



Soil
Conservation
Service

state Office, Room 2~8
401 S. E. First Avenue
Gainesville, FL 32601

September 11, 1992

SNTC WATER RESOURCES/WATER QUALITY TECHNICAL NOTE NO. 1707
(AGRONOMY-FL-43)

SUBJECT: TCH - LABEL CHANGES FOR ATRAZINE USE

Purpose: To transmit Technical Note - Revised Atrazine Label.

Effective Date. Effective when received.

The enclosed technical note provides information, guidance, and clarification regarding the new label revisions affecting the use of atrazine. These label revisions were designed to reduce the amount of atrazine used and reduce the potential for runoff and leaching in surface and ground water. They specifically affect: the use of atrazine on fields defined by SCS as highly erodible land (HEL).

This is very important to some of your cooperators; read it carefully and be prepared to discuss it with those in your field office that may need this information.

File the attachment, SNTC TECHNICAL NOTE No. 1707 (AGRONOMY-FL-43) behind AGRONOMY-FL-42 in your technical notes three ring binder.

Add the No., Date and Title to the Index for Agronomy Technical Notes.

Point of contact on this information is winston Tooke.

T. Niles Glasgow .
State Conservationist

Enclosure

DIST: 0, Principle Staff, PMC

United States
Department of
Agriculture

Soil
Conservation
Service

South
National
Technical
Center

Fort Worth
Texas



Revised Atrazine Label

Water Quality Technical Note 17

Revised Atrazine Label

The U.S. Environmental Protection Agency (EPA) has accepted label revisions for all agricultural products that contain atrazine. These label revisions are effective for atrazine products manufactured after August 1, 1992. All atrazine-containing products released for shipment after this date must bear the new labeling. The label changes, designed to protect surface and ground water quality, provide reduced application rates linked to the erodibility of the land, mandatory setback distances, and the deletion of nonselective, noncrop uses .

Atrazine is an important herbicide used in crop residue management systems, conifer weed control, and some warm season turfgrasses. One important label change is tied to crop residue cover on highly erodible cropland (HEL). Corn and sorghum producers who participate in USDA programs have identified their highly erodible fields and may be using crop residue management and conservation tillage as part of their compliance plan. Those not in the program are encouraged to identify their highly erodible fields and adopt similar planning and management techniques.

The revised Federal atrazine label is designed to -

- reduce the overall amount of atrazine used,
- address conditions that increase the potential for runoff and leaching from treated fields, and
- protect surface and ground water.

The label changes for atrazine are summarized in the following statements. •

Restricted use status of all products containing atrazine.

- No fall applications are permitted.
- Advised not to apply atrazine to sand and loamy sand soils where the water table (ground water) is close to the surface and where these soils are very permeable.
- Apply preplant broadcast of atrazine for corn at the recommended rate up to 45 days prior to planting. On coarse textured soils do not apply more than 14 days before planting.
- No application through irrigation water is permitted.
- Maximum total application of 2.5 pounds active ingredient per acre per year for corn and sorghum from all applications (preplant, premergent, and post).
- Maximum single application rate of 2.0 pounds active ingredients per acre, except limited to 1.6 pounds on highly erodible fields (defined by SCS HEL criteria) that have less than 30 percent crop residue cover on the soil surface.

- Post-emergent maximum rate of 2.0 pounds active ingredient for corn or sorghum per acre. On highly erodible fields post-emergent maximum rate per acre is 1.6 pounds if crop residue soil cover is less than 30 percent. If a postemergence treatment is required following and earlier atrazine herbicide application, the total atrazine applied may not exceed 2.5 pounds active ingredient per acre per calendar year.
- Post-emergent applications must be made before the corn or sorghum crop reaches 12 inches in height.
- No mixing, loading within 50 feet of wells, sink holes, intermittent or perennial streams, rivers, lakes or reservoirs. An intermittent stream is defined as a body of water flowing in a natural surface channel only during wet periods and includes ephemeral streams. States will help develop guidelines on definitions of water courses to describe areas for setbacks.
- No application within 200 feet around natural or impounded lakes or reservoirs. Farm ponds are exempt if located wholly on the farmer's property, if it does not discharge directly into a perennial or intermittent stream, and if pond is not used for drinking water.
- No application within 66 feet of where surface water runoff from a field enters a surface inlet tile, a perennial stream, or an intermittent stream. A vegetated buffer must be existing or planted within the 66 foot setback area if the field is highly erodible.
- Nonselective weed control on noncropland has been canceled. Chemical fallow uses are allowed on wheat-based rotations.
- User must wear protective clothing and goggles.

