



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

AUG 2 2004

Barbara J. Kaminski
Dow AgroSciences, LLC
9330 Zionsville Road
Indianapolis, IN 46268

Subject: Memorandum of Agreement Label Revisions for Atrazine 4L
EPA Registration Number: 62719-312
Submission Dated: June 23, 2004

Dear Ms. Kaminski:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended is acceptable, provided you make the following changes before you release the product for shipment:

1. On page 2 and 10 under Engineering Controls, change "Pilots just..." to "Pilots must..."
2. Add Spray Drift Management Information to the label. See attached.
3. Page 14 (top of page) under "Maximum Use Rate" change first bullet to read:
 *"When tank mixing or sequentially applying atrazine or products containing atrazine to corn or sorghum, do not exceed an application rate of 2.0 pounds active ingredient of atrazine per acre for any single application and the total pounds of atrazine applied (lb. a.i. per acre) must not exceed 2.5 pounds active ingredient per acre per year."
4. In Table 1 that starts on page 17 and continues on page 18 change:
 *"Apply a maximum of 2 pounds active ingredient per acre as a single preemergent application on soils that are not highly erodible or on highly erodible soils if at least 30% of the soil is covered with plant residues, or
 *Apply a maximum of 1.6 pounds active ingredient per acre as a single preemergent broadcast application on highly erodible soils if less than 30% of the soil surface is covered with plant residues; or 2.0 pounds active ingredient per acre if only applied postemergent," to
 *"Apply a maximum of 2 pounds active ingredient per acre as a single preemergent broadcast application on soils that are not highly erodible or on highly erodible soils (as defined by the Soil Conservation Service) if practicing conservation tillage and at least 30% of the soil surface is covered with plant residues at planting, or
 *Apply a maximum of 1.6 pounds active ingredient per acre as a single preemergent broadcast application on highly erodible soils (as defined by the Soil Conservation Service) if less than 30% of the soil surface is covered with plant residues at planting; or 2.0 pounds active ingredient per acre if only applied post-emergent."
5. In the Tank Mixture with Atrazine 4L for Corn, please provide a registration number for a product with the name "Butylate 6.7E" or remove it from the list.
6. Modify "Use tank mix directions appearing on the labels of the above listed herbicides when tank mixing with this product. Observe all precautions and limitations on labeling of products used in a

particular tank mix.” to read:

*“Use tank mix directions appearing on the labels of the above listed herbicides when tank mixing with this product. When tank mixing atrazine containing products, do not exceed 2.0 lbs. a.i./A of atrazine as a pre or post application or 2.5 lbs a.i./A as the total of pre plus post applications per calendar year. Observe all precautions and limitations on labeling of products used in a particular tank mix.”

7. Page 19 Note: “When the labels of the above herbicides refer to Atrazine 80W or DF use the equivalent rate of Atrazine 4L. One pound of Atrazine 80W or DF equals 1.6 pints of Atrazine 4L.” The Atrazine DF products in the Agency’s data base are 90% atrazine products. Atrazine products containing 80% atrazine and 90% atrazine by weight can not both be equal to 1.6 pints of 4L. Drop the DF from the label or provide two equivalency statements.

8. After Table 3 change

*“On highly erodible soils (as defined by the Soil Conservation Service (SCS) if conservation tillage is utilized (> 30% plant residue), the maximum rate is 4 pints per acre. If plant residue is <30%, the maximum rate is 3.2 pints per acre.” to

“On highly erodible soils (as defined by the Soil Conservation Service (SCS) if conservation tillage is utilized (> 30% of the soil covered with plant residue at planting), the maximum rate is 4 pints of Atrazine 4L per acre. If plant residue is <30%, the maximum rate is 3.2 pints of Atrazine 4L per acre.”
“On soils not highly erodible, the maximum rate is 4 pints of Atrazine 4L per acre.”

9. On Page 20 “For All Soil Applications Prior to Crop Emergence” change 4 pints to 2.0 lbs. a.i. of atrazine per acre, and 3.2 pints to 1.6 lbs, a.i. of atrazine per acre.

10. On Page 22, Table 4:

*In the first paragraph you may want to change “earlier herbicide application” to “earlier atrazine application,” and:

*Change 2nd paragraph to read: “Apply a maximum of 2 pounds active ingredient per acre as a single preemergent broadcast application on soils that are not highly erodible or on highly erodible soils (as defined by the Soil Conservation Service) if practicing conservation tillage and at least 30% of the soil surface is covered with plant residues at planting, or”

*Change 3rd paragraph to read: “Apply a maximum of 1.6 pounds active ingredient per acre as a single preemergent broadcast application on highly erodible soils (as defined by the Soil Conservation Service) if less than 30% of the soil surface is covered with plant residues at planting, or 2.0 pounds active ingredient per acre if only applied post- emergent.”

11. On Page 25, adjust the application rate on Wheat-Sorghum-Fallow to 4.5 pints, to comply with the 2.25 lbs a.i. maximum application rate for Chemical Fallow Uses.

12. On Page 26 Chemical Fallow: Wheat-Sorghum-Fallow Precautions. Add “Do not make more than one application per cycle.”

13. On page 28, replace “(Florida, Louisiana and Texas)” with “in Sugarcane” in the “Maximum Application Rates” header. Also, change “year” to “crop.” Delete the second “per acre” in the second statement.

14. To the Conservation Reserve Program restrictions on page 30, add “Do not apply more than one application per year.”

15. On page 31, the delete the following statements from the “For Turfgrass Use in Residential Sites...,” they are intended for granular atrazine products:

“This product must be watered in immediately after application. Watering must be performed by the commercial applicator or the commercial applicator must provide the following instructions to the resident or owner in writing:

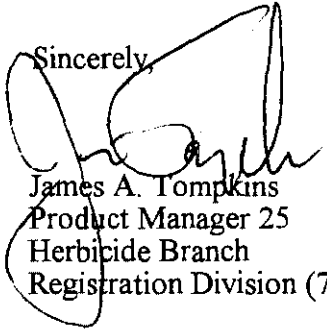
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This product must be watered in immediately.

Do not enter or allow others (including children or pets) to enter the treated areas (except those involved in the watering) until the watering-in is complete and the surface is dry."

Submit one copy of final printed labeling incorporating the above changes before you release the product for shipment. This amended labeling will supercede all previously accepted labels. A stamped copy of labeling is enclosed for your records.

Sincerely,



James A. Tompkins
Product Manager 25
Herbicide Branch
Registration Division (7505C)

Spray Drift Reduction Advisory:

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they shall be observed.

The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information.

IMPORTANCE OF DROPLET SIZE

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

CONTROLLING DROPLET SIZE

VOLUME- Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

PRESSURE- Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

NUMBER OF NOZZLES- Use the minimum number of nozzles that provide uniform coverage.

NOZZLE ORIENTATION- Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.

NOZZLE TYPE- Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

BOOM LENGTH- For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

APPLICATION HEIGHT- Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.)

WIND

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

TEMPERATURE AND HUMIDITY

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

TEMPERATURE INVERSIONS

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

SENSITIVE AREAS

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

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Atrazine 4L

EPA Reg. No. 62719-312

Registration Notes:

Source label text based on EPA accepted text dated April 5, 1999 with conditions of acceptance.

Proposed Changes by Amendment:

The following changes are being implemented as established by the Atrazine IRED:

1. **PPE** modified in accordance with requirements for liquid products that DO contain directions for use on lawns or other turfgrass.
2. **Engineering Controls** modified in accordance with requirements for liquid formulations that contain directions for use permitting aerial application.
3. **First aid statements** revised in accordance with PR-Notice 2001-1.
4. **Environmental Hazards:** Added requirements for ground and surface water protection per IRED.

(Directions for Use)

3. Added information regarding the Atrazine Watershed Information Center (AWIC) as a means of determining the location of watersheds where use of atrazine is prohibited
4. **Rights-of-Way:** Added maximum use rate of 2 pints (1 lb ai)/acre.
5. **Conifers:** Added maximum use rate of 4 qt (4 lb a.i.) per acre.
6. **Sugarcane:** Added maximum use rate of 10 qt (10 lb a.i.) per acre per crop.
7. **Turf:** (1) Added a maximum use rate of 1 quart (1 lb a.i.) per acre per application. (2) Deleted high rate uses specific to the state of Florida.

Note: Other MOA requirements applicable to this product label were previously in place.

8. Referral statements to Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies were revised per EPA correspondence from Joanne I. Miller dated August 31, 2000 and Dow AgroSciences response to Donald R. Stubbs dated November 20, 2000 and Terms and Conditions of Use section added.
9. Added pounds per gallon statement to ingredients statement.
10. Minor formatting changes involving section headings.

ACCEPTED
with COMMENTS
in EPA Letter Dated

AUG 2 2004

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.

62719-312

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(Base Label):

Restricted Use Pesticide

Due to ground and surface water concerns. 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.

