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12/12/84

ACCEPTED
DEC 11 1984
USE: ...
EPA REG. NO. 1812-272

Atrabute[™]
screened color 1
screened color 2

1605
Pm 25
1812-272

Flowable Herbicide

ACTIVE INGREDIENT:	
S ethyl diisobutylthiocarbamate	56.80%
Atrazine: 2-chloro-4-(ethylamino) 6 (isopropylamino)-s-triazine	13.90%
Related Triazines	0.30%
INERT INGREDIENTS:	25.00%
TOTAL	100.00%

Formulated Under U.S. Letters Patent #4,400,197

KEEP OUT OF REACH OF CHILDREN WARNING STATEMENT OF PRACTICAL TREATMENT

FIRST AID: If a known exposure occurs or is suspected immediately initiate the recommended procedures. If further treatment is required, contact a Poison Control Center, a physician, or the nearest hospital.

IF SWALLOWED: Harmful if swallowed. Do not induce vomiting. Immediately give large quantities of water. If vomiting does occur, give fluids again. Never give anything by mouth to an unconscious person. Have a physician determine if condition of patient will permit evacuation of the stomach.

FOR EYE CONTACT: Causes substantial but temporary eye injury. Hold eyelids apart and flush with large amount of running water for at least 15 minutes. Call a physician.

FOR SKIN CONTACT: Flush with large amounts of running water for 15 minutes. Remove contaminated clothing and shoes. Get medical attention if skin irritation occurs. Wash clothing before reuse.

IF INHALED: Remove to fresh air. Get medical attention if respiratory irritation or breathing difficulty occurs.

Griffin

GRIFFIN CORPORATION
VALDOSTA, GEORGIA 31601
NET CONTENTS 2 1/2 Gallons
EPA REG. NO. 1812-272
EPA EST. NO. 1812-GA-3

For control of Johnsongrass and Bermudagrass (in addition to the broadleaf weeds and annual grasses listed): Apply and disc incorporate Atrabute[™] just before planting at the rate of 7 to 10.5 pints per acre. Use the higher rate of Atrabute[™] on medium (medium fine textured silt loam, clay loam, etc.) soils, fine (fine textured clay) soils, for rhizome johnsongrass suppression and for heavy infestations. Disc a second time at right angles to the first. Cultivate at least once, preferably twice.

JOHNSONGRASS: Using a program of plowing and discing followed by Atrabute[™] will give good control of seedlings and greatly reduce competition from plants coming from rhizomes. In some areas discing 2 to 3 times spaced at 4 to 6 week intervals during fall and winter can be done. If this cannot be done, start with fall plowing followed by several discings in the spring before planting. The discing cuts rhizomes into small pieces and brings them to the surface, where both the weather and Atrabute[™] will kill or weaken them.

REDTONE BERMUDAGRASS. The rhizomes and stolons of bermudagrass must be cut up thoroughly so that few or no nodes remain on a strand.

For control of bermudagrass, the disc must be set to cut 6 inches deep.

FOR SUPPRESSION OF BROADLEAF SIGNALEGRASS. For early and mid season suppression, use 10.5 pints of Atrabute[®] per acre. Cultivation or application of a post emergence herbicide recommended for broadleaf signalegrass will aid in extending control to late season.

FOR SUPPRESSION OF HEMP DOGBANE. For early and mid season suppression, use 10.5 pints of Atrabute[®] per acre. Cultivation or application of a post emergence herbicide recommended for hemp dogbane may aid in extending control beyond mid season.

FALL APPLICATION. For use only in Minnesota, Northern Iowa (North of Interstate 80), Northeast Nebraska (North of Interstate 30 and East of State Highway 14), South Dakota (East of Missouri River), Wisconsin and Northern Illinois (North of Interstate 80). Apply and incorporate 10.5 pints Atrabute[®] per acre in the late fall before the ground freezes.

NOTE. Do not use Fall application for suppression of wild cane.

CULTURAL PRACTICES FOLLOWING APPLICATION

Should weeds develop, a shallow cultivation or rotary hoeing will generally result in better weed control. When cultivating for any reason, it should be shallow, i.e., no more than $\frac{1}{2}$ the depth the herbicide was incorporated.

APPENDIX I

SOIL MIXING (INCORPORATION) BEFORE PLANTING DIRECTIONS

The following equipment commonly is used for soil mixing (incorporation) before planting:

Power-Driven Cultivation Equipment (Recommended on all soil types previously primary tilled). All PTO driven cultivation tools must be adjusted so as to have a tillage action speed originating from internal gears and/or tractor gear) synchronized to the tractor's forward speed so that thorough soil mixing is obtained.