Where restrictions do not apply, individuals should be encouraged to maintain soil and water conservation practices to further protect water quality. Management practices should be voluntary, and when mandatory, practices should be specific to an area, state, or region. These practices are designed to reduce pesticide concentrations in water resources. Each state will develop a State Pesticide Specific Management Plan for all triazine herbicides. State SCS is encouraged to work with the State task force in developing the specific management plan and the guidelines for implementation.

A CIBA-Geigy AATREX 4L label is attached to this technical note as an example of the label changes. Refer to the specific atrazine product label in your state. Strict adherence to pesticide labeling for use of atrazine is the law. All persons associated in any way with the sale, distribution, or use of applicable atrazine-containing products need to know and understand the revised label requirement.

Refer any questions about changes of the atrazine label to your State Extension Pesticide Coordinator, atrazine distributor, EPA Regional Pesticide Office. or Jerry Collins, EPA liaison with SCS, South National Technical Center. 817-3345282, extension 3506. The regional EPA Pesticide Offices -

- For the states of Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Alabama, and Mississippi, contact the EP A Pesticide Office in Atlanta.(404-34 7 -5201).
- For the states of Louisiana, Oklahoma, Arkansas, and Texas, contact the EPA Pesticide Office is in Dallas (214-655-7239).
- For Puerto Rico and the Virgin Islands, contact the EPA Office in New York (908-321-6765).

This technical note was prepared at the South National Technical Center, Fort Worth, TX.

February 1993

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RESTRICTED USE PESTICIDE

(GROUND AND SURFACE WATER CONCERNS)

FOR RETAIL SALE AND USE ONLY BY CERTIFIED APPLICATORS OR PERSONS UNDER THEIR DIRECT SUPERVISION AND ONLY FOR THOSE USES COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION.

THIS PRODUCT IS A RESTRICTED-USE HERBICIDE DUE TO GROUND AND SURFACE WATER 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.

eIBA-GEIGY

AAtrex®

4L

2 1/2 Gallons U.S.
Standard Measure

HERBICIDE

For season-long weed control in corn, cotton, soybeans, and certain other crops.

Use only in areas where the weeds are resistant to other herbicides.

Contains 41% active ingredient. 40 Mils Related compounds

Net Weight: 57.1 lbs

Inert Ingredients: 43.0 Mils

Net Weight: 41.0 Mils

Each 4L contains 41 lbs active ingredients per gallon. Shake well before using. Use entire contents at one time.

EPA Reg. No. 100-10497 EPA Est. 100-1-A-1

KEEP OUT OF REACH OF CHILDREN. CAUTION

See additional precautionary statements and directions for use inside booklet. CGA 7138BB 052

DIRECTIONS FOR USE AND CONDITIONS OF SALE AND WARRANTY IMPORTANT: Read the entire Directions for Use and the Conditions of Sale and Warranty before using this product. If terms are not acceptable, return the unopened product container at once.

Conditions of Sale and Warranty

The Directions for Use of this product affect the opinion of the parties based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application of which are beyond the control of CIBA-GEIGY at the Seller. All such risks shall be assumed by the Buyer.

CIBA-GEIGY warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use subject to the inherent risks referred to above.

CIBA-GEIGY makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall CIBA-GEIGY or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product. CIBA-GEIGY and the Seller offer this product, and the Buyer and user accept it, subject to the foregoing Conditions of Sale and Warranty, which may be varied only by agreement in writing signed by duly authorized representative of CIBA-GEIGY.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL, CROP INJURY, OR ILLEGAL RESIDUES.

Do not apply this product in such a manner as to directly or through drift expose workers or other persons, except those knowingly involved in the application. The area being treated must be vacated by unprotected persons.

Do not use treated areas without protective clothing until sprays have dried.

Because certain uses may require the use of protective clothing for various crops treated with this product, consult your State Department of Agriculture for further information.

Written oral warnings must be given to workers who are expected to be in treated areas or in an area about to be treated with this product. Oral warnings must be given which inform workers of areas or fields that may not be treated without specific protection until sprays have dried, and appropriate actions to take in case of accidental exposure as described under Precautionary Statements on this label. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Warnings must include the following information: "CAUTION. Area treated with AAtrex 4L on (date of application). Do not enter without appropriate protective clothing until sprays have dried. In case of accidental exposure, flush eyes or skin with plenty of water. Can a physician if irritation persists. Remove and wash contaminated clothing before reuse."

***** nt IncChpOntled (BroadMf end **** ~): & oadcut in spring aller plowing. rate in T_1. Apply 10 the soil and incopot-1lefoN, during. or aller finalseedbedPNParation. Ao.oid deep incorporation. for best NSUits.IICIPlywithin two __ prior 10 planting.

