

planting and shallowly incorporate or Surface Blend into the upper 1 to 2 inches of soil.

**Preemergence Surface**--Apply this tank mixture after planting, before crop and weed emergence and within 5 days after last preplant tillage operation.

Reference: The "APPLICATION TIMING AND METHODS" section of this label provides detailed information and procedures for the application timing and method selected.

**RECOMMENDED RATES:** Refer to the following table for the recommended broadcast treatment rates for this tank mixture. Applications which are not consistent with recommendations in this label may result in unsatisfactory weed control or crop injury.

**Application Rates**

SOIL TEXTURAL GROUP*	BROADCAST RATE PER ACRE (QUARTS) **			
	1% to 3% organic matter		3% or more organic matter	
	HARNESS® XTRA +	BLADEX 4L***	HARNESS XTRA +	BLADEX 4L***
Coarse****	1.5 to 1.8	1.0 to 1.5	1.5 to 1.8	1.3 to 1.8
Medium	1.8 to 2.3	1.0 to 1.5	1.8 to 2.3	1.3 to 1.8
Fine	1.8 to 2.3	1.3 to 2.0	1.8 to 2.3	1.5 to 2.0

\*Refer to the "SOIL TEXTURE" section of this label to determine the corresponding textural group for the soil to be treated.

\*\*Use the higher rates in the recommended ranges in areas of heavy weed infestation.

\*\*\*Use rates listed in this label using Bladex 4L. Use equivalent rates when using Bladex 90% dry flowable formulations. One quart of Bladex 4L equals 1.1 pounds of Bladex 90% dry flowable.

\*\*\*\*On coarse-texture soils containing less than 2% organic matter, use Harness Xtra plus Bladex only on sandy loam. Do not use on sand and loamy sand with less than 2% organic matter. Refer to the "USE RESTRICTIONS" section of this label for restrictions.

**HARNESS® XTRA plus EXTRAZINE™ II  
(TANK MIXTURE)**

Apply this tank mixture in water or sprayable fluid fertilizer solutions for control of yellow nutsedge, and the annual grasses and broadleaf weeds listed in the "WEEDS CONTROLLED" section of this label.

**APPROVED APPLICATION SYSTEMS**

Ground--Broadcast boom; banded

Dry Bulk Fertilizer Impregnation

Reference: The "APPLICATION SYSTEMS" section of this label provides information on the proper application of this tank mixture using the system selected.

**APPROVED APPLICATION METHODS**

**Preplant Incorporated**--Apply this tank mixture within 14 days prior to planting and shallowly incorporate or Surface Blend into the upper 1 to 2 inches of soil.

**Preemergence Surface**--Apply this tank mixture after planting, before crop and weed emergence and within 5 days after last preplant tillage operation.

Reference: The "APPLICATION TIMING AND METHODS" section of this label provides detailed information and procedures for the application timing and method selected.

**RECOMMENDED RATES:** Refer to the following table for the recommended broadcast treatment rates for this tank mixture. Applications which are not consistent with recommendations in this label may result in unsatisfactory weed control or crop injury.

**Application Rates**

BROADCAST RATE PER ACRE (QUARTS) **				
SOIL TEXTURAL GROUP*	1% to 3% organic matter		3% or more organic matter	
	HARNES <sup>®</sup> XTRA +	EXTRAZINE II 4L***	HARNES XTRA +	EXTRAZINE II 4L***
Coarse****	1.5 to 1.8	1.0 to 1.5	1.5 to 1.8	1.3 to 1.8
Medium	1.8 to 2.3	1.0 to 1.5	1.8 to 2.3	1.3 to 1.8
Fine	1.8 to 2.3	1.3 to 2.0	1.8 to 2.3	1.5 to 2.0

(HARNES XTRA Version 10/19/94)

\*Refer to the "SOIL TEXTURE" section of this label to determine the corresponding textural group for the soil to be treated.

\*\*Use the higher rates in the recommended ranges in areas of heavy weed infestation.

\*\*\*Use rates listed in this label using Extrazine II 4L. Use equivalent rates when using Extrazine II 90% dry flowable formulations. One quart of Extrazine II 4L equals 1.1 pounds of Extrazine II 90% dry flowable.

\*\*\*\*On coarse-textured soils containing less than 2% organic matter, use Harness Xtra plus Extrazine II only on sandy loam. Do not use on sand and loamy sand with less than 2% organic matter. Refer to the "USE RESTRICTIONS" section of this label for restrictions.

**Conservation or Minimum Tillage Systems**

**TANK MIXTURES**

**AT-PLANTING APPLICATIONS**

**FIELD CORN, PRODUCTION SEED CORN, SILAGE CORN AND POPCORN**

When applied as directed under the conditions described, these tank mixtures control many emerged annual weeds, suppress many emerged perennial weeds and give preemergence control of many annual grasses and weeds when corn will be planted directly into a cover crop, established sod or in previous crop residues. These tank mixtures will not control regrowth from perennial weeds.

DO NOT APPLY BY AIR.

Refer to specific product labels for crop rotation restrictions and precautionary statements of all products used in these tank mixtures.

For mixing instructions, see the "MIXING AND SPRAYING INSTRUCTIONS" section of this label.

HARNESS XTRA and the following tank mixtures can be tank mixed with Roundup, Gramoxone Extra and/or 2,4-D.

- [ ] **HARNESS® XTRA** [ ]
- [ ] **HARNESS XTRA plus BLADEX** [ ]
- [ ] **HARNESS XTRA plus EXTRAZINE II** [ ]
- [ ] **HARNESS XTRA plus PRINCEP™** [ ]

(HARNESS XTRA Version 10/19/94)

Apply these tank mixtures with Roundup or 2,4-D (amine or low volatile ester) in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre, or the tank mixtures with Gramoxone Extra in 20 to 60 gallons of water or clear liquid fertilizer per acre immediately before, during or after planting, but BEFORE CROP EMERGENCE. As density of stubble, crop residue or weeds increase, spray gallonage and rate should be increased within the recommended ranges to ensure complete coverage. In the absence of emerged vegetation, delete the Roundup, Gramoxone Extra or 2,4-D portion of these tank mixtures.

**CONTROL OR SUPPRESSION  
OF EMERGED WEEDS**

**ATTENTION**

AVOID DRIFT--EXTREME CARE MUST BE USED WHEN APPLYING THESE TANK MIXTURES TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS. Do not allow spray mist to drift since even minute quantities of spray can cause severe damage or destruction to nearby crops, plants or other areas on which treatment is not intended. Do not apply when winds are gusty or in excess of 5 miles per hour or when other conditions, including lesser wind velocities, will allow drift to occur. When spraying, avoid combinations of pressure and nozzle type that will result in fine particles (mist) which are more likely to drift.

[ ] **ROUNDUP®** [ ]

**Annual Weeds**--Apply 1 to 1.5 pints of Roundup herbicide per acre in these tank mixtures if weeds are less than 6 inches tall. Use 2 pints of Roundup per acre for control of fall panicum, barnyardgrass, crabgrass and shattercane up to 2 inches tall; Pennsylvania smartweed up to 6 inches tall; other annual weeds 6 to 12 inches tall. For emerged annual weeds controlled, see the "WEEDS CONTROLLED" section of the label for Roundup.

