Atrazine 600/Bladex 80W or Atrazine

600. The respective label MUST be consulted for detailed directions and dosage variations according to soil type and spray timing.

FOLLOW ALL MIXING INSTRUCTIONS. USE PRECAUTIONS AND WARNINGS THAT APPEAR ON THE LABEL OF THE PRODUCT SELECTED FOR TANK MIXING WITH Atrazine 600.

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