P ** amergetace or At.f.tantng ~I and **** __ I : Apply during or shonly aller planting before weed emergence. at rate in Talle 1.

foetemervenc:e (kooedMf. ncl **** ~): Applybefore weeds exceeef 15 inches in heigf1t and before com exceeefs 12 inches in t.eigf1t al_ in Table 1.

Table 1: 8foedleaf and Gii -- Weed Controlln Com' FOR

ALL SOII APPLICATIONS PFUOA IOCAOP EMEAGENC'

- On Highly Etodble Solis (as delined by SCS1
If ~ion tillage is praiced.1asWlg atleast 3O'14l olthe soil COWIfed Mll plant rasidws al planting. apply. maximum ol4 pIS.JA as a brOadcas1 spray. lthe soil COYerIfQe Mtl plant residue is less _ 3O'14l al planting ** maximum ol 3.2 ptS./A may be applied.
- On Solle Hot Highly Elodble
Apply 4 ptS./A as. broadcast spray .

FOR POSTEMERGEHCE APPLICATION

Il no atrazine was applied prior 10 com emergence. apply a mulmum ol4 pIS.IA brOadcas1. If a postemervenc:e _ment is NqUirwd following an aallier herbiclda application. the tatal atr&line applied may not exceed 25lbs. atiw lng-cedienl (5 pes. ollhis product) per acnt per calendar year.

8ro<Ileaf /tolrtol (Msr.m- CO. _m KS. western HE, HM, Olc I'Wlhandie., llc. Mid ** stem WY): On sand. loamy saneI. sanely lQam, mild to strongly alkaline SOIL. and an excent **** led soil. apply no more than 2.4 ptS./A. Mher preplant surface. preplant incopotated. or premergence. On other soils in these **** apply **** in Table 1 lor _lead and grass control.

Where there are stalello<:al requirements regarding atrazine use (ncluding lower **** imum rates andlor ~ setbacks) whic:llare dilereenllnm the label. the more reslric-tiYeiproteCliw requilements mUSI be followed. Certain _as may"" established rate limitations Mtlin specific geographical ** eas. ConsultlOUR _lead pesticide c:ontrol agency for addition&l informalion. It is a WoCaIion of ttis label 10 deviale lnlm slale use regulations.

~_...nc:e with emulsifiable oil or oil ~-tnIle _ter: Add the following volume of one of the typeoils Indicaledor aerialorground application unless the oil label specifl8S OCherwise:

Oil	Ground Application	Aerial Applical
Oil Concentrate (Crop or PelroleUfHlerived)	1qt.JA	112 -1
PetroleulfHlerMtd oil	19a1.IA	2qfs.IA

Note: Crop.deriYed or petroleum-derived oil concentrates should contain at least 1% but not more tlan 20'14l suitable emulsifier or surfactant blend. PetroleulfHlerived oils should contain at"" 1% suitable emulsifier.

Broadle.. and **** _trol: for postemergenc:e c:ontrol ollhose weeds listed under PfplantlncCHpOntledand ~-me-nc_e, broadeas14 pIS.IA plus emulsifiable oil or oil concentrate aher weed emergence. but before weeds reach 15 Inches in height and before com exceeds 12 inches in height.

lkoada1 control: For postemergence control of those weeds listed under Post-emergenc. with.....lslilableoll «oil_in __. broadcas12.4 pIS.IAplus emulsifiable oil or oil concentr.e before ~ and lamsbquanes reach 6 inches in height and before all __ reach 4 inches in height. A cultivation may be necessary if al' weeds are not c:ontrolled or if _ regrow.

~ions: For ~ witt! ernuls/fiable oil or oil coo _in wafIr: (1) Inbred **** s or any bleeding stockf may be ~relyinjured by applications with emu/sit~ oil or oil concentrate. (2) Adding lI_ insecticides, herbicides, liqid tert-izers, or other' materials is rool_ because fMynacause-problemsorrorr application. (3) SIOr andllende emulsif- oil end oil c:entral8 carefully. Oil oontamilfed witt! _ a small amount ol_Mr may fOOl emutsIly property.. ." added to tile lIj"" 10 -oid :rrop inury; (4) Do fOOl apply .." CIOp is under stress from protoged cold. _ -ethec. poor 1eritHy, or _factors, Of wilen CIOp is _ and succulent from recent rein-ten. (S) Do fOOl exceed 2.S lbs. ecfw in(fredient (or Spts. 01 thisproduct)par acre par calenda.twr. (6) ~ applications to com must be made btfo<w corn eIJCeeds 12 _sin...ight.

Tank M"lturu lor Com.