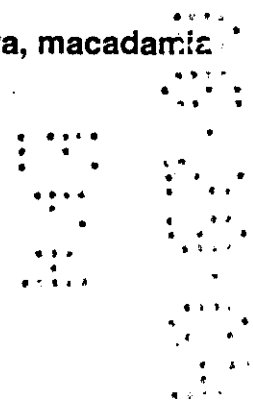
(Logo) Dow AgroSciences

Atrazine 4L

For season-long weed control in corn, conifers, fallowland, guava, macadamia nuts, sorghum, sugarcane, lawns, turf, and chemical fallow

Active Ingredient:

Atrazine: 2-chloro-4-ethylamino-6-isopropylamino-s-triazine	40.8%
Related Compounds.....	2.2%
Inert Ingredients	57.0%
Total	100.0%



Contains 4.0 lb active ingredient per gallon.

Keep Out of Reach of Children

CAUTION PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

Precautionary Statements

Hazards to Humans and Domestic Animals

Harmful If Swallowed, Inhaled, Or Absorbed Through Skin

Do not breathe vapors or spray mist. Avoid contact with skin, eyes, or clothing.

Personal Protective Equipment (PPE)

Some of the materials that are chemical-resistant to this product are polyethylene or polyvinyl chloride. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

Applicators using spray equipment mounted on their backs must wear:

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride

Mixers, loaders, all other applicators, flaggers and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride,
- Shoes plus socks

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- Chemical-resistant apron, when mixing/loading, cleaning up spills, cleaning equipment, or otherwise exposed to the concentrate.

See Engineering Controls section for additional requirements.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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.

Engineering Controls

Mixers and loaders supporting aerial applications **at a rate greater than 3 lb ai/acre B** must use a closed system that meet the requirements for dermal protection listed in the Worker Protection Standard (WPS) for Agricultural Pesticides [40 CFR 170.240(d)(4) and must:

- wear protective equipment required for mixers and loaders,
- wear protective eyewear if the system operates under pressure, and,
- be provided and have immediately available for use in an emergency, such as a spill or equipment breakdown: chemical resistant footwear.

Pilots must use an enclosed cockpit in a manner that is consistent with the WPS for Agricultural Pesticides [40 CFR 170.240(d)(6). Pilots just wear the PPE required on this labeling for applicators, however, they need not wear chemical-resistant gloves when using an enclosed cockpit.

Flaggers supporting aerial applicators must use an enclosed cab that meets the definition on the Worker Protection Standard for Agricultural Pesticides [40 CFR 170.240(d)(5)] for dermal protection.

When applicators use enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(5), the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users 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 outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing

First Aid

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Note to Physician: 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.

If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

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Environmental Hazards

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 and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

Groundwater Advisory: Atrazine can travel (seep or leach) through soil and can enter groundwater that may be used as drinking water. Atrazine has been found in groundwater. Users are advised not to apply atrazine to sand and loamy sand soils where the water table (groundwater) 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 groundwater.

This product must not be mixed or loaded within 50 feet of intermittent streams and rivers, natural or impounded lakes and reservoirs. This product must not be applied within 66 feet of the points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 feet of natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66 foot buffer or setback from runoff points must be planted to crop or seeded with grass or other suitable crop.

This product must not be mixed/loaded or used within 50 feet of all wells including abandoned wells, drainage wells, and sink holes. 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 the 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 at a minimum 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.

Additional State imposed requirements regarding wellhead setbacks and operational area containment must be observed.

One of the following restrictions must be followed in applying atrazine to tile-outletted fields containing standpipes:

1. Do not apply this product within 66 feet of standpipes in tile-outletted fields.
2. Apply this product to the entire tile-outletted field and immediately incorporate it to a depth of 2-3 inches in the entire field.
3. Apply this product to the entire tile-outletted field under a no-till practice only when a high crop residue management practice is used. High crop residue management is described as a crop management practice where little or no crop residue is removed from the field during or after crop harvest.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

Refer to label booklet for Directions for Use including Storage and Disposal.

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Notice: Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994. If you wish to obtain additional product information, visit our web site at www.dowagro.com.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-312

EPA Est. _____

Dow AgroSciences LLC • Indianapolis, IN 46268 USA

Herbicide

Net Contents __ gal

11836

(Datapack cover):

Restricted Use Pesticide

Due to ground and surface water concerns. 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.

(Logo) Dow AgroSciences

Atrazine 4L

For season-long weed control in corn, conifers, fallowland, guava, macadamia nuts, sorghum, sugarcane, lawns, turf, and chemical fallow

Active Ingredient:

Atrazine: 2-chloro-4-ethylamino-6-isopropylamino-s-triazine	40.8%
Related Compounds	2.2%
Inert Ingredients	57.0%
Total	100.0%

Contains 4.0 lb active ingredient per gallon.

Keep Out of Reach of Children

CAUTION PRECAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

Agricultural Use Requirements
 Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

Refer to inside of label booklet for additional precautionary information including Personal Protective Equipment (PPE), User Safety Recommendations and Directions for Use including Storage and Disposal.

Notice: Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994. If you wish to obtain additional product information, visit our web site at www.dowagro.com.

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EPA Est. _____

Dow AgroSciences LLC • Indianapolis, IN 46268 USA

Herbicide

Net Contents __ gal

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Precautionary Statements

Hazards to Humans and Domestic Animals**CAUTION****Harmful if Swallowed, Inhaled, Or Absorbed Through Skin**

Do not breathe vapors or spray mist. Avoid contact with skin, eyes, or clothing.

Personal Protective Equipment (PPE)

Some of the materials that are chemical-resistant to this product are polyethylene or polyvinyl chloride. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

Applicators using spray equipment mounted on their backs must wear:

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride

Mixers, loaders, all other applicators, flaggers and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride,
- Shoes plus socks
- Chemical-resistant apron, when mixing/loading, cleaning up spills, cleaning equipment, or otherwise exposed to the concentrate.

See Engineering Controls section for additional requirements.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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.

Engineering Controls

Mixers and loaders supporting aerial applications **at a rate greater than 3 lb ai/acre B** must use a closed system that meet the requirements for dermal protection listed in the Worker Protection Standard (WPS) for Agricultural Pesticides [40 CFR 170.240(d)(4) and must:

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- wear protective eyewear if the system operates under pressure, and,
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User Safety Recommendations

Users should:

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- Remove PPE immediately after handling this product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing

First Aid

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Note to Physician: 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.

If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

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Groundwater Advisory: Atrazine can travel (seep or leach) through soil and can enter groundwater that may be used as drinking water. Atrazine has been found in groundwater. Users are advised not to apply atrazine to sand and loamy sand soils where the water table (groundwater) 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 groundwater.

This product must not be mixed or loaded within 50 feet of intermittent streams and rivers, natural or impounded lakes and reservoirs. This product must not be applied within 66 feet of the points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 feet of 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 crop or seeded with grass or other suitable crop.

This product must not be mixed/loaded or used within 50 feet of all wells including abandoned wells, drainage wells, and sink holes. 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 the 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 at a minimum 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.

Additional State imposed requirements regarding wellhead setbacks and operational area containment must be observed.

One of the following restrictions must be followed in applying atrazine to tile-outletted fields containing standpipes:

1. Do not apply this product within 66 feet of standpipes in tile-outletted fields.
2. Apply this product to the entire tile-outletted field and immediately incorporate it to a depth of 2-3 inches in the entire field.
3. Apply this product to the entire tile-outletted field under a no-till practice only when a high crop residue management practice is used. High crop residue management is described as a crop management practice where little or no crop residue is removed from the field during or after crop harvest.

Directions for Use

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

ANY USE OF THIS PRODUCT IN AN AREA WHERE USE IS PROHIBITED IS A VIOLATION OF FEDERAL LAW. Before using this product, you must consult the Atrazine Watershed Information Center (AWIC) to determine whether the use of this product is prohibited in your watershed. AWIC can be accessed through [www.atrazine-watershed.info], or [1-866-365-3014]. If use of this product is prohibited in your watershed, you may return this product to your point of purchase or contact Dow AgroSciences for a refund.

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. 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 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, is:

- Coveralls
- Chemical-resistant gloves such as any waterproof material
- Shoes plus socks

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for Agricultural Pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Entry Restrictions for Non-WPS Uses: Do not enter or allow worker entry into treated areas until sprays have dried.

Storage and Disposal

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

Storage Instructions: Store in cool dry location. Avoid storage at high temperatures. Keep container tightly sealed. Avoid contamination with acids or alkalis. Do not stack more than 2 pallets high to prevent crushing. Keep containers away from any source of puncture. Store in original container only.

Pesticides should be separated during storage to prevent cross contamination of other pesticides, fertilizer, food and feed. Storage area should preferably be locked to prevent admittance by unauthorized or unknowledgeable persons.

If the container is damaged and leaking or material has been spilled follow these procedures:

1. Cover spill with absorbent material.
2. Sweep into disposal container.
3. Wash area with detergent and water and follow with clean water rinse.
4. Do not allow to contaminate water supplies.
5. Dispose of according to instructions below.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on-site or at an approved waste disposal facility.

Container Disposal: Triple rinse (or equivalent). Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill, or by incineration or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

General Information

Atrazine 4L herbicide will control many annual broadleaf and grass weeds in corn, sorghum, sugarcane, and certain other crops as specified on this label. Atrazine 4L may be applied before or after weeds emerge.

In each case where a range of rates is given, the lower rate should be used on coarse textured soil and soil low in organic matter, and the higher rate should be used on fine textured soil and soil high in organic matter.