**Perennial Weeds**--At normal application dates in minimum tillage systems, perennial weeds may not be at the proper stage of growth for control. See the "GENERAL INFORMATION" section of the Roundup label for the proper stage of growth for perennial weeds. Use of 2 to 4 quarts of Roundup per acre in the above mixtures under these conditions provides top kill and reduces competition from many emerged perennial grasses and broadleaf weeds.

For emerged perennial weeds controlled see the "WEEDS CONTROLLED" section of the label for Roundup. To obtain control of perennial weeds, follow recommendations on the Roundup label for stage of growth and rate of application.

USE OF THIS MIXTURE FOR BERMUDAGRASS OR JOHNSONGRASS CONTROL IS NOT RECOMMENDED.

NOTE: When using these tank mixtures, do not exceed 4 quarts of Roundup

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herbicide per acre.

**Ammonium Sulfate**--The addition of ammonium sulfate in the spray solution may increase the performance of Roundup tank mixtures on emerged annual weeds under adverse growing conditions. When using ammonium sulfate, add 2 percent dry ammonium sulfate by weight or 17 pounds per 100 gallons of water. Ammonium sulfate should be added to the water in the spray tank and completely dissolved prior to adding the herbicide or surfactant. Do not mix ammonium sulfate in fluid fertilizer solutions.

If ammonium sulfate is added directly to the spray tank, add slowly with agitation. Adding too quickly may clog outlet lines. Nozzle tip plugging may result from the use of low quality ammonium sulfate. To determine quality, perform a jar test by adding 1/3 cup of ammonium sulfate to 1 gallon of water and agitate for one minute. If undissolved sediment is observed, predissolve the ammonium sulfate in water and filter prior to adding to the spray tank.

**Surfactants**--Nonionic surfactants which are labeled for use with herbicides may be used with Roundup. Do not reduce rates of Roundup when adding surfactant. Use 0.5 percent surfactant concentration (2 quarts per 100 gallons of spray solution) when using surfactants which contain at least 50 percent active ingredient or a 1 percent surfactant concentration (4 quarts per 100 gallons of spray solution) for those surfactants containing less than 50 percent active ingredient. Read and carefully observe surfactant cautionary statements and other information appearing on the surfactant label.

[ ] **GRAMOXONE EXTRA** [ ]

When used as directed, Gramoxone Extra in a labeled tank mixture controls many emerged annual weeds and suppresses many emerged perennial weeds.

**Broadcast Treatment**--Apply 1.5 to 3 pints of Gramoxone Extra per acre in these tank mixtures immediately before, during or after planting but BEFORE CROP EMERGENCE. Use 2 to 2.5 pints when weeds are 3 to 6 inches tall. Use 2.5 to 3 pints when weeds are 6 inches tall. This mixture may not control weeds taller than 6 inches. As density of stubble, crop residue or weeds increases, spray gallonage should be increased within the recommended range for complete coverage. Add a nonionic spreader surfactant (approved for use on crops) containing at least 75 percent surfactant active agent at 8 ounces per 100 gallons of diluted spray. REFER TO THE GRAMOXONE EXTRA LABEL FOR PRECAUTIONARY STATEMENTS.

[ ] **2,4-D** [ ]

When used as directed, 2,4-D in labeled tank mixtures controls many emerged annual and perennial broadleaf weeds. For emerged weeds controlled, see the "WEEDS CONTROLLED" section of the label for 2,4-D.

**Broadcast Treatment** - Apply 1 to 2 pints of 2,4-D (amine or low-volatile ester) in these tank mixtures. Applications should be made 7 to 14 days before planting or 3 to 5 days after planting but BEFORE CORN EMERGES. As

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density of stubble, crop residue or weeds increase, spray gallonage should be increased within the recommended range for complete coverage.

DO NOT use 2,4-D on light, sandy soils, or where soil moisture is inadequate for normal weed growth. Observe all precautions and limitations on the 2,4-D label booklet.

PREEMERGENCE WEED CONTROL

[ ] HARNES<sup>®</sup> XTRA [ ]

For weeds controlled preemergence, see the "WEEDS CONTROLLED" section of this label. For recommended rates of this product with tank mixtures of Roundup or Gramoxone Extra, see the following table.

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BROADCAST RATE PER ACRE (QUARTS)\*\*

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SOIL TEXTURAL GROUP*	HARNES <sup>®</sup> XTRA
Coarse***	1.8
Medium	2.3
Fine	2.3

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\*Refer to the "SOIL TEXTURE" section of the label to determine the corresponding textural group for the soil to be treated.

\*\*In areas of heavy weed infestation use up to 2.3 quarts per acre on coarse textured soils and up to 2.7 quarts per acre on medium and fine textured soils.

\*\*\*Refer to the "USE RESTRICTIONS" section of this label for restrictions.

[ ] HARNES<sup>®</sup> XTRA plus BLADEX [ ]

For additional preemergence control of heavy weed infestations and/or hard-to-control weeds listed in the "WEEDS CONTROLLED" section of this label, refer to the following rate table to determine the recommended rates for this tank mixture on various soil types.

See the following table for recommended rates of Harness Xtra plus Bladex in this tank mixture on various soil types.

BROADCAST RATE PER ACRE (QUARTS)\*\*

SOIL TEXTURAL GROUP*	HARNESSTM XTRA	+	BLADEx 4L***
Coarse****	1.5 to 1.8		1.3 to 1.8
Medium	1.8 to 2.3		1.3 to 1.8
Fine	1.8 to 2.3		1.5 to 2.0

\*Refer to the "SOIL TEXTURE" section of this label to determine the corresponding textural group for the soil to be treated.

\*\*Use the higher rates in the recommended ranges in areas of heavy weed infestation or when the organic matter content is 3 percent or more.

\*\*\*Use rates listed in this label using Bladex 4L. Use equivalent rates when using Bladex 90% dry flowable formulations. One quart of Bladex 4L equals 1.1 pounds of Bladex 90% dry flowable.

\*\*\*\*On coarse-texture soils containing less than 2% organic matter, use Harness Xtra plus Bladex only on sandy loam. Do not use on sand and loamy sand with less than 2% organic matter. Refer to the "USE RESTRICTIONS" section of this label for restrictions.

[ ] HARNESSTM XTRA plus EXTRAZINE II [ ]

For additional preemergence control of heavy weed infestations and/or hard-to-control weeds listed in the "WEEDS CONTROLLED" section of this label, refer to the following rate table to determine the recommended rates for this tank mixture on various soil types.

BROADCAST RATE PER ACRE (QUARTS)\*\*

SOIL TEXTURAL GROUP*	HARNESSTM XTRA	+	EXTRAZINE II 4L***
Coarse****	1.5 to 1.8		1.3 to 1.8
Medium	1.8 to 2.3		1.5 to 2.0
Fine	1.8 to 2.3		1.5 to 2.0

\*Refer to the "SOIL TEXTURE" section of this label to determine the corresponding textural group for the soil to be treated.