This P<Oductmaybefan<mUredMtlhese ~forcontrololc:eruin_ leaf and grass _ on corn:

Dual\!l (metolachlor)	lasso or lasso EC + Roundup
Dual + Gra_ Extra	Lasso or Lasso EC + Gfa_ Extra
Dual + Roundup (glyphosate,	Gramoone Extra
Dual + Princepe>	Prinoep
Dual + Princep + ~ Extra	Prinoep + Gramoacone Extra
Dual + Prinoep + Roundup	Prinoep + Roundup
Bexton ^{al} or Ramrod ^s (propachlor)	Roundup
t.assoe ^{al} or lasso EC (alachlor)	Sulan + f>

Use lank mil< directions appe..mg on the labefs of the abewa herbicides when lant< ming with this pOduct. Obse"" an precautions and kmitations on labeling of products .., in a patticular lant< mi *.

Note: When the labels of the a_ ~eter to elruine &ON. use equivalent rates 01 AAtre. 41. One lb. GILLON equals t.61JCS. ol41.

t'rtnoep lOW. Prtncpe 4l. « Princ:ep Caliber 90el

In .ddition to the weeds liS1ed under AAtr **** 41.. Applied Alone - Com or G" ,tn SofVhum - Preplant Surface-Applied. Preplant lncCHpOnIled. « f'reemergence. ChiS comt-cnallOn also controls crabgrass. fall panocum. and carpelweed.

Ilfoadcast lant< mi. before planting. at planting. or alter planting. but before crop and weeds_rge. __ in Table 2. Use the 1:1 ratio for control of most weeds. Use the 1:2 ratiO for expected heavy infestations of crab<ass and tall panicum. Cultivate shallowly it_dewlop.

Preplant Surf8ce-Applied: Use on medium- and fi_lured SOils with minimumtillage or no-tillage systems only in co.IA, ll.IH. KS. t<Y. loIN. MO. loT. NO. HE. SO. WI. and WY. Apply **** recommendad **** ol AAtrex 4land Prinoep Shown in Table 2 up to 45 days prior to planting. Reler to the AAtrex 4l alone section for information If weeds shoukt develop following the early I **** ment. On __ fNd soils, do not apply _than two"-s priorlOplanling. Reler to the Mre. 41.. AlorM-Preplant Surface. Applied section of the com label for additional details.

Il weeds are~ at lime of __ * apply in a _ mil< _nalion with a COntac:l herbicide (for -mple. Gf_ Extra or Roundup). Observe di<ections fur use, precautions. and reslric-tions on the label olthe contact herbicide.

Hole: Tothe _possible, do not _treated soilOUlthe lOW or _untreated soil 10 the surface during planting. or weed control wlt be diminished.

Preplarttncorporated: Apply to the soil and incorporate in the spring before. during. or after r_ **** ~ preparation. ANoid deep incorporation. for best results, apply within two _ks prior to planting.

***** ~nce: Apply during or Shonty afler ~ing. but before crop and weeds emerge.

RelerlOCornsectionsollhis labelandlOPrinc:aplOW. Prinoep Caliber9O, or Prinoep 41 labels for lurlher directions.liml tations. and prec:autions.

Talle 2: TanllMlxtu_ with l'rineep on Com .*

Soil Texture	* l'roadcast Ratel A			
	1:1 Ratio-		1:2 Ratio"	
	Thla Product	PrIncap lOW'	TtlS Product	Princ lOW'
Sand,loamy saneI. sancly loam	2pts.	1.25lbs.	132 pes.	1.671
Loam. silloam. silt. clay loam. sanely clay loam. silty clay loam, sandy clay. or silly clay with low organic-	2.4 pIS.	15lbs.	UipIS.	2lbs.
Loam, silt loam. silt. clay loam. sandy clay loam. silty clay loam. sanely clay. or silly clay with medium to high organic ~ and clay (ric:luding dalt< prairie soils olthe CO Belt)	3pts.	t.B lbs.	1.92	2.4lbs

* for control of most weeds.

** for control of expected **** vy ime-ions of crabgrass and tan panicum.

, When using PrincepCaliber9OorPrincep41, use equivalent rates. One lb. of Princep &ON equals 09111. ol Princep Caliber 90 or 1.6 pes. ol Princ:ep 41.

Prtncpe lOW. Princep 41.. «Prtncpe Callbar to plus Roundup: Use as tank mixture lor preemergence and postemergence control of certain broadleaf and grass _s where corn wi. be planted diractly into a COOler crop. _iShed sod. or In previous crop residues. Refer 10 Roundup label for aU directions, __ controlled, precautions, and limitations.