Following many years of continuous use of this product and chemically related products, it has been reported that biotypes of some of the weeds listed on this label cannot be effectively controlled by this and related herbicides. Where this is known or suspected and weeds controlled by this product are expected to be present along with resistant biotypes, it is recommended that this product is used in combinations or in sequence with other registered herbicides which are not triazines. If only resistant biotypes are expected to be present, use a registered non-triazine herbicide. Consult with your state Agricultural Extension Service for specific recommendations.

Since Atrazine 4L acts mainly through root absorption, its effectiveness depends on moisture to move it into the root zone. Should weeds develop, a shallow cultivation or rotary hoeing will generally result in better weed control.

Atrazine 4L is non-flammable.

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Failure to follow the directions for use and precautions on this label may result in poor weed control, crop injury or illegal residue.

Care should be taken to avoid using Atrazine 4L near adjacent desirable plants or in greenhouses or injury may occur.

To avoid spray drift, do not apply under windy conditions. Avoid spray overlap, as crop injury may result.

Note: The Seller does not recommend the use of Atrazine 4L in combination with other herbicides or oils except as specifically described on the label or in literature published by the Seller.

Failure to follow all precautions on this label may result in poor weed control, crop injury, or illegal residues.

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

Maximum Use Rates:

- When tank mixing or sequentially applying atrazine or products containing atrazine to corn or sorghum, the total pounds of atrazine applied (lb ai per acre) must not exceed 2.5 pounds active ingredient per year.
- When tank mixing or sequentially applying atrazine or products containing atrazine to crops other than corn or sorghum, the total pounds of atrazine applied (lb ai per acre) must not exceed the specific seasonal rate limits as noted in the specific use directions.

Application Procedures

GROUND APPLICATION

Use conventional ground sprayers equipped with nozzles that provide accurate and uniform application. Be certain that nozzles are uniformly spaced and are the same size. Calibrate sprayer according to manufacturer's recommendations before use and recalibrate at the start of each season and when changing carriers. Unless otherwise specified, use a minimum of 10 gallons of spray mixture per acre for all preplant incorporated, preplant surface, pre-emergence, and postemergence applications (with or without oil or surfactant) with ground equipment.

Use a pump with capacity to (1) maintain 34 - 50 psi at nozzles; (2) provide sufficient agitation in tank to keep mixture in suspension; and to (3) provide a minimum of 20% bypass at all times.

Use centrifugal pumps which provide propeller shear action for dispersing and mixing this product. The pump should provide a minimum of 10 gallons per minute per 100 gallon tank size circulated through a correctly positioned sparger tube or jets.

Use screens to protect the pump and to prevent nozzles from clogging. Screens placed on the suction side of the pump should be 16-mesh or coarser. Do not place a screen in the recirculation line. Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles. Check nozzle manufacturer's recommendations.

For band application, calculate the amount to be applied per acre as follows:

$$\frac{\text{band width in inches}}{\text{row width in inches}} \times \text{broadcast rate per acre} = \text{amount needed per acre of field}$$

AERIAL APPLICATION

Use aerial application only where broadcast applications are specified. Apply in a minimum of 1 quart of water for each quart of Atrazine 4L applied per acre. For post-emergence treatments on corn and sorghum, apply recommended rate in a minimum of 2 gallons of water per acre. Avoid applications under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur.

Atrazine 4L IN WATER APPLICATIONS

Atrazine 4L, a liquid formulation, should be mixed with water and applied as a spray. Pour Atrazine 4L into the tank during or after filling. Hydraulic (jet) or mechanical agitation is recommended during mixing and application to keep the materials in suspension. All return lines to the tank must discharge below liquid level and agitation should not be so violent as to cause air bubbles to form in the liquid. Wash sprayer thoroughly after use.

Atrazine 4L IN LIQUID FERTILIZER APPLICATIONS

Nitrogen solutions or complete liquid fertilizers may replace all or part of the water as a carrier for pre-emergence and preplant applications of Atrazine 4L on corn and sorghum. Mixing should be accomplished as described under "Atrazine 4L IN WATER APPLICATIONS". Check the compatibility of this product with liquid fertilizer and/or nitrogen solution as shown below before use. Do not apply in nitrogen solution or complete liquid fertilizer after corn or sorghum emerges, or crop injury may occur.

Compatibility Test: Since liquid fertilizers can vary, even within the same analysis, always check compatibility with herbicide(s) each time before use.

Be especially careful when using complete suspension or fluid fertilizers as serious compatibility problems are more likely to occur. Commercial application equipment may improve compatibility in some instances. The following test assumes a spray volume of 25 gallons per acre. For other spray volumes, make appropriate changes in the ingredients. Check compatibility using this procedure:

1. Add 1 pint of fertilizer to each of two, one-quart jars with tight lids.
2. To one of the jars, add 1/4 teaspoon (1.2 milliliters) of a compatibility agent approved for this use, such as Compex or Unite (1/4 teaspoon is equivalent to 2 pints per 100 gallon spray). Shake or stir gently to mix.
3. To both jars add the appropriate amount of herbicide(s). If more than one herbicide is used, add them separately with dry herbicides first, flowables next, and emulsifiable concentrates last. After each addition, shake or stir gently to thoroughly mix. The appropriate amount of herbicides for this test follows:

Dry Herbicides: For each pound to be applied per acre, add 1.5 level teaspoons to each jar.

Liquid Herbicides: For each pint to be applied per acre, add 0.5 teaspoon (2.5 milliliters) to each jar.

4. After adding all ingredients, put lids on and tighten, and invert each jar 10 times to mix. Let the mixtures stand 15 minutes and then look for separation, large flakes, precipitates, gels, heavy oily film on the jar, or other signs of incompatibility. Determine if the compatibility agent is needed in the spray mixture by comparing the two jars. If either mixture separates, but can be remixed readily, the mixture can be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of improving compatibility: (A) slurry the dry herbicide(s) in water before addition, or (B) add 1/2 of the compatibility agent to the fertilizer and the other 1/2 of the emulsifiable concentrate or flowable herbicide before addition to the mixture. If incompatibility is still observed, do not use the mixture.

Atrazine 4L+EMULSIFIABLE OIL OR OIL CONCENTRATE

Adding emulsifiable oil (petroleum-derived, petroleum-derived oil concentrate, or single or mixed crop-derived oil concentrate) to post-emergence water-based sprays in corn and sorghum may improve weed control. However, under certain conditions, the use of either type of oil may seriously injure the crop. To minimize this possibility, observe the following directions:

Use one of the following properly emulsified:

1. A suitable oil concentrate containing at least 1% but not more than 20% suitable emulsifier or surfactant blend.
2. Petroleum-derived oil containing at least 1% suitable emulsifier.

Note: In the event of a compatibility problem when mixing oil with this product and water, a compatibility agent such as Compex or Unite should be used. Any of the above oils contaminated with water or other materials can cause compatibility problems and/or crop injury.

Mixing procedures (All Uses):

1. Be sure sprayer is clean and not contaminated with any other materials or crop injury or sprayer clogging may result.
2. Fill tank 1/4 full with clean water, nitrogen solution, or complete liquid fertilizer.
3. Start agitation.
4. Be certain that the agitation system is working properly and creates a rippling or rolling action on the liquid surface.
5. Pour product directly from container into tank.
6. Continue filling tank until 90% full. Increase agitation if necessary to maintain surface action.
7. Add emulsifiable oil, oil concentrate, or tank mix herbicide(s) after this product is thoroughly suspended.
8. Finish filling tank.
9. Empty tank as completely as possible before refilling to prevent buildup of oil or emulsifiable concentrate residue. Maintain agitation to avoid separation of materials.
10. If an oil or emulsifiable concentrate film starts to build up in tank, drain it and clean with strong detergent solution or solvent.
11. Clean sprayer thoroughly immediately after use by flushing system with water containing a detergent. Dispose of rinsate by spraying on treatment site.

Rotational Crops - All Uses

1. Land treated with Atrazine 4L should not be planted to any crop except corn or sorghum until the following year or injury may occur.
2. If Atrazine 4L is applied after June 10, do not rotate with crops other than corn or sorghum the next year or injury may occur.
3. In the High Plains and Intermountain area of the West where rainfall is sparse and erratic or where irrigation is required, use Atrazine 4L to control weeds in corn only when corn is to follow corn or a crop of untreated corn or sorghum is to precede other rotational crops.
4. In Western Minnesota and Eastern parts of the Dakotas, Nebraska and Kansas, corn treated with Atrazine 4L should not be followed with soybeans if the broadcast rate applied was more than 4 pints per acre of Atrazine 4L (or comparable rate in a band) or injury may occur.
5. Injury may occur to soybeans planted in North Central Iowa and South Central Minnesota the year following an Atrazine 4L application on Harps, Canisteo, Stroden or other soils having a calcareous surface layer.
6. Do not plant sugarbeets, tobacco, vegetables (including dry beans), spring-seeded small grains or small-seeded legumes and grasses the year following Atrazine 4L application or injury may occur.