A. Horizontal axis of rotation: set to cut 2 to 3 inches deep.

B. Vertical axis of rotation: set to cut 6 to 8 inches deep.

Tandem discs (Recommended on all soil types).

Set to cut to a depth of 4 to 6 inches, operated 4 to 6 mph, followed by a spike tooth harrow or some other leveling device which extends beyond the ends of the discs. For more thorough mixing (for control of deep germinating grasses, wild cane, seedling johnsongrass and nutedge), disc in two different directions. When discing the second time, the disc should be reset to cut no deeper than 4 to 6 inches.

Field cultivator (Recommended on lighter soils in good tillth). Use 3 to 4 rows of sweeps spaced at 7 inch or less intervals and staggered so that no soil is left unturned, followed by a spike tooth harrow pulled behind the cultivator. Do not use chisels or points. Set the cultivator to cut 4 to 6 inches deep, operated at 5 mph or more. The field cultivator should not be used alone as an incorporation tool where control of deep-germinating weeds such as nutgrass, johnsongrass seedlings or wild cane is desired. For control of these weeds, use a disc alone for at least one of the passes over the field.

APPENDIX II

PROCEDURE OR TESTING THE COMPATIBILITY OF ATRABUTE[®] WITH FLUID FERTILIZERS

The following procedure is suggested for determining whether Atrabute[®] may be combined with a specific fluid fertilizer for spray tank applications.

MATERIALS REQUIRED:

1. Atrabute[®]
2. Fluid fertilizer to be used
3. Tank mix adjuvants for fluid fertilizer combination: Complex[®], Sponto 168-D[®], Ula-Mix[®], Ureite[®] or equivalent. The adjuvant which provides the best compatibility depends on the specific fertilizer involved.
4. Two one quart, wide mouth glass jars with lids.
5. Measuring spoons, a graduated pipette or cylinder will provide more accurate measurements; 1 tables spoon equals 3 teaspoons; 1 teaspoon equals approximately 5 milliliters.
6. Measuring cup, 8 oz. (237 ml).

*Complex, Kalo Laboratories, Inc., Kansas City, Missouri; Sponto 168-D, Witco Chemical Company, Houston, Texas; Ula-Mix, Thompson-Hayward Chemical Co., Kansas City, Kansas; Ureite, Hopkins Agricultural Chemical Company, Madison, Wisconsin.

PROCEDURE:

1. Pour a pint (473 ml) of the fluid fertilizer into each of the quart jars.
2. Add adjuvant to one of the jars and mix (see next rate table).
3. Add Atrabute[®] to both jars.
4. Close both jars with lids and mix the contents by turning the jars upside down ten times.
5. Inspect the surface and body of the mixtures.
 - (A) Immediately after completing the jar inversions.
 - (B) After allowing the jars to stand quietly for 30 minutes.
 - (C) And then again after turning the jars upside down 10 times.

If a uniform mix cannot be made, the mixture should not be used. If either mixture remains uniform for 30 minutes, the combination may be used. Should either mixture separate after 30 minutes, but readily remix uniformly with ten jar inversions, the mixture can be used if adequate agitation is maintained in the tank. If the mixture with the adjuvant is satisfactory, but the one without adjuvant is not, be sure to use the adjuvant in the spray tank. Add the adjuvant at a rate of 3 pints per 100 gallons of fluid fertilizer. Mixing can be minimized by using moderate agitation.

If nondispersible oil sludge or clumps of solids form in the mixtures, the combination should not be used. Rate Table^{*} for Atrabute[®] and Adjuvant^{**} with the Fluid Fertilizer.

Gallons of Fluid Fertilizer applied per acre	ml	ml of Atrabute [®] to be added	1/2 pint of Fertilizer
10	10 1/2	1 1/2	1 1/2
15	15 3/4	2 1/4	2 1/4
20	20 1/2	3 1/4	3 1/4
25	25 1/4	4 1/4	4 1/4
30	30 1/8	5 1/8	5 1/8
40	40 1/2	7 1/2	7 1/2

*Based on field rate of 1 pound Atrabute[®] and 1.2 pound atrazine per acre in the fertilizer volume is indicated, increase volume proportionately to correspond with intended field rate in terms of pounds active ingredients per acre (e.g. for field rate of 4 pounds actual Atrabute[®] and 1 pound atrazine in 40 gallons of fertilizer per acre, add 12 ml or 2 tsp. Atrabute[®] to each jar for compatibility testing purposes).