Prinoep lOW. PrIncap 4l, or Princep Caliber to plus Gtamo_ Est'..: Use as lank ml.rure Mtl Princep and Gramoxone Extra to kiU existing oegotation and lor resida' weed control ***** corn wi. be planted diractly into a _ crop, established sod. or in previous crop residues. Add this product and Princep le_ in spray tank. agitating untilthoroughly mixed. Then add Gra_ Extra and a nonionic surfactant. such as X-77el. Continue agitation during application. Broadcast 2~ pIS. of this product plus 1.2S-251bs. ol Princep8OW(or2~ pIS. ol Princep 4L. or 1. t-2.2lbs. of Princ:apCaUber90) plus a suitable amount ol Gfamaxone Extra in 20-60 gals. ol _ar per sprayed acre . Referlolhe Gramoxone Extra label forthe appropriate rates to utilize in this tar.l< mixture. Apply before. during. or alter planting. but before corn emerges. Add 05 pl. ola nonionic surfactlanl, suchasX-n.par 100gals. ofspraymixture. Use the higher rate ofGra""""""", Extra specified on the label if existing vegetation is ~ inches laU. This mixture ** .ll: not control weeds laMer than 6 inches.

Refer 10 further fimitations and precautions on labels for lhis product. Princep. and Gramoxone Extra.

Precautions: For ** epp'lIcations to corn: (f) 10 -oid CIOp injury and illegal residues, do not apply mote than 2.5lbs.fA /lctilre lngredient(6 pts.fA of this product}parcalendertar. (2) For best control 01 Vtthrlleat and coc<lebur, file application raM cal no! be less tlan 2 lbs./A acltre ingredient. eiflRM alone or in tank mi' comoinctions. (3) ~ harvest. plON (moldbOard ordisk-plow) and tlroug/lly litt soil in la. or spring to minimize possible irYru lb spring-seeded rot_ crops, regardless 01 rate used. N **** for all applic:ationa to com: Do not graze or teed forage lnlm treated areas lor 21 days lollowing application. or llegal residues may resuf.

Sorvtum end Sorg/lum-eudan Hybrids (Gtaln end f.onoge Types)

Pwplant Surfaoe Applied (lroadleaf end **** ~: Use on medium- .nd fine' lexlturecl soi4 with minimumHillage or no-tiMage systems only in CO. IA, ll. IN. KS. KY. loIN. MO. loT. NO. HE. SO. WI. andWY. Applythe recommended rate of AAtrex 4lsl lown in Tabl 3 upto45 dayspriorto pl_ing. If an...-istactlOrylength ol weedc:ontrol results from adYersewilo4 ***** condilions following early treatment. a follow-up application ol en ~ labeled herticide may be used. " the follow-up treatment includes ** Aline. do not exceed the labeled rat ** lor corn indicated in Tabl& 1. Under dry conditions. irrigation after application is recommended to """" AAtrex 4l into _ soil. "weeds are present ** lime ollre.ment. apply in ala"" mi. comtYtation with a concla herbicide (lor example. Grammrone E ** ra or Roundup). Observe directions for use. precautions, and restric-tions on the label ollhe contact hert-icide.

Prinoep 41 the _____ . do _ moYel-catedsoilOUlthe r_ormoYe untreated soil te; the surface during planting. or weed control witt be <lom,nished

Uses

To control certain annual weeds in established perennial grasses along roadside in CO, 1-5, MT, NO, NE, SO, and WY, including Cheatgrass (downy brome, chess), common (annual) broomweed, little barley, medusahead, sagewort, and lumbler mustard. Broadcast 2 pS/A in a minimum of 10 gals. of water by ground equipment in the fall before ground freezes, or after melting in the spring, but before the established grasses green up and before weeds emerge. Desirable established grasses include big bluestem, bluegrass, bromegrass, buffalograss, crested wheatgrass, indiangrass, little bluestem, side-oats grama, smoothgrass, and western wheatgrass. Apply only once per year. Temporary discoloration or form of injury to the desirable perennial grasses may occur following application.

Not to: To avoid illegal residues. (1) 00 Cul or teed roadside grass hay. (2) 00 allow livestock to graze treated areas.

Sugarcane

For control of many broadleaf and grass weeds, including amaranths, crabgrass, wireweed, Florida's paintbrush, toxfalls, jungletick and wiregrass, broadcast 4-8 pS/A 01 "AALrex 4L at time of planting or ratooning, bill before sugarcane emerges. Broadcast 2 pS/A in a minimum of 5 gals. of spray per acre, or broadcast or band by ground equipment in a minimum of 20 gals. per acre, unless indicated otherwise. One additional application may be made over the sugarcane as it emerges, and two additional applications may be made in-line after emergence as directed sprays. Repeat treatments, where needed, may be applied broadcast, band, or in-line as suggested with the final application being prior to cutting. Do not exceed the rate of herbicide suggested for any one crop of sugarcane.