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\*\*Use the higher rates in the recommended ranges in areas of heavy weed infestation or when the organic matter content is 3 percent or more.

\*\*\*Use rates listed in this label using Extrazine II 4L. Use equivalent rates when using Extrazine II 90% dry flowable formulations. One quart of Extrazine II 4L equals 1.1 pounds of Extrazine II 90% dry flowable.

\*\*\*\*On coarse-texture soils containing less than 2% organic matter, use Harness Xtra plus Bladex only on sandy loam. Do not use on sand and loamy sand with less than 2% organic matter. Refer to the "USE RESTRICTIONS" section of this label for restrictions.

[ ]

**HARNESS® XTRA plus PRINCEP**

[ ]

For additional preemergence control of heavy weed infestations and/or hard-ro-control weeds listed in the "WEEDS CONTROLLED" section of this label, refer to the following rate table to determine the recommended rates for this tank mixture on various soil types.

**BROADCAST RATE PER ACRE (QUARTS)\*\***

SOIL TEXTURAL GROUP*	HARNESS® XTRA	+	PRINCEP 4L***
Coarse****	1.5 to 1.8		0.8 to 1.0
Medium	1.8 to 2.3		1.0 to 1.5
Fine	1.8 to 2.3		1.0 to 1.5

\*Refer to the "SOIL TEXTURE" section of this label to determine the corresponding textural group for the soil to be treated.

\*\*Use the higher rates in the recommended ranges in areas of heavy weed infestation or when the organic matter content is 3 percent or more.

\*\*\*Use rates listed in this label using Princep 4L. Use equivalent rates when using Princep 90% dry flowable formulations. One quart of Princep 4L equals 1.1 pounds of Princep 90% dry flowable.

\*\*\*\*Refer to the "USE RESTRICTIONS" section of this label for restrictions.

NOTE: LAND TREATED WITH PRINCEP SHOULD NOT BE PLANTED TO ANY CROP EXCEPT FOR CORN FOR ONE YEAR FOLLOWING TREATMENT AS CROP INJURY MAY OCCUR. AFTER HARVEST OF TREATED CROP, PLOW AND THOROUGHLY TILL THE SOIL IN THE FALL OR SPRING TO MINIMIZE POSSIBLE INJURY TO SPRING SEEDED ROTATIONAL CROPS.

## EARLY PREPLANT APPLICATION

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For use in no-till and other conservation tillage systems.

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If emerged weeds are present at the time of treatment, Roundup, Gramoxone Extra or 2,4-D should be added to this product according to the directions for use on their respective product labels. If unsatisfactory weed control occurs (due to excessively dry or excessively wet conditions) following the earlier application, a postemergence application of an appropriate labeled grass and/or broadleaf weed herbicide may be used. If a postemergence treatment includes the herbicide used early preplant, do not exceed the labeled rate for corn on a given soil texture. Observe all precautions and limitations on the labels for Harness Xtra, Roundup, and Gramoxone Extra, 2,4-D and other postemergence herbicides before use of these products.

DO NOT apply tank mixture containing Roundup, Gramoxone Extra or other contact herbicides by air.

### HARNESS® XTRA

This product, when applied in a single application or split application will provide preemergence control or reduced competition of the annual grasses and broadleaf weeds listed in the "WEEDS CONTROLLED" section of this label. If weeds are emerged at time of application, apply a labeled contact herbicide with this product. Observe the directions for use, precautions and restrictions on the label of the contact herbicide.

#### APPROVED APPLICATION SYSTEMS

Ground - Broadcast boom

Dry Bulk Fertilizer Impregnation

Reference: The "APPLICATION SYSTEMS" section of this label provides detailed information on the application of this product using the system selected.

#### RECOMMENDED RATE AND TIMING OF APPLICATION

**Single application**—Application of this product should be made less than 30 days before planting but prior to weed emergence. On coarse textured soils applications should not be made more than 2 weeks prior to planting.

**Split application**—Apply 60 percent of the recommended rate as a split application prior to weed emergence and no more than 45 days prior to planting and the remaining 40 percent at or immediately following planting but before crop emergence.

See the following table for recommended broadcast rates per acre for single and split applications.

(HARNESS XTRA Version 10/19/94)

BROADCAST RATE PER ACRE (QUARTS)\*\*

SOIL  
TEXTURAL  
GROUP\*

HARNESS® XTRA

Coarse***	1.8
Medium	2.3
Fine	2.3

\*Refer to the "SOIL TEXTURE" section of this label to determine the corresponding soil textural group for the soil to be treated.

\*\*In areas of heavy weed infestation use up to 2.3 quarts per acre on coarse textured soils and up to 2.7 quarts per acre on medium and fine textured soils.

\*\*\*Refer to the "USE RESTRICTIONS" section of this label for restrictions.

In order to provide broad-spectrum weed control, both single and split applications of this product must be followed with a planned postemergence application of a labeled broadleaf and/or grass herbicide. Observe the directions for use, precautions and restrictions on the label of the postemergence herbicide before use of these products.

If emerged weeds exist at planting, the application of a contact herbicide or tillage is recommended when possible to eliminate existing weeds.

**Sequential application**—Application of this product following Bladex or Princep should be utilized for the control of fall panicum, crabgrass or broadleaf signal grass. Apply 1.5 to 2 quarts per acre of Bladex or 1.5 to 2 quarts per acre of Extrazine II or 1 to 1.25 quarts per acre of Princep prior to weed emergence and no more than 45 days prior to planting. At or immediately following planting, but before crop emergence, apply the recommended rate of this product.

Following application of Bladex, Extrazine II or Princep see the following table for recommended rates.

(HARNESS XTRA Version 10/19/94)

BROADCAST RATE PER ACRE (QUARTS)\*\*

SOIL  
TEXTURAL  
GROUP\*

HARNESS® XTRA

Coarse***	1.5 to 1.8
Medium	1.8 to 2.3
Fine	1.8 to 2.3

\*Refer to the "SOIL TEXTURE" section of this label to determine the corresponding soil textural group for the soil to be treated.

\*\*Use the higher rates in the recommended ranges in areas of heavy weed infestation.

\*\*\*Refer to the "USE RESTRICTIONS" section of this label for restrictions.

When using Bladex 90 DF use equivalent rates. One quart of Bladex 4L equals 1.1 pounds of Bladex 90 DF. When using Extrazine II 90 DF use equivalent rates. One quart of Extrazine II 4L equals 1.1 pounds of Extrazine II 90 DF. When using Princep 90 DF use equivalent rates. One quart of Princep 4L equals 1.1 pounds of Princep 90 DF.

DO NOT use Bladex on coarse-textured soils or soils of less than 1 percent organic matter.