Atrazine 4L Applied Alone - Corn or Grain Sorghum †

PREPLANT SURFACE-APPLIED, PREPLANT INCORPORATED, OR PRE-EMERGENCE (or postemergence at 4 pints per acre with oil)

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Grass and Broadleaf Weeds Controlled

Barnyardgrass ^{†††} (watergrass)	Cocklebur ^{†††}	Nightshade
Crabgrass ^{††} (large hairy)	Groundcherry	Pigweed
Foxtail (giant)	Jimsonweed	Purslane
Foxtail ^{††} (green)	Kochia	Ragweed
Foxtail ^{†††} (yellow)	Lambsquarters	Sicklepod ^{††}
Oats (wild)	Morning glory (annual)	Velvetleaf ^{†††} (buttonweed)
Witchgrass ^{†††} (<i>Panicum capillare</i>)	Mustards	

POST-EMERGENCE WITH EMULSIFIABLE OIL OR OIL CONCENTRATE IN WATER (2.4 pints per acre)**Broadleaf Weeds Controlled**

Buckwheat (wild)	Mustards
Cocklebur	Pigweed
Jimsonweed	Ragweed
Lambsquarters	Smartweed
Morning glory (annual)	Velvetleaf ^{†††}

[†] Where there are state/local requirements regarding atrazine use (including lower maximum rates and/or set-backs) which are different from the label, the more restrictive/protective requirements must be followed. Certain states may have established rate limitations within specific geographical areas. Consult your state lead pesticide control agency for additional information. It is a violation of this label to deviate from state regulations.

^{††} Partial control only

^{†††} Partial control only on medium and fine-textured soils

CORN

Atrazine 4L may be applied either before planting, at planting, or after planting as indicated below.

PREPLANT SURFACE-APPLIED (broadleaf and grass control)

Use on medium and fine textured soils with minimum tillage or no tillage systems only in CO, IL, IN, IA, KS, KY, MN, MO, MT, NE, ND, SD, WI, WY. Apply the recommended rate of Atrazine 4L shown in Table 1 up to 30 days prior to planting. On coarse-textured soils, do not apply more than 2 weeks prior to planting.

If weeds are present at the time of treatment, apply in tank mix combination with a contact herbicide (for example, paraquat or glyphosate). Observe applicable directions for use, precautions, and restrictions on the label of the contact herbicide.

Note: To the extent possible, do not move treated soil out of the row or move untreated soil to the surface during planting or weed control will be diminished.

PREPLANT INCORPORATED (Broadleaf and Grass Weed Control)

Broadcast in the spring after plowing at the rate indicated in Table 1. Application may be made before, during or after final seedbed preparation. If soil is tilled or worked after application, avoid deep incorporation of Atrazine 4L. Best results have been obtained when Atrazine 4L is applied within 2 weeks prior to planting.

PRE-EMERGENCE OR AT-PLANTING (Broadleaf and Grass Weed Control)

Apply during or shortly after planting prior to weed emergence at the rate indicated below in Table 1.

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POST-EMERGENCE (Broadleaf and Grass Weed Control)

Apply before weeds exceed 1.5 inches in height and before corn exceeds 12 inches in height at rate recommended in Table 1.

Table 1: For Control of Broadleaf and Grass Weeds in Corn, maximum broadcast application rates must be as follows:

- If no atrazine was applied prior to corn emergence, apply a maximum rate of 2 pounds active ingredient per acre broadcast. If a post-emergence treatment is required following an earlier herbicide application, the total atrazine applied must not exceed 2.5 pounds active ingredient per acre per calendar year.
- Apply a maximum of 2 pounds active ingredient per acre as a single preemergence application on soils that are not highly erodible or on highly erodible soils if at least 30% of the soil is covered with plant residues, or
- Apply a maximum of 1.6 lb pounds active ingredient per acre as a single preemergence application on highly erodible soils if less than 30% of the surface is covered with plant residues; or 2.0 pounds active ingredient per acre if only applied postemergence.

Note: Broadleaf control (eastern CO, western KS, western NB, NM, OK Pan Handle, west TX, and eastern WY): On sand, loamy sand, sandy loam, mild to strongly alkaline soil and all recently leveled soil, apply no more than 2.4 pints per acre, either preplant or pre-emergence. On other soils in these areas, apply rate in Table 1 for broadleaf and grass control.

Where there are state/local requirements regarding atrazine (including lower maximum rates and/or set-backs) which are different from the label, the more restrictive/protective requirements must be followed. Certain states may have established rate limitations within specific geographical areas. Consult your state lead pesticide control agency for additional information. It is a violation of this label to deviate from state use regulations.

POST-EMERGENCE WITH EMULSIFIABLE OIL OR OIL CONCENTRATE IN WATER

Add the following volume of one of the type oils indicated for aerial or ground application unless the oil label specifies otherwise:

Type Oil	Ground Application	Aerial Application
Oil concentrate (crop or petroleum-derived)	1 quart per acre	½ - 1 quart per acre
Petroleum-derived oil	1 gallon per acre	2 quarts per acre

Note: Crop-derived or petroleum-derived oil concentrates should contain at least 1% but not more than 20% suitable emulsifier or surfactant blend. Petroleum-derived oils should contain at least 1% suitable emulsifier.

Broadleaf and Grass Control

For post-emergence control of those weeds listed under "Preplant Surface-Applied, Preplant Incorporated, or Pre-emergence", broadcast 4 pints per acre plus emulsifiable oil or oil concentrate after weed emergence, but before weeds reach 1.5 inches in height and before corn exceeds 12 inches in height.

Broadleaf Control: For post-emergence control of those weeds listed under "Post-emergence with Emulsifiable Oil or Oil Concentrate in Water", broadcast 2.4 pints per acre plus emulsifiable oil or oil concentrate before pigweed and lambsquarters reach 6 inches in height and before all other weeds reach 4 inches in height. A cultivation may be necessary if all weeds are not controlled or if weeds regrow.

Precautions For Applications Of Atrazine 4L+Emulsifiable Oil In Water To Corn:

1. Do not use oil in Atrazine 4L sprays when corn is under stress from prolonged cold, wet weather, poor fertility, or other factors, or when corn is wet and succulent from recent rainfall as crop injury may occur.
2. Do not use oils in sprays when treating inbred lines or any breeding stock as injury may occur.

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3. Adding other insecticides, herbicides, liquid fertilizers or other materials is not recommended with Atrazine 4L and emulsifiable oil in water because they cause compatibility problems or crop injury.
4. Store and handle emulsifiable oil carefully. Oil contaminated with even a small amount of water may not emulsify properly when added to the tank.
5. Do not exceed 2.5 pounds active ingredient (5 pints of this product) per acre per calendar year.
6. Post-emergence application to corn must be made before corn exceeds 12 inches in height.

Tank Mixture with Atrazine 4L for Corn

This product may be tank mixed with these herbicides for control of certain broadleaf and grass weeds in corn:

Alachlor	Metolachlor + simazine
Alachlor + glyphosate	Metolachlor + simazine + glyphosate
Alachlor + paraquat	Metolachlor + simazine + paraquat
Butylate 6.7E	Paraquat
Glyphosate	Propachlor
Metolachlor	Simazine
Metolachlor + glyphosate	Simazine + glyphosate
Metolachlor + paraquat	Simazine + paraquat

Use tank mix directions appearing on the labels of the above-listed herbicides when tank mixing with this product. Observe all precautions and limitations on labeling of products used in a particular tank mix.

Note: When the labels of the above herbicides refer to Atrazine 80W or DF, use equivalent rates of Atrazine 4L. One pound of Atrazine 80W or DF equals 1.6 pints of Atrazine 4L.

ATRAZINE 4L+SIMAZINE 4L OR SIMAZINE 80W

In addition to the weeds listed under **ATRAZINE 4L APPLIED ALONE-CORN AND GRAIN SORGHUM - "PREPLANT SURFACE - APPLIED, PREPLANT INCORPORATED, OR PRE-EMERGENCE"**, this combination also controls crabgrass, fall panicum, and carpetweed.

Broadcast tank mix before planting, at planting, or after planting, but before crop and weeds emerge, at rates in Table 2. Use the 1:1 ratio for control of most weeds. Use the 1:2 ratio for expected heavy infestations of crabgrass and fall panicum. Cultivate shallowly if weeds develop.

Preplant Surface - Applied: Use on medium and fine textured soils with minimum-tillage or no-tillage systems in CO, IL, IN, IA, KS, KY, MN, MO, MT, NE, ND, SD, WI, and WY.

Apply the recommended rate of Atrazine 4L and simazine shown in Table 2 up to 30 days prior to planting. Applications made less than 30 days prior to planting may be as either a split or single treatment. On coarse textured soils, do not apply more than 2 weeks prior to planting. Refer to the "**Atrazine 4L Applied Alone - Preplant Surface - Applied**" section of the corn label for additional details.

If weeds are present at time of treatment, apply in a tank mix combination with a contact herbicide (for example, paraquat or glyphosate). Observe directions for use, precautions and restrictions on the label of the contact herbicide.

Note: To the extent possible, do not move treated soil out of the row or move untreated soil to the surface during planting, or weed control will be diminished.

Preplant Incorporated: Apply to the soil and incorporate in the spring before, during, or after final seedbed preparation. Avoid deep incorporation. For best results, apply within 2 weeks prior to planting.

Pre-emergence: Apply during or shortly after planting, but before crop and weeds emerge.