How: Where high rates of AALrex 4L are used alone, apply in a minimum of 1 qt. of water for each 1 qt. of AALrex 4L applied per acre.

Aerial -on: In order to assure that spray will be controllable within the target area when used according to label directions, make applications at a maximum height of 10 to 15 feet, using low drift nozzles at a maximum pressure of 140 psi, and restrict application to periods when wind speed does not exceed 10 mph. To assure that spray will not adversely affect adjacent sensitive nontarget plants, apply AALrex 4L alone by aircraft at a minimum upwind distance of 1000 feet from sensitive plants.

Florida

For control of emerged perennials: Apply 0.8-1.2 pS/A in at least 40 gals. of water as a directed spray by ground equipment prior to cutting. Add 4 qts. of surfactant for each 100 gals. of spray. Thoroughly cover weed foliage.

For control of annual weeds: large crabgrass, perennials (artemisia) weed, and spiny amaranth, use one of the following methods at planting or ratooning:

- Apply 8 pS/A preemergence. Follow with one or two applications, as needed, post-emergence to sugarcane and weeds, at 4 pS/A. Treat before weeds exceed 15 inches in height.
- Apply 1-3 times, as needed, at 4 pS/A postemergence to sugarcane and weeds. Treat before weeds exceed 1.5 inches in height.

Louisiana

For control of annual weeds during the summer fallow period, apply 4 pS/A to weed-free beds immediately after bed tilling. Follow normal weed control program after planting.

Precautions: To avoid crop injury, (1) Do not use more than 10 qts/A on any one crop of sugarcane. (2) Do not make application during summer fallow period, do not exceed 8 qts/A during the remaining growing season, or if residues may result.

Texas

Use AALrex 4L for control of banyardgrass, pigweed, purslane and sunflower, in plant or ratoon sugarcane.

Apply 8 pS/A of AALrex 4L preemergence. Follow with one or two applications, as needed, at 6 pS/A postemergence to sugarcane and weeds.

For best results when weeds are emerged, add a nonionic surfactant at a concentration of 2 qt/100 gals. to the spray and apply before weeds exceed 15 inches in height.

Precautions: (1) Injury to sugarcane may occur when moisture stress, when soil is of low adsorptive capacity, or when land is first topped 10 sugarcane. (2) Do not use on any crop of sugarcane. (3) Do not apply more than 20 pS/A on any one crop of sugarcane, or crop injury may result.

Turfgrass for Sod (Florida only)

St. Augustinegrass, Centipede, and Zoysia

Broadcast 4-8 pS/A according to soil texture to control weeds listed under AALrex 4L Applied Alone - Com of Grain Sorghum - Preplant Surface-Applied, Preplant Incorporated, or Pre-emergence.

Muck or peat	8 pS.	Old beds: Within 2 days after lifting sod. New beds: 3-4 days after sprigging or plugging.
Sandy soil	4 pS.	Old beds: Within 2 days after lifting sod. New beds: 7-10 days after sprigging or plugging.

weed regrow, apply an additional 4 pS/A on muck or peat, or 2 pS/A on sandy soil. Precautions: To avoid crop injury, (1) Do not apply within 30 days prior to cutting or mowing. (2) Do not apply in-line with wettable herbicides. (3) Use only on turfgrass reasonably free of insecticides, and diseases. (4) On newly sprigged turfgrass, temporary slowing of growth may follow application.

Turfgrass for Sod (Florida only) and ANAS

In States Other than FL. For use on turfgrass for sod in FL, see Turfgrass for Sod (Florida only) section.

Bermudagrass, Canilpedegrass, St. Augustine and Zoysia.

Apply AALrex 4L after October 1 before emergence of annual weeds for control of annual bluegrass, carpetweed, corn speedwell, henbit, hop and spurweed. AALrex 4L will control annual bluegrass even if it is galled at time of treatment. For control of summer annual weeds, apply AALrex 4L after October 1 before emergence of annual weeds. Apply in a minimum of 15 gals. of water per acre or 1 gal. per 1,100 sq. ft.

Where annual bluegrass is a major weed, use 2 qt/A (22 ml/0.75 fl. oz. per 1,100 sq. ft.). Use 2 qt/A (44 ml or 1.5 fl. oz. per 1,100 sq. ft.) for control of other weeds named above. Do not exceed 1 qt/A per treatment on newly sprigged turfgrass on hybrid bermudagrass such as Tiflawn, Tifway, and Ormonet.