**Two (2) milliliters or one half (1/2) teaspoon of adjuvant should be added to 1 pint of fluid fertilizer in order to equal the rate of 3 pints of adjuvant per 100 gallons of fluid fertilizer.

APPENDIX III

ATRABUTE* IMPREGNATION OF DRY BULK FERTILIZERS

CAUTION: Atrabute* alone or in combination with other fertilizers must not be impregnated on any monoammoniate, potassium nitrate or sodium nitrate fertilizers. Such mixtures may cause explosion and fire. All individual state regulations relating to dry bulk fertilizer blending, registration, labeling and application are the responsibility of the individual user or company using the Atrabute* fertilizer mixtures.

Atrabute* may be impregnated on many dry bulk fertilizers (1) and applied and incorporated into the soil either in the fall before the ground freezes or before planting for the control of many grassy and broadleaf weeds.

All Atrabute* label and supplementary literature instructions and precautions regarding rates per acre, soil type and soil incorporation, application and other directions must be followed.

Test results have shown that Atrabute* on many dry bulk fertilizers gives weed control equal to Atrabute* 6% or tank mixtures of Atrabute* 6% / E. Atrabute* (20% or 4L) mixed as a spray in water or liquid fertilizer, or impregnated on dry bulk fertilizer. However, uniform impregnation of the Atrabute* on dry fertilizer particles and uniform application in the field are necessary to assure good results.

A minimum of 200 pounds and a maximum of 700 pounds of approved fertilizer ingredients (1) impregnated with the appropriate amount of Atrabute* must be applied per acre.

For impregnating the Atrabute* on dry fertilizers, use a closed rotary drum type mixer equipped with suitable spraying equipment. The spray nozzles should be positioned inside of the mixer to provide uniform spray coverage of the tumbling fertilizer. The Atrabute* should be sprayed uniformly onto the fertilizer using a fine spray pattern. Atrabute* is a relatively viscous material, particularly at low temperatures (20 degrees F). At warmer temperatures (45-80 degrees F) the viscosity is significantly lower (see viscosity data later in this appendix).

The physical properties of fertilizers vary, particularly in liquid absorptive capacity. When absorptivity is sufficient, simple spray impregnation of the fertilizer with Atrabute* provides a satisfactory dry mixture.

If the absorptivity is not adequate, use of a highly absorptive powder is required to provide a dry, free flowing mixture.

Microcel E Johns Mansville Products Corporation is the recommended absorbent powder. It should be added separately and uniformly to the prepared postside fertilizer mixture, in a quantity that is sufficient to provide a suitably free flowing mixture.

The amount of Atrabute* actually required in the manufacture of individual fertilizer mixtures should be determined carefully for each production operation (2). This is necessary to ensure that the amount of Atrabute* actually contained in the mixture applied to the soil represents the correct rates of use.

Bulk fertilizers impregnated with Atrabute* should be applied immediately, NOT STORED. All bulk containers should be tightly covered while the products are being transported and applied to reduce chances of Atrabute* loss via volatilization.

Do not combine Atrabute* with single superphosphate (0-20-0) or triple superphosphate (0-46-0).

(2) RATE CHART FOR THE IMPREGNATION OF DRY BULK FERTILIZERS WITH ATRABUTE*

FERTILIZER Rate/Acre	5% pts. per acre	7 pts. per acre	ATRABUTE* Rate/Acre
200 lbs	26 1/2 qts/ton	35 qts/ton	52 1/2 qts/ton
250 lbs	21 qts/ton	28 qts/ton	42 qts/ton
300 lbs	17 1/2 qts/ton	23 1/2 qts/ton	35 qts/ton
350 lbs	14 1/2 qts/ton	20 qts/ton	30 qts/ton
400 lbs	13 1/2 qts/ton	17 1/2 qts/ton	26 1/2 qts/ton
450 lbs	11 1/2 qts/ton	15 1/2 qts/ton	23 1/2 qts/ton
500 lbs	10 1/2 qts/ton	14 qts/ton	21 qts/ton
550 lbs	9 1/2 qts/ton	12 1/2 qts/ton	19 qts/ton
600 lbs	8 1/2 qts/ton	11 1/2 qts/ton	17 1/2 qts/ton
650 lbs	8 qts/ton	10 1/2 qts/ton	16 1/2 qts/ton
700 lbs	7 1/2 qts/ton	10 qts/ton	15 qts/ton

(1) APPROVED DRY FERTILIZER INGREDIENTS FOR USE WITH ATRABUTE*

	N	P	K
Ammonium Sulfate	21	0	0
Ammonium Phosphate Sulfate	16	25	0
Diammonium Phosphate	18	46	0
Monammonium Phosphate	11	56	0
Potassium Chloride	0	0	42
Potassium Sulfate	0	0	52
Urea*	45	0	0

*Some areas may be phytotoxic when high rates are applied to corn. Use only urea rates known to be safe for corn application.