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Table 2: Tank Mixtures with simazine 4L or 80W on Corn

Soil Texture	Broadcast Rate per Acre			
	1:1 Ratio [†]		1:2 Ratio ^{††}	
	Atrazine 4L	simazine ^{††} 80W or simazine 4L	Atrazine 4L	simazine ^{††} 80W or simazine 4L
Coarse Sand, loamy sand, sandy loam	2 pints	1.25 pounds or 2 pints	1.32 pints	1.67 pounds or 2.6 pints
Medium: Loam, silt loam, silt, clay loam, sandy clay loam, silty clay loam, sandy clay, or silty clay with low organic matter	2.4 pints	1.5 pounds or 2.4 pints	1.6 pints	2.0 pounds or 3.2 pints
Fine Loam, silt loam, silt, clay loam, sandy clay loam, sandy clay, or silty clay with medium to high organic matter, and clay (including dark prairie soils of the Corn Belt)	3 pints	1.8 pounds or 3 pints	1.92 pints	2.4 pounds or 3.84 pints

[†] For control of most weeds.

^{††} For control of expected heavy infestations of crabgrass and fall panicum.

Refer to Corn sections of this label and to simazine 4L or simazine 80W label for further directions, limitations and cautions.

ATRAZINE 4L PLUS SIMAZINE 4L OR SIMAZINE 80W+PARAQUAT

For control of existing vegetation and residual weed control where corn will be planted directly into a cover crop, established sod or in previous crop residues: Apply 2 - 4 pints Atrazine 4L plus 2 - 4 pints simazine 4L or 1.25 - 2.5 pounds simazine 80W plus paraquat per sprayed acre prior to, during or after planting but before crop emergence. Refer to the paraquat label for the appropriate rates to use in this tank mixture. Use the low rates of atrazine and simazine on light soils, and the higher rates on heavy clay soils. Use 20 - 60 gallons of diluted spray per sprayed acre. Add Surf-Ac 820 or another non-ionic surfactant at the rate of 8 fluid ounces per 100 gallons diluted spray. Add the atrazine to the spray tank while agitating, then add the simazine, paraquat, and Surf-Ac 820. Continue agitation during application. Use the 2 pint rate of Surf-Ac 820 and the higher rate of paraquat specified on the label if existing vegetation is 4 - 6 inches tall. This mixture will not control weeds taller than 6 inches. Refer to paraquat and simazine labels for further limitations, directions for use and precautions.

For All Soil Applications Prior to Crop Emergence: On highly erodible soils, as defined by the Soil Conservation Service (SCS), if conservation tillage is practiced, leaving at least 30% of the soil covered with plant residues at planting, apply 4 pints per acre as a broadcast spray. If the soil coverage with plant residue is less than 30% at planting, a maximum of 3.2 pints per acre as a broadcast spray. On soils not highly erodible apply 4 pints per acre as a broadcast spray.

ATRAZINE 4L+SIMAZINE 4L OR SIMAZINE 80W+GLYPHOSATE

When applied as recommended under the conditions described, this tank mixture controls many emerged weeds, and gives pre-emergence control of many annual weeds when corn will be planted directly into a cover crop, established or in previous crop residues.

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Apply this tank mixture in 20 - 60 gallons of water per acre immediately before, during or after planting, but **before crop emergence**. As density of stubble, crop residue or weeds increases, spray gallonage and rate should be increased within the recommended ranges to ensure complete coverage.

Annual Weeds: Apply Atrazine 4L and simazine to actively growing grasses and broadleaf weeds that are 6 inches tall at the rates given in Table 3 plus 1 quart of glyphosate per acre. If the weeds are over 6 inches tall, increase the rate of glyphosate to 1.5 quarts.

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 glyphosate label for the proper stage of growth for perennial weeds. Apply the atrazine and simazine at the rates given in Table 3 plus 2 - 4 quarts of glyphosate per acre. This combination will provide top kill and reduce competition from many emerged perennial grass and broadleaf weeds.

Note: Do not use this tank mix on sand or loamy sand soils. Do not exceed 4 quarts of glyphosate per acre in this tank mixture. Not recommended to control bermudagrass or Johnsongrass in minimum tillage systems.

Table 3: Atrazine 4L + simazine 4L or simazine 80W for mixture with glyphosate

Soil Texture	Broadcast Rates per Acre	
	Atrazine 4L [†]	simazine [†] 4L or simazine 80W
Coarse: Sandy loam only	2 pints	2 pints or 1.25 pounds
Medium: Loam, silt loam, silt, sandy clay loam	2 - 2.8 pints	2 - 2.8 pints/or 1.25 - 1.8 pounds
Fine: Silty clay loam, clay loam, sandy clay, silty clay, clay	2.4 - 3.2 pints	2.4 - 3.2 pints/or 1.25 - 2 pounds

[†] Use the higher rate of atrazine and simazine in the recommended ranges in soil with greater than 3% organic matter.

On highly erodible soils, as defined by the Soil Conservation Service (SCS), if conservation tillage is utilized (>30% plant residue), the maximum rate is 4 pints per acre. If plant residue is <30%, the maximum rate is 3.2 pints per acre.

On soils not highly erodible, the maximum rate is 4 pints per acre.

Precautions and Restrictions for all Applications to Corn:

1. Post-emergence application to corn must be made before corn reaches 12 inches in height.
2. Applications for quackgrass suppression in corn are restricted to spring application only. No fall applications are permitted.
3. To avoid crop injury and illegal residues do not apply more than 5 pints per acre of Atrazine 4L to corn in any one year.
4. Following harvest of a treated crop, plow (moldboard or disk-plow) and thoroughly till the soil in the fall or spring to minimize possible injury to rotational spring-seeded crops, regardless of the rate used.
5. **Pre-harvest Interval:**
 - Field Corn: Do not allow grazing or harvest of corn for forage within 60 days of a preemergence or postemergence application of this product.
 - Sweet Corn: Do not allow grazing or harvest of corn for forage within 45 days of a preemergence or postemergence application of this product.
6. For best control of velvetleaf and cocklebur, the application rate cannot be less than 2 pounds per acre active ingredient, either alone or in tank mix combination.

For post-emergence applications plus emulsifiable oil or oil concentrate, see additional precautions under that section of this label.

Sorghum and Sorghum-Sudan Hybrids (Grain and Forage Types)

Apply before planting, at planting, or after planting. See Corn section for weeds controlled.

PREPLANT SURFACE-APPLIED (Broadleaf and Grass Control)

Use on medium and fine textured soil with minimum tillage or no-tillage systems only in CO, IL, IN, IA, KS, KY, MN, MO, MT, NE, ND, SD, WI, WY. Apply 2/3 the recommended rate of atrazine shown in Table 4 for the soil texture as a split treatment 30 - 45 days prior to planting and the remainder at planting. Applications made less than 30 days prior to planting may be as either a split or single treatment.

Under dry conditions, irrigation after application is recommended to move atrazine into the soil.

If weeds are present at time of treatment, apply in a tank mix combination with a contact herbicide (for example, paraquat or glyphosate). Observe directions for use, precautions, and restrictions on the label of the contact herbicide.

Note: To the extent possible, do not move treated soil out of the row or move untreated soil to the surface during planting, or weed control will be diminished.

PREPLANT INCORPORATED (Broadleaf and Grass Control)

Broadcast in spring at rate in Table 4 after plowing. Apply before, during, or after final seed bed preparation. If soil is tilled or worked after application, avoid deep incorporation. For best results, apply within 2 weeks prior to planting.

PRE-EMERGENCE (Broadleaf and Grass Control)

Apply at rate shown in Table 4 before weeds exceed 1.5 inches in height and before sorghum exceeds 12 inches in height.

Table 4: For preplant surface, preplant incorporated, and pre-emergence applications [†] for broadleaf and grass weed control in sorghum, maximum broadcast application rates must be as follows:

- If no atrazine was applied prior to sorghum emergence, apply a maximum rate of 2 pounds active ingredient per acre broadcast. If a post-emergence treatment is required following an earlier herbicide application, the total atrazine applied must not exceed 2.5 pounds active ingredient per acre per calendar year.
- Apply a maximum of 2 pounds active ingredient per acre as a single preemergence application on soils that are not highly erodible or on highly erodible soils if at least 30% of the soil is covered with plant residues, or
- Apply a maximum of 1.6 pounds active ingredient per acre as a single preemergence application on highly erodible soils if less than 30% of the surface is covered with plant residues; or 2.0 pounds active ingredient per acre if only applied postemergence.

[†]Do not apply preplant in AL, AR, FL, GA, LA, MS, NC, NM, OK, SC, TN, or TX. Do not apply pre-emergence in NM, OK, or TX, except in northeast OK and the TX Gulf Coast and Blackland areas.

Where there are state/local requirements regarding atrazine use (including lower maximum rates and/or set-backs) which are different from the label, the more restrictive/protective requirements must be followed. Certain states may have established rate limitations within specific geographical areas. Consult your state lead pesticide control agency for additional information. It is a violation of this label to deviate from state use regulations.

In case of planting failure, sorghum or corn may be replanted. Do not make a second broadcast application, or injury may occur. If originally applied in a band and sorghum or corn is replanted in untreated row middles, this product may be applied in a band to the second planting.