For continued summer annual weed control, apply another 1 qt/A at least 30 days after the previous application, but no later than April 15. HowlNer, do not make more than two applications of this product per year.

Precautions: On newly sprigged turfgrass and bermudagrass, leptomorphous Slowing of growth and tawing may occur following application. To avoid injury, (1) Use only on turfgrass reasonably free of insects, nematodes, and diseases. (2) Do not use on greens. (3) Do not use on newly sprigged turfgrass or bermudagrass. (4) Do not use on muck or peat. (5) Do not apply over ornamentals not listed on this label. (6) Do not use on weeds with desirable turfgrass. (7) Do not apply within 4 months before mowing. (8) Do not apply within 1 month before bermudagrass or zoysia. (9) Do not exceed 2 qts. of AALrex 4L within 12 months of cutting bermudagrass.

How: 00 graze or feed turf clippings to animals, or illegal residues may result.

Macadamia Nuts

For preemergence control of many broadleaf and grass weeds, including crabgrass, wiregrass, Florida's paintbrush, spanishneedles, and wireweed, broadcast 4-8 pS/A before nutfall before weeds emerge. Repeat as necessary. Do not spray when nuts are on ground during nutfall period. Do not apply by air.

Golf Courses

Use only on established plantings which are at least 18 months old. Apply as a directed spray at 4-8 pS/A of AALrex 4L in 20-50 gals. of water per acre. Mix with pre-emergence or early post-emergence to weeds. When applying post-emergence, the use of a surfactant and greater spray volume (80-100 gals. of spray per acre) may enhance weed control. This product controls many annual broadleaf and grass weeds, including wireweed, purslane, scarlet pimpernel, spanglemeedles, and sowthistle.

How: To avoid illegal residues, (1) Do not allow spray to contact foliage or fruit. (2) Do not apply more frequently than at 4 month intervals. (3) Do not apply more than 16 pS. of AALrex 4L per year.

Conifers

For control of annual broadleaf and grass prior to transplanting or in established conifers (including Douglas fir, grand fir, noble fir, white fir, Austrian pine, bishop pine, Jeffrey pine, knobcone pine, loblolly pine, lodgepole pine (shore pine), Monterey pine, ponderosa pine, Scotch pine, slash pine, blue spruce, and Sitka spruce):

Broadcast 4-8 pS/A in a minimum of 5 gals. of water per acre by air or 10 gals. by ground before weeds are 15 inches tall. Apply to established trees between fall and early spring while trees are dormant. For new transplants, apply during or soon after transplanting. For applications prior to transplanting, allow sufficient precipitation to activate AALrex 4L before transplanting. In areas where spring and summer rainfall is inadequate to activate AALrex 4L, apply during fall prior to spring transplanting.

For the list of weeds controlled, see Mtx 4L Applied Alone - Com or Grain Sorghum - Preplant Surface-Applied, Preplant Incorporated, or Pre-emergence.

Quackgrass control: Broadcast 8 pS/A in a minimum of 5 gals. of water per acre by air or 10 gals. by ground between fall and early spring while trees are dormant and before quackgrass is more than 15 inches tall.

Precautions: (f) In areas of the Rocky Mountains (except the Great Basin), grazing may begin 7 months after application or 3 months after a winter or spring application. (2) To avoid illegal residues, do not graze treated areas of the Great Basin, or areas of the Rocky Mountains. (3) Temporary injury to trees may occur following use of AALrex 4L on coarse-textured soil. (4) To avoid crop injury, do not apply to seedbeds. (5) Also apply only once per year.

Aerial application: In order to assure that spray will be controllable within the target area when used according to label directions, make applications at a maximum height of 10 to 15 feet, above vegetation, using low drift nozzles at a maximum pressure of 40 psi and restrict application to periods when wind does not exceed 10 mph. To assure that spray will not adversely affect adjacent sensitive nontarget plants, apply AALrex 4L by aircraft at a minimum upwind distance of 1000 feet from sensitive plants.

Storage and Disposal

Storage

Groundwater contamination may be reduced by diluting and flooring of permanent liquid bulk storage sites with an impermeable material.

Pesticide Disposal

Do not contaminate water, food, or feed by storage or disposal, or cleaning of equipment. Open dumping is prohibited. Wastes resulting from the use of this product are acutely toxic. Improper disposal of unused pesticide, spray mixture, or residue is a violation of federal law. Pesticide, spray mixture, or residue that cannot be used according to label instructions must be disposed of according to federal, state or local procedures. For guidance in proper disposal methods, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office.