NOTE: LAND TREATED WITH PRINCEP SHOULD NOT BE PLANTED TO ANY CROP EXCEPT FOR CORN FOR ONE YEAR FOLLOWING TREATMENT AS CROP INJURY MAY OCCUR. AFTER HARVEST OF TREATED CROP, PLOW AND THOROUGHLY TILL THE SOIL IN THE FALL OR SPRING TO MINIMIZE POSSIBLE INJURY TO SPRING SEEDED ROTATIONAL CROPS.

If emerged weeds exist at planting, the application of a contact herbicide or tillage is recommended when possible to eliminate existing weeds.

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™Bladex is a trademark of E.I. duPont de Nemours and Company.  
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™Gramoxone is a trademark of a Zeneca Group Company.  
™MP-79 is a trademark of Eagle Picher Industries.  
™Microcel is a trademark of Manville Products Corporation.  
™Princep is a trademark of Ciba-Geigy Corporation.

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MONSANTO COMPANY  
THE AGRICULTURAL GROUP  
ST. LOUIS, MISSOURI 63167

Read the entire label before using this product.

Use only according to label instructions.

Read "LIMIT OF WARRANTY AND LIABILITY" before buying or using. If terms are not acceptable, return at once unopened.

REFORMULATION IS PROHIBITED.

#### LIMIT OF WARRANTY AND LIABILITY

This Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ("Directions") when used in accordance with those Directions under the conditions described therein. NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein.

Buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

Buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company, including, but not limited to, incompatibility with products other than those set forth in the Directions, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop or treated vegetation.

THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement.

**RESTRICTED USE PESTICIDE**  
due to ground and surface water concerns and oncogenicity concerns. Users must read and follow all precautionary statements and instructions for use in order to minimize potential for atrazine to reach ground and surface water. For retail sale to and use only by Certified Applicators, or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

**HARNESS® XTRA**

HERBICIDE  
BY MONSANTO

Preemergence herbicide for weed control in Field Corn, Production Seed Corn, Silage Corn and Popcorn.

In case of an emergency involving this product or for user safety information on this product, call Collect, day or night (314) 694-4000.

**Complete Directions for Use**

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EPA Reg. No. 524-XXX

1994-1

Read each of these sections of this label for essential product performance information.

PRECAUTIONARY STATEMENTS

GENERAL INFORMATION

USE RESTRICTIONS

MIXING, SPRAYING, AND  
HANDLING INSTRUCTIONS

APPLICATION INFORMATION

CULTIVATION INFORMATION

WEED CONTROL WITH HARNESS® XTRA

**ACCEPTED**  
**OCT 25 1994**  
Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under  
EPA Reg. No. 524-480

(HARNESS XTRA Version 10/19/94)

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Read the entire label before using this product.

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REFORMULATION IS PROHIBITED.

#### LIMIT OF WARRANTY AND LIABILITY

This Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ("Directions") when used in accordance with those Directions under the conditions described therein. NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein.

Buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

Buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company, including, but not limited to, incompatibility with products other than those set forth in the Directions, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop or treated vegetation.

THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement.

APPENDIX

APPLICATION INFORMATION

- BAND TREATMENT
- GROUND BROADCAST TREATMENT
- APPLICATION WITH
  - DRY BULK FERTILIZER
- APPLICATION TIMING AND METHODS

DIRECTIONS FOR USE

- CORN, PRODUCTION SEED CORN, FIELD CORN, SILAGE CORN AND POPCORN
  - HARNESS XTRA
  - HARNESS XTRA + Bladex
  - HARNESS XTRA + Extrazine II

CONSERVATION OR MINIMUM TILLAGE SYSTEMS

- At-Planting Applications
  - HARNESS XTRA
  - HARNESS XTRA + Bladex
  - HARNESS XTRA + Extrazine II

- Early-Preplant Applications
  - HARNESS XTRA

DISPOSAL

FLUID FERTILIZER COMPATIBILITY TEST

GENERAL INFORMATION

INGREDIENTS

LIMIT OF WARRANTY AND LIABILITY

MIXING, SPRAYING, AND HANDLING INSTRUCTIONS

PRECAUTIONARY STATEMENTS

SOIL TEXTURE

WEEDS CONTROLLED WITH HARNESS XTRA

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**PRECAUTIONARY STATEMENTS**

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**Hazards to Humans and Domestic Animals**

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Keep out of reach of children.

**CAUTION!**

**HARMFUL IF SWALLOWED.  
CAUSES EYE IRRITATION.**

Avoid contact with skin, eyes, or clothing.

**FIRST AID: IF IN EYES**, immediately flush with plenty of water. Get medical attention if irritation persists.

**IF SWALLOWED**, do NOT induce vomiting. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

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**Personal Protective Equipment**

Applicators and other handlers must wear: long-sleeved shirt and long pants, waterproof gloves, and shoes plus socks.

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.

**User Safety Recommendations:**

User should:

Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

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.

In case of an emergency involving this product,

Call Collect, day or night, (314) 694-4000.

Environmental Hazards

Atrazine has been identified in limited ground water sampling and there is the possibility that it can leach through the soil to ground water, especially where soils are coarse and ground water is near the surface. Users are advised not to apply this product to sand and loamy sand soils where the water table (ground water) is near the surface and where these soils are permeable (well drained).

Ground water contamination may be reduced by diking and flooring of permanent liquid bulk storage sites with an impermeable material.

This product is toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

This chemical demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the groundwater is shallow, may result in groundwater contamination.

Acetochlor has properties that may result in surface water contamination via dissolved runoff and runoff erosion. Practices should be followed to minimize the potential for dissolved runoff and/or runoff erosion.

ACTIVE INGREDIENTS:\*

Acetochlor, [2-chloro-N-ethoxymethyl-N-(2-ethyl-6-methylphenyl)acetamide]. . . . .	46.3%
Atrazine, [2-chloro-4-(ethylamino)-6-(isopropylamino)s-triazine] and related triazines . . . . .	18.3%
INERT INGREDIENTS . . . . .	35.4%
	<u>100.0%</u>

\*Contains 516 grams/litre or 4.3 pounds/gallon of acetochlor and 204 grams/liter or 1.7 pounds/gallon of atrazine and related compounds.

U.S. Pat. No. 4,256,481. Other patents pending. No license is granted under any non-U.S. patents.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. 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 interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours. Exception: if the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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, are: coveralls, waterproof gloves and shoes plus socks.

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For more product information, call toll-free 1-800-332-3111.

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Storage and Disposal

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Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

**DISPOSAL:** Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state or local procedures.

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is destroyed.

(See the individual container label for disposal information.)

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GENERAL INFORMATION

This product is recommended for control of yellow nutsedge and many annual grasses and broadleaf weeds. This product may be applied either as a surface

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application before or after planting or shallowly incorporated prior to planting to blend the herbicide treatment into the upper 1 to 2 inches of soil. Except for minimum or conservation tillage systems, the seedbed should be fine, firm and free of clods and trash.

Read and carefully observe cautionary statements and all other information appearing on the labeling of all products used in mixtures and sequential treatments.