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Note: For post-emergence applications, if there has been no previous soil application to that crop, the maximum rate is 4 pints per acre. If there has been no previous soil application to that crop, do not exceed a total of 5 pints per acre per calendar year.

PRE-EMERGENCE BROADLEAF WEED CONTROL IN FURROW-IRRIGATED BEDDED SORGHUM (Arizona and California Only)

For pre-emergence control of broadleaf weeds such as ground cherry, lambsquarters, morning glory, mustard, pigweed and purslane, broadcast 1.6 - 2.4 pints per acre. Use the lower rate on coarse textured soils and soils low in organic matter and use the high rate on fine textured soils and soils high in organic matter. Make application after bed preparation, during or after planting, but before sorghum and weeds have emerged and before the first furrow irrigation. Several irrigations should follow the application, making sure that all soil is thoroughly wet.

Precautions for Pre-emergence Applications of Atrazine 4L to Furrow Irrigated Bedded Sorghum Grown in Arizona and California

To avoid possible sorghum injury, do not use on sand or loamy sand soils or on sorghum planted in the furrow. Additionally, applications made to sorghum growing on alkali soils or where cuts, fills or erosions have exposed calcareous or alkali subsoils, may result in crop injury. In case of crop failure, do not replant sorghum for eight months following application. Corn may be planted immediately.

POST-EMERGENCE (Broadleaf and Grass Weed Control)

Apply before weeds exceed 1.5 inches in height at the rate indicated in Table 5. Application may be made up to sorghum reaching up to 12 inches in height.

Table 5: Post-emergence Broadleaf and Grass Weed Control in Sorghum

Soil Texture	Minimum Height of Sorghum at Treatment	Broadcast Rate Atrazine 4L per acre
Sand or loamy sand	DO NOT USE	
Sandy loam	See directions for broadleaf and weed control below	
Silt loam to sandy clay loams	Completely emerged	4 pints
Olton and Pullman clay soils	At least 6 inches high	4 pints
Silty clay loams and heavier soils	Completely emerged	4 pints

Note: For post-emergence applications, if there has been no previous soil application to the crop, the maximum rate is 4 pints per acre. If there has been a previous soil application to that crop, do not exceed a total of 5 pints per acre per calendar year.

POST-EMERGENCE BROADLEAF WEED CONTROL WITH Atrazine 4L+EMULSIFIABLE OIL OR OIL CONCENTRATE IN WATER

Broadcast 2.4 pints per acre for control of broadleaf weeds such as annual morning glory, cocklebur, lambsquarters, mustard, pigweed, ragweed, smartweed and wild buckwheat. Application should be made before pigweed and lambsquarters reach 6 inches in height and before all other weeds reach 4 inches in height. In CO, western KS, NM, OK, TX, and desert regions of AZ and CA, apply when sorghum is 6 - 12 inches in height, but before it reaches 12 inches. In all other areas, apply after sorghum reaches the 3-leaf stage. Add emulsifiable oil at the rate of 1 gallon per acre for ground applications and 0.5 gallon per acre for aerial applications, or add 1 quart per acre of oil concentrate for ground application. A cultivation may be necessary if all weeds are not controlled or if regrowth of weeds occurs.

For the list of weeds controlled, see Atrazine 4L Applied Alone - Corn or Grain Sorghum - Post-emergence with Emulsifiable Oil or Oil Concentrate in Water.

Precautions for Application of Atrazine 4L+Emulsifiable Oil or Oil Concentrate in Water to Sorghum: See "Precautions for Applications with Emulsifiable Oil or Oil Concentrate in Water" in Corn section.

POST-EMERGENCE BROADLEAF WEED CONTROL WITH Atrazine 4L+SURFACTANT (CO, Western KS, NM, OK, TX, and desert regions of AZ and CA only): Broadcast 2.4 pints of Atrazine 4L plus 0.75 - 1.5 pint of surfactant per acre after sorghum reaches 6 inches in height, but before weeds reach 1.5 inches in height. Apply only on sandy loams and finer textured soils.

Precautions and Restrictions for all Applications to Sorghum:

1. Post-emergence application to sorghum must be made before sorghum reaches 12 inches in height.
2. The maximum application rate for sorghum is 2.5 pounds active ingredient per acre per calendar year. Application for quackgrass suppression in sorghum are restricted to a spring application only. No fall applications are permitted.
3. Heavy rains immediately following application tend to result in excessive concentrations of herbicide in seed furrow, resulting in possible crop injury. Applications to furrow planted sorghum should not be made until furrows are leveled (plow-in). Deep planter marks or seed furrows should also be leveled before application.
4. Application made to sorghum growing under stress caused by minor element deficiency or to sorghum growing on highly calcareous soils may result in crop injury.
5. **Pre-harvest Interval:** Do not allow grazing or harvest of sorghum for forage within 60 days of a preemergence application or within 45 days of postemergence application of this product.
6. Following harvest of a treated crop, plow (moldboard or disk-plow) and thoroughly till the soil in the fall or spring to minimize possible injury to rotational spring seeded crops, regardless of rate used.
7. Injury may occur if both this herbicide preplant surface, preplant incorporated or pre-emergence, and an at-planting systemic insecticide applied in-furrow are used.

For applications to furrow-irrigated bedded sorghum in AZ and CA and for post-emergence applications plus emulsifiable oil, see additional precautions under these sections of this label.

Tank Mixture for Grain Sorghum

ATRAZINE 4L+METOLACHLOR ON GAIN SORGHUM (Cyometrinil-Treated Seed Only)

The Atrazine 4L + metolachlor tank mixture provides control of weeds listed on this label and those on the metolachlor label.

Apply Atrazine 4L+metolachlor pre-plant incorporated or pre-emergence using the appropriate rates from the metolachlor label and refer to all directions, precautions and limitations.

Precautions:

1. Applications of Atrazine plus metolachlor on highly alkaline soils or on eroded areas where calcareous subsoils are exposed may cause sorghum injury.
2. If sorghum seed is not properly treated with cyometrinil, atrazine plus metolachlor will severely injure the crop.
3. Under high soil moisture conditions prior to sorghum emergence, injury may occur following the use of atrazine plus metolachlor. The crop will normally outgrow this effect.
4. **Do not use atrazine plus metolachlor on sorghum grown under dry mulch tillage or injury may occur.**

ROTATIONAL CROPS

Refer to the crop rotation instructions on the metolachlor label for metolachlor + atrazine tank mixtures on corn.

Winter Weed Control in Texas

For post-emergence control of winter weeds only, such as henbit, seedling dock, and annual thistle on fall bedded land in the Gulf Coast and Blacklands of Texas. Apply 0.8 - 1 quart per acre post-emergence to

the weeds in November or December to land that will be planted to corn, grain sorghum or forage sorghum the following spring. For best results add a suitable surfactant such as Surf-Ac 820 at the rate of 0.5% of the spray volume, an emulsifiable oil at the rate of 1.0% of the spray volume, or an oil concentrate at the rate of 1 quart per acre.

Normal weed control programs may be used in the following corn, grain sorghum or forage sorghum crop.

Note: Do not plant any crops except corn, grain sorghum, or forage sorghum the spring following this treatment, or illegal residues may result.

Chemical Fallow

Atrazine 4L Alone

If weeds are present at application and Atrazine 4L is used alone, use either an approved contact herbicide before or after treatment, or tillage after treatment.

WHEAT-SORGHUM-FALLOW

This treatment controls annual broadleaf and grass weeds following wheat harvest and in the following sorghum crop when grown under minimum tillage.

Apply 6 pints to wheat stubble immediately following wheat harvest. If weeds are present, remove them with a sweep plow or other suitable implement after application or use an approved contact herbicide before or after application of Atrazine 4L. Plant sorghum into wheat stubble the following spring with minimum disturbance of the soil. Use a surface planter or a planter leaving a shallow furrow. If weeds are present at planting, remove them with a sweep plow or other suitable implement before planting.

For the list of weeds controlled, see "ATRAZINE 4L APPLIED ALONE - CORN OR GRAIN SORGHUM - PREPLANT SURFACE-APPLIED, PREPLANT INCORPORATED, OR PRE-EMERGENCE".

Precautions:

1. Use only on silt loam or finer textured soil.
2. Wheat-sorghum-fallow cropping sequence must be followed.
3. Do not apply following sorghum harvest.

Note: To avoid illegal residues, do not graze or feed forage from treated area to livestock. To avoid illegal residues and crop injury do not plant any crop other than those on this label within 18 months following treatment.

WHEAT-CORN-FALLOW (KS, NE)

This product controls cheatgrass (downy brome, chess), kochia, mustards, pigweed, Russian thistle, wild lettuce, wild sunflower, and volunteer wheat during period after wheat harvest. Weed control may extend into following corn crop grown under minimum tillage.

Follow directions for use, notes, and precautions in the Wheat-Sorghum-Fallow section above, substituting corn for references to sorghum.

WHEAT-FALLOW-WHEAT (CO, KS, MT, NE, ND, SD, and WY)

For pre-emergence and control of cheatgrass (downy brome, chess), common lambsquarters, field pennycress, kochia, mustard, Russian thistle, wild lettuce, and suppression of volunteer wheat during fallow period of a wheat-fallow-wheat rotation, broadcast 1 - 2 pints per acre on all soils except those listed under "Precautions".