Container Disposal

Triple rinse (or equivalent) and 011 *** for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or by open burning, if not by State and local authorities. Do not burn. Keep out of sight.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire or other emergency, call 1-800-888-8372 day or night.

Precautionary Statements

Hazards to Human and Domestic Animals

CAUTION

Harmful if swallowed, inhaled, or absorbed through skin. Do not breathe vapors or spray mist. Avoid contact with eyes, skin or clothing.

Users are required to wear long-sleeved shirts and long pants or equivalent, chemical resistant gloves, and boots (waterproofed). In addition, pants worn in mixing/loading operations are required to use chemical resistant rubber or neoprene gloves and a face shield or goggles.

Statement of First Aid Treatment

Swallowed: Call a physician or Poison Control Center immediately. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger, or, if available, by administering syrup of ipecac. Do not induce vomiting or give anything by mouth to an unconscious person.

Inhaled: Remove victim to fresh air. If breathing, give artificial respiration, preferably through mouth-to-mouth. Get medical attention.

On skin: Wash with plenty of soap and water. Get medical attention.

In eyes: Flush eyes with plenty of water. Call a physician if irritation persists. Hold

eyes open. There is no specific antidote for atrazine. If this product is ingested, induce emesis or lavage stomach. The use of an aqueous slurry of activated charcoal may be considered.

Environmental Hazards

Atrazine can travel (seep or leach) through soil and can enter ground water which may be used as drinking water. Atrazine has been found in ground water. Users are advised not to apply atrazine to sand and loamy sand soils where the water table (ground water) is close to the surface and where these soils are very permeable, i.e., well-drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of ground water.

This product may not be mixed/loaded or used within 50 feet of ditches, including abandoned ditches, drainage ditches, and sink holes. This product may not be mixed or loaded within 50 feet of intermittent streams and rivers, natural or impounded lakes and reservoirs. This product may not be applied aerially or by ground within 66 feet of the 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 setback from runoff entry points must be planted to crop, seeded with grass or other suitable crop.

This pesticide is toxic to aquatic organisms. Do not apply directly to water, to areas where surface water is present, or to tidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash waters.

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BeXion trademark of OowElanco

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Unad trademark of Hopkins Agricultural Chemical Company

X-7 trademark of Chevron Chemical Company

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Agricultural Division

CIBA-GEIGY Corporation

Greensboro, North Carolina 27419

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KEEP OUT OF REACH OF CHILDREN.
RESTRICTED USE CAUTION

PESTICIDE

(GROUND AND SURFACE WATER CONCERNS)

Precautionary Statements

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 THIS PRODUCT IS A RESTRICTED-USE HERBICIDE DUE TO GROUND AND SURFACE WATER 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

Do not breathe vapors or spray mist. Avoid contact with eyes, skin or clothing. Users are required to wear long-sleeved shirts and long pants or equivalent, chemical resistant gloves, and boots (waterproofed) in addition, persons involved in mixing/loading operations are required to use chemical resistant rubber or neoprene gloves and a face shield or goggles. Statement of Pesticide Tolerance. If Willowed: Call a physician or Poison Control Center immediately. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger or. Available by administering syrup of ipecac. Do not induce vomiting or give anything by mouth to an unconscious person. If inhaled: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

Physician information persists.

Note: No physician: There is no specific antidote for atrazine. If this product is ingested, induce emesis or lavage stomach. Use of aqueous slurry of activated charcoal may be considered.

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Environmental Hazard

For seasonal weed control in corn, sorghum, Atrazine can leach (seep or leach) through soil and can enter ground and certain other crops water which may be used as drinking water. Atrazine has been found in active ingredients: Atrazine: 2-chloro-4-ethyl-6-isopropylamino-s-triazine and where these soils are very permeable, i.e. well-drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of ground water.

Inert Ingredients

Total

AAAtrex 4L contains 4 lbs. active ingredients per 100.1 gallons. natural or impounded lakes and reservoirs. This product may not be applied aerially or by ground within 66 feet of the 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 setback from runoff entry points must be planted to crop-seeded with grass or other suitable crop.

See directions for use in attached booklet. Shake well before using.

Use entire contents at one time.

EPA Reg. No. 100-497 EPA Est. 100-LA-1

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Agricultural Divisions, Greensboro, North Carolina 27419

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This product may not be mixed/loaded, or used within 50 feet of all wells, 100.1 gallons including abandoned wells, drainage wells, and sink holes. This product may not be mixed or loaded within 50 feet of 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 setback from runoff entry points must be planted to crop-seeded with grass or other suitable crop.

This pesticide is toxic to aquatic invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Runoff or drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash waters.

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

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