NOTE: Sul. Ph. Mag., K. Mag. and 11-48-0 have been shown to be compatible with Atrabute* and are approved for use.

PRECAUTIONS FOR ROTATION CROPS FOLLOWING ATRABUTE* USED FOR CORN

If the corn planting treated with Atrabute* is lost, corn may be replanted immediately. Do not make a second application.

Do not apply Atrabute* after June 10.

Following corn harvest, thoroughly invert soil (deep disk or plow) in the fall or early spring to minimize injury potential to rotational spring seeded crops.

Following corn harvest, thoroughly invert soil (deep disk or plow) in the fall or early spring to minimize injury potential to rotational spring seeded crops.

Corn or soybeans may be planted in the spring season following treatment with Atrabute*.

Injury may occur to soybeans planted in North Central and Northwest Iowa, South Central and Southwest Minnesota, Northeast Nebraska and Southeast North Dakota and soils having a calcareous surface layer.

Small grains may be planted 15 months following treatment with Atrabute*.

All other atrazine sensitive crops may be planted 18 months after application of Atrabute*.

WARRANTY STATEMENT

GRIFFIN CORPORATION warrants that this product in its unopened package conforms to the chemical description on the label and is reasonably fit for the purposes set forth on the label when used according to directions under normal use conditions on the crops specified. There are no other warranties, expressed or implied, concerning the use of this product other than indicated on the label. This warranty does not extend to the handling or use of this product contrary to label instructions or under abnormal conditions or under conditions not reasonably foreseeable to seller and buyer assumes all risk of any such use.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS & DOMESTIC ANIMALS WARNING

Avoid contact with skin and clothing. Avoid contact with eyes. Avoid breathing dust. Avoid breathing spray mist. Wear goggles, rubber gloves, and protective clothing when handling. Wash skin with soap and water immediately after contact. Flush eyes with water.

ENVIRONMENTAL HAZARDS

Do not apply directly to water or wet soils. Do not contaminate water by cleaning of equipment or disposal of wastes.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

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STORAGE AND DISPOSAL

PROHIBITIONS. Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container.

STORAGE: Keep container tightly closed when not in use. Do not store near seeds, fertilizers, or foodstuffs. Can be stored at temperatures as low as minus 30 degrees F.

PESTICIDE DISPOSAL: Rinse spray equipment. Pesticide, spray mixture, or rinsate that cannot be used according to label instructions must be disposed of according to Federal or approved state procedures under Subtitle C of the Resource Conservation and Recovery Act.

CONTAINER DISPOSAL: PLASTIC — Triple rinse (or equivalent), puncture and dispose of in a sanitary landfill or by incineration if allowed by State and local laws.

GENERAL INFORMATION

Read all label directions before using.

Atrabute[®] is a selective herbicide which is mixed (incorporated) into the soil for control of weeds listed on this label. Atrabute[®] controls annual grasses as their seeds germinate by interfering with normal germination and seedling development. It does not control established weeds.

Applied according to directions and under normal growing conditions Atrabute[®] will not harm the treated crop. During germination and early stages of growth, extended period of unusually cold and wet or hot and dry weather, insect or plant disease attack, carryover pesticide residues, the use of certain soil applied systemic insecticides, improperly placed fertilizers or soil insecticides may create abnormal conditions that weaken crop seedlings. Atrabute[®] used under these abnormal conditions could result in crop injury.

Make only one application per crop. After treatment with Atrabute[®], do not plant any crop except corn until the following year or injury may occur.

Do not use on milo or sorghum. Do not use on corn seed stock (Breeders, Foundation, or Increased).

Atrabute[®] is recommended for use on mineral soils only (soils containing less than 10% organic matter).

Do not contaminate irrigation water (used for crops other than corn) or water used for domestic purposes.

Do not contaminate food or feed.

Keep container closed when not in use. Do not store near seeds, fertilizers, or foodstuffs.