NOTE: Use this product for weed control in corn only. CORN, MILO (SORGHUM), OR SOYBEANS CAN BE PLANTED THE YEAR FOLLOWING THE USE OF THIS PRODUCT. IF SOYBEANS OR OTHER NONLABELED CROPS ARE TO BE PLANTED THE FOLLOWING YEAR, THERE IS THE POSSIBILITY OF CROP INJURY DUE TO CARRYOVER OF ATRAZINE. Do not plant soybeans in areas where furrow irrigation is practiced.

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#### USE RESTRICTIONS

This chemical demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the groundwater is shallow, may result in groundwater contamination. Do not apply to the following soils where depth to groundwater is 30 feet or less: sands with less than 3% organic matter; loamy sands with less than 2% organic matter; or sandy loams with less than 1% organic matter.

This product may not be mixed or loaded within 50 feet of any wells (including abandoned wells and drainage wells), sink holes, intermittent streams and rivers, and natural or impounded lakes and reservoirs. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pad or properly diked mixing/loading areas.

Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or washwater, and rainwater that may fall on pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain a minimum of 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above specified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment.

This product may not be applied within 66 feet of all points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 feet around natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66-foot buffer or set-back from runoff points must be planted to a crop or seeded with grass or other suitable crop. Where there are state/local requirements regarding atrazine use (including lower maximum rates and/or higher set-backs) which are different from the label, the more restrictive/protective requirements apply.

Do not flood irrigate to apply or incorporate this product.

Product must be used in a manner which will prevent back siphoning into wells, spills or improper disposal of excess pesticide, spray mixtures or rinsates.

Do not apply this product through any type of irrigation system.

Disposal of excess pesticide, spray mixtures or rinsate should be according to label use instructions or according to the state Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA regional office.

Do not apply under conditions which favor runoff or wind erosion of soil containing this product to non-target areas. To prevent off-site movement due to runoff or wind erosion:

Avoid treating powdery dry or light sandy soils when conditions are favorable for wind erosion. Under these conditions, the soil surface should first be settled by rainfall or irrigation.

Do not apply to impervious substrates such as paved or highly compacted surfaces or frozen or snow covered soils.

Do not use tailwater from the first flood or furrow irrigation of treated fields to treat non-target crops unless at least 1/2 inch of rainfall has occurred between application and the first irrigation.

Do not apply this product using aerial application equipment.

Do not apply when wind conditions favor drift to non-target sites. To minimize spray drift to non-target areas:

Use low pressure application equipment capable of producing a large droplet spray. Do not use nozzles that produce a fine droplet spray. Minimize drift by using sufficient spray volume to ensure adequate coverage with large droplet size sprays.

Keep ground driven spray boom as low as possible above the target surface.

Make application when the wind velocity favors on-target product deposition (approximately 3-10 mph). Do not apply when wind velocity exceeds 15 mph. Avoid application when gusts approach 15 mph.

Low humidity and high temperatures increase the likelihood of spray drift to sensitive areas. Avoid spraying during conditions of low humidity

and/or high temperatures. Do not apply during inversion conditions.

Use of this product not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences. Keep container closed to prevent spills and contamination.

Flush sprayer with clean water after use.

Do not rotate to crops other than soybeans, corn, milo (sorghum), wheat, or tobacco.

On highly erodible soils as defined by the Soil Conservation Service (SCS), if conservation tillage is utilized (more than 30% plant residue cover), the maximum rate of atrazine is 2 pounds active ingredient per acre. If plant residue is less than 30% the maximum rate of atrazine is 1.6 pounds active ingredient per acre. On soils not highly erodible, the maximum rate of atrazine is 2 pounds active ingredient per acre. The maximum application rate for corn is 2.5 pounds atrazine active ingredient per acre per calendar year. Where sequential postemergence treatments with appropriately registered products containing atrazine are necessary, do not exceed a total of 2.5 pounds atrazine active ingredient per acre per calendar year. Where there are state local requirements regarding atrazine use (including lower maximum rates and/or higher setbacks) which are different from the label, the more restrictive/protective requirements apply.

**SOIL TEXTURE**

Applicators should evaluate soil conditions carefully to assure that they choose the correct label rate.

The recommended use rates of this product and the other herbicides labeled for use in tank mixtures with this product vary with soil texture. Unless soil texture is specifically named, rate tables throughout this label refer to only three soil textural groups: coarse, medium and fine. The following is a complete listing of soil textures included in each of these three soil textural groups:

SOIL TEXTURAL GROUP	SOIL TEXTURE
COARSE:	sand, loamy sand, sandy loam
MEDIUM:	loam, silt loam, silt, sandy clay loam
FINE:	silty clay loam, clay loam, sandy clay, silty clay, clay

Refer to the above table to determine the corresponding soil textural group for the soil to be treated.

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MIXING, SPRAYING AND HANDLING INSTRUCTIONS

NOTE

Direct contact or exposure to this product or spray mixtures of this product should be minimized. The following instructions for transfer, mixing, cleaning or repairing equipment should be followed in order to minimize this exposure. Review the protective clothing requirements as listed in the "PRECAUTIONARY STATEMENTS" section of this label (front panel) and do not use this product until you have the necessary protective clothing.

2.3 Gallon Containers

Open pouring from these containers can result in exposure from splashing or spilling. Special care in lifting and pouring are strongly recommended.

Bulk Containers

Open pouring from these containers can result in exposure from splashing or spilling and is not recommended. This product should be transferred from these containers to the mix or spraytank using pumps or transfer probes. The probe or pump should not be removed from the container or disconnected until the container is emptied and rinsed. Use the pump or probe system to rinse the empty container and transfer the rinsate directly to the mix or spray tank.

Equipment Cleaning & Repair

Cleaning and repair of transfer systems and application equipment is a source of exposure to this product. Care should be taken to minimize exposure during cleaning and repair of transfer systems and application equipment. Whenever possible, these systems or equipment should be rinsed before being cleaned or repaired.

When repairs must be made during transfer or application, the equipment should be shut down, and special care taken to avoid contact with the pesticide.

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Always predetermine the compatibility of this product or labeled tank mixtures of this product with water carrier or sprayable fluid fertilizer carrier by mixing small proportional quantities in advance. See the "STANDARD SPRAYABLE FLUID FERTILIZER COMPATIBILITY TEST" section in this label to determine the compatibility of this product and the labeled tank mixtures recommended for use with sprayable fluid fertilizer carrier.