For control of pigweed and wild sunflower, use the higher rate. Apply to stubble ground. Treat only once during same fallow period.

Tank Mixtures for Chemical Fallow

WHEAT-SORGHUM-FALLOW OR WHEAT-CORN-FALLOW (KS, NE)

Atrazine 4L Plus Paraquat: If weeds are present at application, a tank mix with paraquat may be used. Broadcast 1 - 2 pints of atrazine plus 1 - 2 pints of paraquat in 20 - 60 gallons of water per acre by ground equipment. Add 0.5 - 1 pint of a nonionic surfactant, such as Surf-Ac 820, per 100 gallons of spray mixture. Add this product to spray tank first and thoroughly mix with water. Then add paraquat followed by surfactant. Use the 2 pint rate of paraquat if weeds are 4 - 6 inches tall. This mixture will not control weeds taller than 6 inches. Apply to stubble ground. Treat only once during same fallow period. Refer to paraquat label for further directions, precautions, and limitations.

WHEAT-FALLOW-WHEAT (CO, KS, MT, ND, SD, and WY)

Atrazine 4L + Paraquat: If weeds are present at application, a tank mix with paraquat may be used. Broadcast 1 - 2 pints of Atrazine 4L plus a suitable amount of paraquat in 20 - 60 gallons of water per acre by ground equipment. Add 0.5 - 1 pint of a non-ionic surfactant, such as Surf-Ac 820, per 100 gals of spray mixture. Add atrazine to spray tank first and thoroughly mix with water. Then add paraquat, followed by surfactant. Use the higher rate of paraquat specified on the label if weeds are 4-6 inches. Apply to stubble ground. Treat only once during same fallow period. Refer to paraquat label for further directions, precautions, and limitations.

Use tillage to control weeds which escape during fallow period. Till before planting. For this product applied alone or in tank mixture with paraquat, plant at least 2 inches deep and 12 months or more after application.

Restrictions:

1. Do not use on sand soil.
2. For soils in North Dakota and South Dakota with a pH of 7.5 or greater
 - Do not apply more than 3 pints of Atrazine 4L (1.5 lb ai) per acre for any application.
 - Do not make more than one application per year.
3. For soils in North and South Dakota with pH of less than 7.5
 - Do not apply more than 4 pints of Atrazine 4L (2.0 lb ai) per acre for any application.
 - Do not make more than one application per year.
4. For all other locations
 - Do not apply more than 4.5 pints of Atrazine 4L (2.25 lb ai) per acre for any application.
 - Do not make more than one application per year.
5. Do not treat eroded hillsides, caliche and rocky outcroppings, or exposed calcareous subsoil.
6. Do not treat soils of the Rosebud and Canyon Series in western NE and adjoining counties in CO and WY.
7. Do not treat soils with calcareous surface layers.
8. Avoid spray overlay.

Note: Do not graze treated areas within 6 months after application or illegal residues may result.

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 feet using low drift nozzles at a maximum pressure of 40 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 Atrazine 4L alone by aircraft at a minimum upwind distance of 400 feet from sensitive plants.

Roadsides

To control certain annual weeds in established perennial grasses along roadsides in CO, KS, MT, NE, ND, SD, and WY, including cheatgrass (downy brome, chess), common (annual) broomweed, little barley, medusahead, sagewort, and tumble mustard, broadcast 2 pints per acre in a minimum of 10 gallons of water by ground equipment in the fall before ground freezes, or after thawing in the spring, but before the established grasses green up and before weeds emerge. Examples of desirable established grasses include big bluestem, bluegrama, bromegrass, buffalo grass, crested wheatgrass, Indiangrass, little bluestem, side-oats grama, witchgrass, and Western wheatgrass. Apply only once per year. Temporary discoloration or other form of injury to the desirable perennial grasses may occur following application.

Restrictions:

- Do not apply more than 2 pints of Atrazine 4L (1 lb ai) per acre for any application
- Do not make more than one application per year.

Sugarcane

For control of many broadleaf and grass weeds, such as crabgrass, jungle rice, wire grass, foxtail, amaranths, Flora's paintbrush, fireweed and similar plants.

Broadcast 2 - 4 quarts per acre at time of planting or ratooning, but before the cane emerges.

Broadcast aerially in a minimum of 5 gallons of spray per acre, or broadcast or band by ground equipment in a minimum of 20 gallons per acre, unless indicated otherwise. One additional application may be made over the sugarcane as it emerges, and two additional applications may be made interline after emergence, as a directed spray. Repeat treatments, where needed, may be applied broadcast, band, or interline as suggested with the final application being prior to "close-in". Do not exceed the rate of herbicide suggested for any one crop of sugarcane.

Note: Where high rates of atrazine are used alone, apply in a minimum of 1 quart of water for each 1 quart of Atrazine 4L applied per acre.

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 feet using low drift nozzles at a maximum pressure of 40 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 Atrazine 4L alone by aircraft at a minimum upwind distance of 400 feet from sensitive plants.

Maximum Application Rates (Florida, Louisiana and Texas):

- Do not apply more than 4 quarts of Atrazine 4L (4 lb ai) per acre for any application.
- Do not apply more than 10 quarts of Atrazine 4L (10 lb ai) per acre per acre per year.

FLORIDA

For control of emerged pellitory weeds (artillery weed). Apply 0.8 - 1.2 pints per acre in 40 gallons of water per acre as a directed spray, by ground equipment prior to "close-in". Add 2 quarts of surfactant for each 50 gallons of spray and be sure weed foliage is thoroughly covered.

For control of alexandergrass, large crabgrass, pellitory (artillery) weed, and spiny amaranth, use one of the following methods at planting or ratooning.

1. Apply 4 quarts of Atrazine 4L per acre pre-emergence. Follow with one or two applications, as needed, post-emergence to sugarcane and weeds, at 2 quarts per acre. Treat before weeds exceed 1.5 inches in height.
2. Apply 1 - 3 times, as needed, at 2 quarts of Atrazine 4L per acre post-emergence 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 2 quarts of Atrazine 4L per acre to weed-free beds immediately after bed formation. Follow normal weed control after planting.

Precautions - To avoid crop injury:

1. Do not apply more than 10 quarts per acre of Atrazine 4L to any one crop of sugarcane.
2. If applying 2 quarts per acre application during summer fallow period do not exceed 8 quarts per acre during remainder of the growing season, or illegal residues may result.

TEXAS

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

Apply 4 quarts per acre of Atrazine 4L pre-emergence. Follow with 1 or 2 applications, as needed at 3 quarts per acre post-emergence to sugarcane and weeds.

For best results when weeds are emerged, add a nonionic surfactant, such as Surf-Ac 820, at a concentration of 2 quarts per 100 gallons to the spray and apply before weeds exceed 1.5 inches in height.

Precautions:

1. Do not apply Atrazine 4L after "close-in".
2. Injury to sugarcane may occur when under moisture stress, when soil is of low adsorptive capacity, or when land is first cropped to sugarcane.

Conservation Reserve Program (CRP) (NE, OK, OR, and TX)

For control or suppression of the following weeds: annual ragweeds, barnyardgrass, black nightshade, cheat, cocklebur, downy brome, fall panicum, field pennycress, giant foxtail, yellow foxtail, Japanese brome, Kentucky bluegrass, kochia, lambsquarters, little barley, maretail, pigweed, prickly lettuce, smooth brome and sunflower, refer to the directions, notes, and precautions below:

Pure stands of newly seeded big bluestem, switchgrass, and eastern gamagrass - Use only on loam, silt loam, silty clay loam, clay loam, and silty clay soils with at least 1% organic matter.

Establishment - Broadcast 2 quarts per acre of Atrazine 4L preplant incorporated or pre-emergence at time of seeding and prior to emergence of weeds. Prepare a good firm seedbed. Plant ½ inch deep with a grassland drill (preferred method) or a conventional drill. If a conventional drill is used on prepared seedbeds, remove all tension from the disk openers. For best results, cultipack or roll after planting.

Renovation of existing stands of big bluestem and switchgrass planted on CRP acres: Broadcast 1 - 2 quarts per acre to existing stands of big bluestem and switchgrass prior to the emergence of weeds. Use the low rate on soils containing from 1 - 2% organic matter. Use the high rate on soils with 2% or more organic matter.

Renovation of existing stands of the following perennial range grasses planted on CRP acres: Blue grama, indiagrass, little bluestem, sand lovegrass, sideoats grama, and western wheatgrass.

Broadcast 0.5 - 1 quart per acre in the spring prior to weed emergence, or in the Fall before the ground freezes and prior to weed emergence after these species have been established for at least one growing season or control or partial control of the weeds listed above. Use the low rate for weeds controlled or suppressed easily. Use the high rate on other weeds listed under "ATRAZINE 4L APPLIED ALONE - CORN OR GRAIN SORGHUM".