Do not use in Arizona or in ten Southern most California counties.

In irrigated areas, do not apply Atrabute[®] before pre-irrigation.

WEEDS CONTROLLED BY ATRABUTE[®]:

Barnyardgrass	(Echinochloa crus-galli)	Texas Panicum ⁺ *
Crabgrass		Buffalograss
Adiantum		Coloradograss (Panicum texanum)
Signalgrass ⁺ *	(Brachiaria platyphylla)	Volunteer Sorghum ⁺ (Sorghum spp.)
Crabgrass	(Digitaria spp.)	Wild Cane ⁺ *
Fall Panicum	(Panicum didymum/fluor.)	Shattercane
Field Sandbur ⁺	(Cenchrus pauciflorus)	Black Amber Cane
Giant Foxtail	(Setaria faberii)	Chicken Corn
Green Foxtail	(Setaria viridis)	Scatter Cane (Sorghum bicolor)
Goosegrass	(Eleusine indica)	See Wild Cane Rate and Cultural Recommendations
Seedling		Wild Oats (Avena fatua)
Pennsylvanigrass	(Cynodon dactylon)	Witchgrass (Panicum capillare)
Seedling		Yellow Foxtail (Setaria glauca)
Johnsongrass ⁺	(Sorghum halepense)	

⁺ Partial control (suppression) only.

* Cultivation is suggested in addition to the Atrabute[®] treatment in fields with moderate to heavy infestations of wild cane, sandbur, johnsongrass, Texas panicum, volunteer sorghum or broadleaf signalgrass.

** Southeast Region only.

ANNUAL BROADLEAF WEEDS:

Annual Morningglory	(Ipomoea purpurea)
Carpetweed	(Mollugo verticillata)
Common Cocklebur	(Xanthium pennsylvanicum)
Common Lambsquarters	(Chenopodium album)
Common Purslane	(Portulaca oleracea)
Florida Purslane	(Richardia scabra)
Jimsonweed	(Datura stramonium)
Mustards	(Brassica spp.)
Nightshade	(Solanum spp.)
Prostrate Pigweed	(Amaranthus gracilis)
Ragweed	(Ambrosia spp.)
Redroot Pigweed	(Amaranthus retroflexus)
Sicklepod ⁺	
Coffinweed	(Cassia obtusifolia)
Smartweed	(Polygonum spp.)
Smooth Pigweed	(Amaranthus hybridus)
Velvetleaf	(Abutilon theophrasti)

⁺ Southeast Region Only.

PERENNIAL WEEDS:

Hemp Dogbane +
Purple Nutgrass, Nutsedge
Rhizome, Bermudagrass*
Rhizome, Johnsongrass*
Yellow Nutgrass, Nutsedge

(Apocynum cannabinum)
(Cyperus rotundus)
(Cyperus dactylon)
(Sorghum halepense)
(Cyperus esculentus)

* Partial control (suppression) only

+ Southeast Region only

Existing stands of nutgrass must be turned under and chopped up thoroughly before treatment. Cultivation is suggested in addition to Atrabute + treatment in fields with moderate to heavy nutsedge infestations.

Atrabute + can be mixed with water or combined with fluid (solution, slurry or suspension) fertilizers and applied as a spray, or can be impregnated on dry bulk fertilizers.

ATRABUTE + FLUID FERTILIZER TANK MIX

Atrabute + can be combined with fluid fertilizers for applications made before planting. However, the physical compatibility with these fluid fertilizers must be determined before combining in the spray tank, and even though found to be compatible, constant agitation is necessary to keep the Atrabute + evenly mixed with the fluid fertilizer during application.

Refer to Appendix II regarding the procedure for testing the compatibility of Atrabute + with fluid fertilizers.

IMPREGNATION ON DRY BULK FERTILIZERS

Dry bulk fertilizers (except single superphosphate, treble superphosphate and nitrate fertilizers) may be impregnated or coated with Atrabute +. However, uniform distribution of Atrabute + on fertilizer particles and uniform application are necessary to assure good results. See Appendix for information and directions for impregnation and use for these combinations.

APPLICATION AND SOIL INCORPORATION DIRECTIONS

SPRAY APPLICATION AND MECHANICAL INCORPORATION

Apply the recommended dosage in 10 to 50 gallons of water per acre (use the higher volume in arid areas) using a properly calibrated, low-pressure type nozzle (flood, fan or swirl chamber) on boom type sprayer having good, but not excessive agitation. Check frequently during application to be sure nozzles are free from clogging and are delivering a uniform spray pattern.