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Mix this product or labeled tank mixture of this product with the appropriate carrier as follows:

1. Place a 20 to 35 mesh screen or wetting basket over filling port.
2. Through the screen, fill the sprayer tank one-half full with the appropriate carrier.
3. If a compatibility agent is necessary to improve mixing or to prevent the formation of undesirable and unsprayable gels or precipitates, while agitating add it to the carrier already in the tank. Use only compatibility agents cleared by FDA for this use. Read and follow all directions for use, cautionary statements and all other information appearing on the selected compatibility agent label. Check for adequate agitation.
4. If a wettable powder or dry flowable formulation is used, make a slurry with water and add it slowly through the screen into the tank. Continue agitation.
5. If a flowable formulation is used, add slowly through screen into the tank. Mixing and compatibility may be improved when flowable is pre-mixed one part flowable with one part water and added to the tank in diluted form.
6. Add this product slowly through the screen into the tank. Mixing and compatibility may be improved when this product is prediluted with two parts of water and added to the tank in diluted form.
7. Complete filling the sprayer tank with carrier. If Roundup® or Gramoxone™ Extra is used, add the required amount near the end of the filling process. Remove hose from tank immediately after filling to avoid siphoning back into the carrier source.

Maintain good agitation at all times until the contents of the tank are sprayed. NOTE: If spray mixture is allowed to settle at any time, thorough agitation is required to resuspend the mixture before spraying is resumed.

Keep by-pass line on or near bottom of tank to minimize foaming. Screen size in nozzle or line strainers should be 50 mesh. Carefully select proper nozzle to avoid spraying a fine mist. Check for even distribution of spray droplets. To reduce loss of the chemical due to drift of a fine mist, apply at nozzle pressures below 40 psi.

**STANDARD SPRAYABLE FLUID  
FERTILIZER COMPATIBILITY TEST**

Herbicides may not always mix evenly throughout a sprayable fluid fertilizer or the components may separate too quickly to make their combined use of practical value. This may be due to certain characteristics of the different fluid fertilizers. A simple test using small quantities of the components is suggested to provide compatibility potential. The test follows:

**A. Materials Required For A Compatibility Test**

1. Two one-quart jars with lid or stopper (marked "with" and "without").
2. TEAspoons (for a more exacting test, a five to ten milliliter (ml.) pipette or graduated cylinder is desirable).
3. Sprayable fluid fertilizer to be tested.
4. The herbicide chemicals to be mixed.
5. A compatibility agent (the purpose of the adjuvant is to help keep the fertilizer and crop protection chemical in suspension, if this assistance is needed).

**B. Procedure**

1. Add one pint of the sprayable fluid fertilizer that will be used or other herbicide carrier to each jar marked "with" and "without".

Add One Pint Liquid Fertilizer  
To Two Quart Jars.

WITH

WITHOUT

2. To the jar marked "with", add 1/4 TEAspoon or 1.2 milliliters of a suitable compatibility agent; shake gently for five to ten seconds to mix. (1/4 Teaspoon in one pint is the equivalent of two pints per 100 gallons of liquid fertilizer.)

To Jar Marked "With"  
Add Compatibility Agent  
And Shake to Mix.

WITH

WITHOUT

3. To each jar add the appropriate amount of herbicide(s). If more than one is used, add them separately with the wetttable powders or dry flowables added first, flowables second and liquid last. Shake gently five to ten seconds after each addition.

Add Herbicide(s) To Both Jars  
And Shake to Mix.

WITH

WITHOUT

Amount to Be  
Added Per Pint Of  
Sprayable Fluid Fertilizer  
(Assuming Volume is 25 gal/A)

HERBICIDE	RATE/A	Level TEAspoons
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Wettable	1 lb. =	1.5
Powders	2 lb. =	3
or	3 lb. =	4.5
Dry Flowables	4 lb. =	6
	5 lb. =	7.5

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HERBICIDE	RATE/A	Level TEAspoons	Milliliters
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Emulsifiable	1 pint =	0.5	or	2.4
Concentrates or	1 quart =	1	or	4.7
Flowables or	2 quarts =	2	or	9.5
Liquids or	3 quarts =	3	or	14.2
Solutions	1 gallon =	4	or	19.0
	5 quarts =	5	or	23.8

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This compatibility test is designed for 25 gallons of spray per acre with the maximum labeled rate of herbicide. For changes in spray volume or herbicide rate, make appropriate changes in the ingredients of the test. Regardless of spray volume, the amount of compatibility agent should be equal to two or three pints (two pints = 1/4 TEAspoon or 1.2 milliliters, three pints = 3/8 TEAspoon or 1.8 milliliters per pint of sprayable fluid fertilizer) per 100 gallons of liquid fertilizer.

#### C. Observations and Decisions

1. If the herbicide(s) and the sprayable fluid fertilizer are compatible.
2. If a compatibility agent is necessary.

Five minutes after the final addition and mixing, observe both jars for the formation of large flakes, sludge, gels or other precipitates. Observe if the herbicide(s) cannot be physically mixed with the liquid fertilizer but remains as small oily particles in the solution.

If incompatibility in any form described above occurs in the jar "with" the compatibility agent added, the liquid fertilizer and the herbicide(s) should not be used together in the same spray tank.

If incompatibility as described above occurs in the jar "without" the adjuvant but not in the jar "with" adjuvant, the use of a compatibility adjuvant is recommended.

Both jars should be allowed to stand and be observed periodically for one-half hour. If the separate layers of liquid fertilizer and additives can be resuspended by shaking, commercial application is possible. An emulsifiable concentrate normally will go to the top after standing; wetttable powders will either settle to the bottom of the tank or jar, or float to the top, depending upon the density of the fertilizers.

If the herbicide(s) is compatible with fluid fertilizer in the foregoing test without having to use a compatibility agent, fluid fertilizer may be used for the premixing. If it is not compatible without the compatibility agent, the herbicide(s) should be premixed with water before adding to the spray tank.

**APPLICATION INFORMATION**

**APPLICATION SYSTEMS**

**Ground Broadcast Treatment**--Apply this product and the labeled tank mixtures in 10 or more gallons of solution per acre using broadcast boom equipment. The carrier may be either water or sprayable fluid fertilizer as specified for the crop to be treated in the "DIRECTIONS FOR USE" section of this label. Do not apply during periods of gusty winds, when winds are in excess of 15 mph or when other conditions favoring drift exist.

**Band Treatment**--Apply a broadcast equivalent rate and volume per acre. To determine these:

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast RATE per acre} = \text{Band RATE per acre}$$

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast VOLUME per acre} = \text{Band VOLUME per acre}$$

**Application with dry bulk fertilizer**--The herbicide-fertilizer impregnation process (In-Plant and On-Board systems) must be completed only by commercial fertilizer or chemical dealerships properly equipped for this procedure. Contact Monsanto Company for additional information regarding recommended equipment and methods for herbicide-fertilizer impregnation applications.

Dry bulk fertilizer may be impregnated with this product or the tank mixtures of this product plus atrazine or this product plus Bladex™ on corn. This product and these tank mixtures must be applied with 200 to 450 pounds of dry bulk fertilizer per acre and shallowly incorporated within 14 days prior to planting. On medium and fine-textured soils in areas where soil incorporation is not planned, i.e., reduced tillage situations or in some conventional tillage situations, applications can be made up to 30 days before planting to allow moisture to move the hebcicide-fertilizer mixture into the soil. On coarse-textured soils, applications can be made up to 14 days prior to planting. The herbicide must be applied as recommended in this label for the crop, weed and soil type treated. Refer to the table for broadcast rate per acre to determine the recommended rate per acre for the herbicide treatment to be applied.