Aerial Application: Make applications at maximum height or 10 feet above vegetation. Use low-drift nozzles at a maximum pressure of 40 psi. Restrict application to periods when wind speed does not exceed 10 mph to control drift. To assure that drift will not adversely affect adjacent sensitive non-target plants, apply Atrazine 4L by aircraft at a minimum upwind distance of 400 feet from sensitive plants. Use 3 - 5 gallons per acre total water volume; use the higher water volume when a dense, heavy ground cover is present.

Notes: (1) Do not cut or feed grass hay to livestock. (2) Do not graze treated areas. (3) Do not use seeds for bird food. (4) Do not dump or spill product or dispose of containers within reach of livestock. (5) Follow all applicable restrictions for the Conservation Reserve Program.

Precautions - To avoid crop injury, make only one application per year. Slight discoloration of desirable grasses may occur following treatment. Injury may be enhanced when used on neutral or alkaline soils.

SEVERE DROUGHT CONDITIONS

Do not graze forage or cut forage for hay. Under severe drought conditions, the Conservation Reserve Program allows grazing and making of hay from CRP acres, as so specified by the local ASCS (Agricultural Stabilization & Conservation Service) office. This label does **not allow** grazing or making of hay from CRP acres that have been treated with atrazine under any circumstance.

Restriction: Do not apply more than 2 quarts of Atrazine 4L (2.0 lb ai) per acre for any application.

Conifers

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

Broadcast 4 - 8 pints in a minimum of 5 gallons of water per acre by air or 10 gallons by ground before weeds are 1.5 inches tall. Apply to established trees between fall and early spring while trees are dormant.

For applications prior to transplanting allow sufficient precipitation to activate atrazine before transplanting.

In areas where spring and summer rainfall is inadequate to activate atrazine, apply during fall prior to spring transplanting.

For the list of weeds controlled, see "ATRAZINE 4L APPLIED ALONE - CORN OR GRAIN SORGHUM - PREPLANT SURFACE APPLIED, PREPLANT INCORPORATED OR PRE-EMERGENCE".

Quackgrass Control: Broadcast 8 pints in a minimum of 5 gallons of water per acre by air or 10 gallons by ground between fall and early spring while trees are dormant and before quackgrass is more than 1.5 inches tall.

Precautions and Restrictions:

1. In areas west of the Rocky Mountains (except the Great Basin), grazing may begin 7 months after a fall application or 3 months after a winter or spring application.

2. To prevent illegal residues, do not graze treated areas of the Great Basin, or areas east of the Rocky Mountains.
3. Temporary injury to trees may occur following use of this product on coarse-textured soil.
4. To avoid crop injury, do not apply to seedbeds.
5. Apply only once per year.
6. Do not apply more than 4 quarts of Atrazine 4L (4 lb ai) per acre for any application.
7. Do not apply more than 4 quarts of Atrazine 4L (4 lb ai) per acre 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 feet above vegetation, using low drift nozzles at a maximum pressure of 40 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 Atrazine 4L by aircraft at a minimum upwind distance of 400 feet from sensitive plants.

Turfgrass for Fairways, Lawns, Sod Production † and Similar Areas

† In states other than Florida. For use on turfgrass for sod in Florida, see TURFGRASSES FOR SOD (FLORIDA ONLY) section below.

Bermudagrass, Centipede Grass, St. Augustine Grass, and Zoysiagrass: Apply Atrazine 4L after October 1 before emergence of winter annual weeds for control of annual bluegrass, burclover, carpet burweed, chickweed, corn speedwell, henbit, hop clover, and spurweed. Atrazine 4L will control annual bluegrass even if it is emerged at time of treatment. For control of summer annual weeds listed in the pre-emergence portion of the "Atrazine 4L Applied Alone - Corn or Grain Sorghum" section of this label, also apply Atrazine 4L in late winter before the weeds emerge. Apply in a minimum of 15 gallons of water per acre or 1 gallon per 1,000 square feet.

Where annual bluegrass is the major weed, use 1 quart per acre (22 ml or 0.75 fluid ounce per 1,000 square feet). Use 2 quarts per acre (44 ml or 1.5 fluid ounce per 1,000 square feet) for control of the other weeds named above. Do not exceed 1 quart per acre per treatment on newly sprigged turfgrass or on hybrid bermudagrass such as Tiflawn, Tifway, and Ormond.

For Turfgrass Use in Residential Sites (Including homes, daycare facilities, playgrounds, parks, recreational areas and sports fields):

This product must be watered in immediately after application. Watering must be performed by the commercial applicator or the commercial applicator must provide the following instructions to the resident or owner in writing:

- This product must be watered in immediately.
- Do not enter or allow others (including children or pets) to enter the treated areas (except those involved in the watering) until the watering-in is complete and the surface is dry.

Note: The maximum application rate is 1 quart of Atrazine 4L (1.0 lb) per acre (see rate limitations under Precautions and Restrictions, below).

For continued summer annual weed control, apply another 1 quart per acre at least 30 days after the previous application, but not after April 15. Do not make more than two applications of this product per year.

Precautions and Restrictions:

On newly sprigged turfgrass and hybrid bermudagrass, temporary slowing of growth and yellowing may occur following application. To avoid turf injury:

1. Use only on turfgrass reasonably free of infestations of insects, nematodes, and diseases.
2. Do not use on golf greens.
3. Do not use north of NC (except may be used in Virginia Coastal Plains) or west of the high rainfall areas of eastern OK and eastern TX.
4. Do not use on muck or alkaline soils.
5. Do not apply over the rooting area of trees or ornamentals not listed on this label.
6. Do not overseed with desirable turfgrass within 4 months before or 6 months after treatment.
7. Do not apply this product to newly seeded bermudagrass until it has over-wintered and has a well developed rhizome system. Do not exceed 2 quarts of this product per acre within 12 months of seeding bermudagrass.
8. **Turfgrass in Residential Sites (Including homes, daycare facilities, schools, playgrounds, parks recreational areas, and sports fields):**
 - Do not apply more than 1 quart of Atrazine 4L (1 lb ai) per acre for any application.
 - Do not apply more than 2 quarts of Atrazine 4L (2 lb ai) per acre per year.
9. **Sod Farm Uses:**

(For muck or peat soils):

 - Do not apply more than 4 quarts of Atrazine 4L (4 lb ai) per acre for any application
 - Do not apply more than 6 quarts of Atrazine 4L (6 lb ai) per acre per year.

(For sandy soils):

 - Do not apply more than 2 quarts of Atrazine 4L (2 lb ai) per acre for any application
 - Do not apply more than 3 quarts of Atrazine 4L (3 lb ai) per acre per year.

Note: Do not graze or feed turf clippings to animals, or illegal residues may result.

Turfgrasses for Sod (Florida Only)

St. Augustine grass, Centipede grass, and Zoysiagrass Broadcast: Apply 4 - 8 pints per acre according to soil texture to control those weeds listed under "Atrazine 4L Applied Alone - Corn or Grain Sorghum - Preplant Surface-Applied, or Preplant Incorporated, or Pre-emergence".

Muck or Peat	8 pints	Old Beds:	Within 2 days after lifting sod
		New Beds:	3 - 4 Days after sprigging or plugging
Sandy Soil	4 pints	Old Beds:	Within 2 days after lifting sod
		New Beds:	7 - 10 Days after sprigging or plugging

If weeds regrow, apply an additional 4 pints per acre on muck or peat, or 2 pints per acre on sandy soil.

Precautions - To avoid crop injury:

1. Do not apply within 30 days prior to cutting or lifting.
2. Do not apply in combination with surfactants or other spray additives.
3. Use only on turfgrass reasonably free of infestations of insects, nematodes, and diseases.
4. On newly sprigged turfgrass, temporary slowing of growth may follow application.
5. **(For muck or peat soils):**
 - Do not apply more than 4 quarts of Atrazine 4L (4 lb ai) per acre for any application
 - Do not apply more than 6 quarts of Atrazine 4L (6 lb ai) per acre per year.

(For sandy soils):

 - Do not apply more than 2 quarts of Atrazine 4L (2 lb ai) per acre for any application
 - Do not apply more than 3 quarts of Atrazine 4L (3 lb ai) per acre per year.

Macadamia Nuts

For pre-emergence control of many broadleaf and grass weeds, including crabgrass, foxtail, wiregrass, Flora's paintbrush, spanishneedles, and fireweed, broadcast 4 - 8 pints per acre before harvest and before weeds emerge. Repeat as necessary. Do not spray when nuts are on ground during harvest period. Do not apply by air.

Restrictions:

1. Do not apply more than 8 pints of Atrazine 4L (4 lb ai) per acre for any application.
2. Do not apply more than 16 pints of Atrazine 4L (8 lb ai) per acre per year.

Guava

Use only on established plantings which are at least 18 months old. Apply as a directed spray at 4 - 8 pints per acre of Atrazine 4L in 20 - 50 gallons of spray mix pre-emergence or early post-emergence to weeds. When applying post-emergence, the use of a surfactant and greater spray volume (80 - 100 gallons of spray mix per acre) may enhance weed control.

This product controls many annual broadleaf and grass weeds, including fireweed, purslane, scarlet pimpernel, spanishneedles, and sowthistle.

Precautions and Restrictions:

Note - 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 8 pints of Atrazine 4L (4 lb ai) per acre for any application.
4. Do not apply more than 16 pints of Atrazine 4L (8 lb ai) per acre per year.

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