The herbicides must be incorporated into the soil immediately after application to prevent loss of the Atrabute +. Whenever possible, application and incorporation should be done in the same operation. Apply the herbicides to soil dry enough to permit good soil mixing.

See Appendix I for Soil Mixing (incorporation) before Planting Directions.

Loss of weed control will result from any delay in incorporation if Atrabute + is applied to a moist soil surface.

If there must be a delay (less than one hour) in incorporation of the herbicides when application and incorporation are done in separate operations, Atrabute + must be applied to a dry soil surface (at least $\frac{1}{8}$ inch deep) and free from dew and incidental moisture.

IMPORTANT: Thorough mixing of Atrabute + in the soil is necessary. The soil must be in good tilth. Improper disking or poor tilth (large clods) may result in unsatisfactory control.

CENTER PIVOT SPRINKLER APPLICATION

Apply Atrabute + with irrigation water before planting (see PLANTING), or immediately after planting before either corn or weeds emerge. It is important that application be done immediately after the last tillage operation since poor results will occur if the weeds have germinated before application of the herbicide. Meter the pre-mixed Atrabute + into the irrigation water during the entire period. Apply in $\frac{1}{2}$ to 1 inch of water or sufficient water to penetrate the soil to a depth of 5 to 7 inches. Good agitation should be maintained during the entire application period.

USE PRECAUTIONS

A. Apply the product only through center pivot irrigation systems containing anti siphon and check valves which will prevent water source contamination and overflow of the slurry tank and containing interlocking controls between the metering device and the water pump to insure a simultaneous shut-off.

B. Inject the product with a positive displacement pump into the main line ahead of a right angle turn to insure adequate mixing.

C. Application of more than recommended quantities of irrigation water may result in decreased product performance by removing the chemical from the zone of effectiveness.

D. Do not apply when wind speed favors drift, when system connections or fittings leak, when nozzles do not provide uniform distribution or when lines containing the product may be dismantled and drained.

PLANTING

Do not plant seed deeper than 2 inches. For Atrabute + application made before planting, seeding can be done immediately, or it may be delayed up to 2 weeks*. To avoid removing Atrabute + from the row (with loss of weed control in the row), do not move or shape soil after treatment, such as by planting in deep furrows. If it is necessary to work the soil following application and incorporation but before planting, do not work the soil deeper than the depth the herbicides were incorporated.

*For Wild Cane - See Special Recommendations

RECOMMENDATIONS FOR USE ON CORN (FIELD, SWEET SILAGE AND POPCORN)

NOTE: Atrabute + is not recommended on corn grown in Arizona or in the ten Southernmost California counties.

For all uses cultivation is recommended in addition to the Atrabute + treatment in fields with moderate to heavy infestations of wild cane, nutgrass, sandbur, johnsongrass seedlings, rhizome bermudagrass, Texas panicum or volunteer sorghum.

Broadcast Rates Per Acre Conventional sprays and center pivot sprinklers

For control of annual grasses and broadleaf weeds. Use 5.25 to 7 pints of Atrabute + per acre. Use the higher rate of Atrabute + on medium (medium fine textured silt loam, clay loam, etc.) to fine (fine textured clay) soils and for sandbur and johnsongrass seedling control.

For control of nutsedge and Texas panicum (in addition to the broadleaf weeds and other annual grasses listed). Use 7 to 10.5 pints of Atrabute + per acre. Use the higher rates of Atrabute + on medium (medium fine textured silt loam, clay loam, etc.) soils, fine (fine textured clay) soils and for heavy infestations.

For partial control (suppression) of Wild Cane (and for control of broadleaf weeds and annual grasses listed). When applied and incorporated immediately before planting, Atrabute + at the rate of 10.5 pints per acre on a broadcast basis will reduce competition from wild cane. On continuous corn acreage with high cane seed population, rotation to another crop is recommended.

Suppression of wild cane may be improved if all the following practices are followed:

1. Fall or Spring Moldboard Plow
2. Before application, the soil should be well worked with a disc and dry enough to permit good soil mixing of the herbicide (incorporation). All trash should be worked into the soil.
3. Delay application until soil warms to a constant 55 degrees or greater temperature. Plant immediately.
4. Incorporate thoroughly. Use recommended incorporation equipment and procedures found on this label.
5. Cultivate immediately if wild cane emerges. Cultivation should be shallower than the depth used when incorporating the herbicide.

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