The following table provides a reference to determine the amount of LIQUID herbicide to be mixed per ton of dry bulk fertilizer for a range of herbicide recommendations for fertilizer rates per acre:

		RECOMMENDED QUARTS LIQUID HERBICIDE/ACRE		
Fertilizer Rate (Lb/Acre)	Acres Covered (Per Ton)	1.5	1.8	2.3
		(Quarts of Herbicide/Ton Dry Bulk Fertilizer)		
200	10	15	18	23
250	8	12	14.4	18.6
300	6.7	10.1	12.1	15.5
350	5.7	8.6	10.2	13.3
400	5	7.5	9	11.7
450	4.5	6.8	8.1	10.4

To determine the amount of herbicide needed for rates not included in the preceding table, use the following formula:

Recommended Herbicide Rate

$$\frac{\text{Quarts/Acre} \times 2000}{\text{Pounds Fertilizer/Acre}} = \frac{\text{Quarts of herbicide}}{\text{per ton of dry bulk fertilizer}}$$

With the In-Plant system, mix and blend the dry fertilizer and herbicide mixture in a closed rotary-drum type mixture allowing sufficient time to ensure uniform coverage. Use at least one ton of dry fertilizer per mixing operation. Inject the herbicide into the drum over a minimum of a 2-minute

period and allow at least 2 additional minutes mixing time to ensure uniformity. The nozzle used to spray the herbicide treatment must be placed inside the mixer to provide uniform spray coverage of the tumbling fertilizer.

If the dry fertilizer used has inadequate absorptive capacity, use a higher absorptive material such as Agsorb™, MP-79™ or Microcel™ E, to provide a free-flowing mixture. Contact Monsanto Company for specific guidelines with regard to the sequence of addition for the various components and the amount of drying agent to add to provide a free-flowing mixture.

The following table provides a partial list of dry fertilizers which may be impregnated with this product.

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Ammonium sulfate	21-0-0
Ammonium phosphate-sulfate	16-20-0
Diammonium phosphate	18-46-0
Potassium chloride	0-0-60
Potassium sulfate	0-0-52
*Urea	46-0-0

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\*Some ureas may be phytotoxic when applied on corn. Use only ureas known to be safe to corn.

NOTE: DO NOT impregnate this product or tank mixtures of this product with other herbicides on fertilizers containing ammonium nitrate, potassium nitrate or sodium nitrate.

Spread the herbicide-dry fertilizer mixture uniformly with a properly calibrated applicator: dribble, pneumatic (air flow) or spin. When using spin applicators, fertilizers impregnated with this product or tank mixtures of this product with other herbicides must be spread at half-rate and overlapped 100 percent to obtain full rate and uniform distribution. Non-uniform spreading of the fertilizer-herbicide mixture may result in unsatisfactory weed control or crop injury.

**APPLICATION TIMING AND METHODS**

NOTE: Only one treatment of this product may be applied to a labeled crop.

**Early Preplant Surface**--This product and some labeled tank mixtures of this product may be applied in no-till and other conservation tillage systems before weeds emerge and up to 45 days before planting field corn or silage corn. Split applications can be made 30 to 45 days prior to planting with 60 percent of the recommended broadcast rate applied initially and the remaining 40 percent applied at planting. Applications made less than 30 days prior to

planting can be made either as a split or as a single application. If weeds are present at the time of application, apply this product in tank mixture with an appropriate contact herbicide. Observe directions for use, precautions and restrictions on the label of the contact herbicide. During the planting operation, be careful not to move untreated soil to the surface or move treated soil out of the row, as weed control may be reduced.

**Preemergence Surface Application**--This product and all labeled tank mixtures may be applied to the soil surface after planting and prior to either crop or weed emergence. Apply within 5 days of last preplant tillage. If weeds emerge after treatment, or if treatment is applied more than 5 days after last preplant tillage, rotary hoe or shallowly cultivate immediately to improve performance. Precipitation or overhead sprinkler irrigation is required after application to move the herbicide treatment into the weed germination zone. The amount of precipitation or overhead sprinkler irrigation required depends on existing soil mixture, soil type and percent organic matter content, but 1/3 to 3/4 inch is normally adequate. Performance is improved when moisture is received within 7 days after application and prior to weed emergence. High intensity or excessive rainfall or excessive irrigation after application may reduce control.

**Preplant Incorporation**--This product and many of the labeled tank mixtures may be mixed into the soil using shallow incorporation equipment any time within 14 days prior to planting. Apply the recommended treatment rate to the soil surface as a broadcast application. Either existing soil moisture or subsequent precipitation or irrigation is required to bring incorporated herbicide treatments into contact with germinating weed seedlings. If weeds emerge after treatment, rotary hoe or shallowly cultivate immediately to improve performance.

**1-Pass Incorporation (Surface Blend™)**: Shallowly incorporate (Surface Blend) the treatment into the upper 1 to 2 inches of the soil. Equipment should be operated at manufacturer's designed speed for incorporation to ensure adequate mixing and distribution of the herbicide treatment in the soil. Equipment design including any drag attachments must be adequate to avoid soil ridging which may result in streaked or reduced weed control. Soil conditions, including moisture content and crop residue levels, must be suitable to allow thorough and uniform mixing with the equipment used for 1-pass incorporation.

Contact Monsanto Company for additional information regarding recommended equipment and methods for Surface Blend Application.

**2-Pass Incorporation**: When 2-pass incorporation is used, shallowly incorporate the herbicide treatment into the upper 1 to 2 inches of the soil with equipment set to work the soil NO DEEPER THAN 4 INCHES. The second pass must be made at an angle to and no deeper than the first pass to ensure proper distribution of the herbicide treatment in the soil.

**Cultivation Information**--Delay cultivation after application for as long as possible unless weeds or grasses emerge. Shallowly cultivate or rotary hoe immediately if weeds or grasses emerge. If cultivation is necessary because of soil crusting or compaction, set equipment shallow and minimize lateral soil movement to avoid dilution or displacement of the herbicide treatment. If a band application is used and weeds have emerged in the treated band, set

cultivator to throw soil into the row covering the band.

#### WEEDS CONTROLLED

When applied as directed under conditions described, this product will CONTROL the following weeds:

##### Barnyardgrass

*Echinochloa crus-galli*

##### Crabgrass

*Digitaria ischaemum*

*Digitaria sanguinalis*

##### Cupgrass, woolly\*

*Eriochloa villosa*

##### Foxtail, giant

*Setaria faberi*

##### Foxtail: green, robust purple, robust white

*Setaria viridis*

##### Foxtail, yellow

*Setaria lutescens*

##### Goosegrass

*Eleusine indica*

##### Oat, wild

*Avena fatua*

##### Panicum, browntop

*Panicum fasciculatum*

##### Panicum, fall

*Panicum dichotomiflorum*

##### Rice, red

*Oryza sativa*

##### Signalgrass, broadleaf

*Brachiaria platyphylla*

##### Sprangletop, red

*Leptochloa filiformis*

##### Wheat, volunteer

*Triticum aestivum*

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Witchgrass  
*Panicum capillare*

\* Apply 2.7 quarts of this product per acre to control this weed.

ANNUAL BROADLEAVES

Beggarweed, Florida  
*Desmodium tortuosum*

Carpetweed  
*Mollugo verticillata*

Cocklebur\*  
*Xanthium strumarium*

Galinsoga  
*Galinsoga spp.*

Groundcherry, annual  
*Physalis spp.*

Groundcherry, cutleaf  
*Physalis angulata*

Henbit  
*Lamium amplexicaule*

Jimsonweed  
*Datura stramonium*

Kochia\*\*  
*Kochia scoparia*

Lambsquarters  
*Chenopodium album*

Morningglory, annual\*  
*Ipomoea purpurea*

Mustard  
*Brassica spp.*

Nightshade, black  
*Solanum nigrum*

Nightshade, hairy  
*Solanum sarrachoides*

(HARNESS XTRA Version 10/19/94)

**Pigweed, Carelessweed**  
*Amaranthus spp.*

**Purslane**  
*Portulaca oleracea*

**Pusley, Florida**  
*Richardia scabra*

**Ragweed, common**  
*Ambrosia artemisiifolia*

**Sida, prickly; Teaweed**  
*Sida spinosa*

**Smartweed**  
*Polygonum pensylvanicum*  
*Polygonum pensicaria*

**Velvetleaf, Buttonweed\***  
*Abutilon theophrasti*

**Waterhemp**  
*Amaranthus tuberculatos*

\* Control of these weeds can be erratic especially under dry weather conditions. Control escaped weeds with cultivation or application of an appropriate EPA-registered postemergence herbicide.

\*\* Triazine-resistant biotypes may require a post sequential application of a non-triazine herbicide for control.

SEDGE

**Nutsedge, yellow\***  
*Cyperus esculentus*

\* Preplant incorporate for control.

When applied immediately after planting and within 5 days of last tillage, this product at a rate of 2.3 to 2.7 quarts per acre on a broadcast basis will reduce competition from the following HARD-TO-CONTROL weeds.

ANNUAL GRASSES

**Johnsongrass, seedling**  
*Sorghum halepense*

**Millet, proso**  
*Panicum miliaceum*

**Panicum, Texas**  
*Panicum texanum*

**Sandbur, Grassbur**  
*Cenchrus incertus*

**Shattercane, wildcane**  
*Sorghum bicolor*

ANNUAL BROADLEAVES

**Ragweed, giant**  
*Ambrosia trifida*

**Sicklepod**  
*Cassia obtusifolia*

**Sunflower, common**  
*Helianthus annuus*

**NOTE:** For hard-to-control weeds, additional amounts of Harness® herbicide and/or atrazine may be added to the recommended treatment rates for this product to provide improved control. For more consistent control of common cocklebur, annual morningglory or velvetleaf, additional atrazine may be applied so that the total atrazine rate is at least 1.5 quarts per acre on medium textured soil with less than 3 percent organic matter, and 1.5 to 2 quarts on medium and fine textured soils with 3 percent or greater organic matter content. For more consistent control of woolly cupgrass additional Harness Plus may be applied so that the total acetochlor rate is 3.0 pounds per acre. The following table shows the amounts of Harness Plus herbicide and/or atrazine that can be added to specific treatment rates of of this product.

**NOTE:** The maximum application rate of atrazine is 2.5 pounds active ingredient per acre per calendar year ( 2.5 quarts per acre atrazine 4L). On highly erodible soils (as defined by the Soil Conservation Service) with less than 30 percent residue cover, the maximum rate of atrazine is 1.6 pounds active ingredient (1.6 quarts pints per acre of atrazine 4L). On soils not highly erodible or on highly erodible soils with more than 30 percent plant residue cover, the maximum rate of atrazine is 2 pounds active ingredient per acre (2 quarts per acre of atrazine 4L). If there has been a previous application of a product containing atrazine, do not exceed a total of 2.5

(HARNES XTRA Version 10/19/94)

pounds of atrazine active ingredient per acre per calendar year. The maximum application rate of acetochlor for corn is 3 pounds active ingredient per acre per calendar year.

Do not use more than 2.7 quarts of this product per acre per calendar year.

RECOMMENDED RATE (quarts)	ADDITIONAL PRODUCT (maximum)	
	HARNESS® XTRA (quarts)	ATRAZINE (quarts)
1.5	1.5	1.4
1.8	1.2	1.3
2.0	0.9	1.2

**FIELD CORN, PRODUCTION SEED CORN, SILAGE CORN AND POPCORN**

**HARNESS® XTRA**

Apply this product in water or sprayable fluid fertilizer solution for control of yellow nutsedge and the annual grasses and broadleaf weeds listed in the "WEEDS CONTROLLED" section of this label.

**APPROVED APPLICATION SYSTEMS**

Ground--Broadcast boom; banded

Dry Bulk Fertilizer Impregnation

Reference: The "APPLICATION SYSTEMS" section of this label provides detailed information on the proper application of this product using the system selected.

**APPROVED APPLICATION METHODS**

**Preplant Incorporated**--Apply this product within 14 days prior to planting and shallowly incorporate or Surface Blend into the upper 1 to 2 inches of soil. Irrigation within 10 days following planting may improve weed control.

**Preemergence Surface**--Apply this product after planting, before crop and weed emergence and within 5 days after last preplant tillage operation.

Reference: The "APPLICATION TIMING AND METHODS" section of this label provides detailed information and procedures for the application timing and

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method selected.

RECOMMENDED RATES: Refer to the following table for the recommended broadcast treatment rates for this product. Applications which are not consistent with recommendations in this label may result in unsatisfactory weed control or crop injury.

**Application Rates**

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BROADCAST RATE PER ACRE (QUARTS)\*\*

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SOIL TEXTURAL GROUP*	HARNESS® XTRA
Coarse***	1.8
Medium	2.3
Fine	2.3

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\*Refer to the "SOIL TEXTURE" section of the label to determine the corresponding textural group for the soil to be treated.

\*\*In areas of heavy weed infestation use up to 2.3 quarts per acre on coarse textured soils and up to 2.7 quarts per acre on medium and fine textured soils.

\*\*\*Refer to the "USE RESTRICTIOS" section of this label for restrictions.

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**HARNESS® XTRA plus BLADEX  
(TANK MIXTURE)**

Apply this tank mixture in water or sprayable fluid fertilizer solutions for control of yellow nutsedge, and the annual grasses and broadleaf weeds listed in the "WEEDS CONTROLLED" section of this label.

APPROVED APPLICATION SYSTEMS

Ground--Broadcast boom; banded

Dry Bulk Fertilizer Impregnation

Reference: The "APPLICATION SYSTEMS" section of this label provides information on the proper application of this tank mixture using the system selected.

APPROVED APPLICATION METHODS

Preplant Incorporated--Apply this tank mixture within 14 days prior to

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