

264-668

5/18/2011

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

OFFICE OF
CHEMICAL SAFETY AND
POLLUTION PREVENTION

MAY 18 2011

Mike See
Bayer CropScience
P.O. Box 12014
Research Triangle Park, NC 27709

Subject: Notification per PR Notice 98-10 (remove patent numbers and references)
Liberty ATZ Herbicide
EPA Reg. No. 264-668
Application Dated May 2, 2011

Dear Mr. See:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the subject product. The Registration Division (RD) has conducted a review of this request finds that the action falls within the scope of PRN 98-10. The label submitted with the application has been date-stamped "Notification" and will be placed in our records.

If you have any questions, please contact Mindy Ondish at (703)605-0723 or at ondish.mindy@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Kable Bo Davis".

Kable Bo Davis
Product Manager 25
Herbicide Branch
Registration Division (7505P)



United States
Environmental Protection Agency
Washington, DC 20460

<input type="checkbox"/>	Registration
<input type="checkbox"/>	Amendment
<input checked="" type="checkbox"/>	Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number 264-668	2. EPA Product Manager Kathryn Montague, Jim Stone	3. Proposed Classification <input type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Liberty ATZ Herbicide	PM# 23	
5. Name and Address of Applicant (Include ZIP Code) Bayer CropScience 2 TW Alexander Drive PO Box 12014 Research Triangle Park, NC 27709 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____	NOTIFICATION MAY 18 2011
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.	
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.	

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Bayer CropScience is removing all references to patents and patent numbers from the Liberty ATZ Herbicide end use product label. NOTIF per PR Notice 98-10.

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____		
* Certification must be submitted		If "Yes" Unit Packaging wgt. No. per container	If "Yes" Package wgt. No. per container		
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container		5. Location of Label Directions <input type="checkbox"/>	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph Paper glued Stenciled			<input type="checkbox"/> Other _____		

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Mike See	Title Registration Manager	Telephone No. (Include Area Code) (919) 549-2913
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature 	3. Title Registration Manager	
4. Typed Name Mike See	5. Date 02 May 2011	

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RESTRICTED USE PESTICIDE

(GROUND 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. This product is a restricted use herbicide due to ground water concerns. Users must read and follow all precautionary statements and instructions for use in order to minimize potential for atrazine to reach ground water.

NOTIFICATION

MAY 18 2011

LIBERTY[®] ATZ Herbicide

A Selective Herbicide For Use Only on Corn Tolerant to Glufosinate-Ammonium. Bayer CropScience Recommends Use Only on Seed Designated as LibertyLink[®] or Warranted by Bayer CropScience as being tolerant to Liberty[®] ATZ Herbicide.

ACTIVE INGREDIENTS:

Atrazine (CAS Number 1912-24-9).....	31.75%*
Related compounds	1.67%*
Glufosinate-ammonium (CAS Number 77182-82-2).....	10.00%**

OTHER INGREDIENTS:

.....	56.58%
*Equivalent to 3.3 pounds of atrazine and related compounds per U.S. gallon	TOTAL 100.00%
**Equivalent to 1.0 pound of glufosinate-ammonium per U.S. gallon	

EPA Reg No. 264-668

EPA Est. No. 11773-IA-001

EPA Est. No. 264-MI-001

KEEP OUT OF REACH OF CHILDREN CAUTION

For MEDICAL And TRANSPORTATION Emergencies ONLY Call 24 Hours A Day 1-800-334-7577

For PRODUCT USE Information Call 1-866-99BAYER (1-866-992-2937)

FIRST AID

If swallowed	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advise. • 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.
If in Eyes	<ul style="list-style-type: none"> • 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. • Have the product container or label with you when calling a poison control center or doctor or going for treatment.
If on skin or clothing	<ul style="list-style-type: none"> • Take off contaminated clothing. • Wash skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	<ul style="list-style-type: none"> • Move person to fresh air. • If Person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for treatment advice.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or when going for treatment. Call 1-800-334-7577 for emergency medical treatment information.

NOTE TO PHYSICIAN

If this product is ingested, endotracheal intubation and gastric lavage should be performed as soon as possible, followed by charcoal and sodium sulfate administration. Additionally, call 1-800-334-7577 immediately for further information.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed, inhaled or absorbed through the skin. Do not breathe vapors or spray mist. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

Applicators and other handlers must wear: Long-sleeved shirt and long pants; waterproof gloves and shoes plus socks. Follow manufacturer's instructions for cleaning/maintaining personal protective equipment (PPE). If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Control Statement

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [(40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

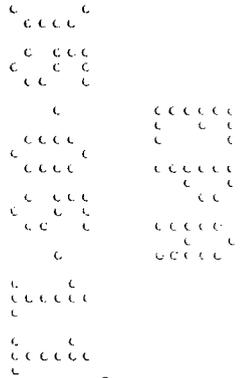
This product contains atrazine as one of its active ingredients. Atrazine can travel (seep or leach) through soil and can enter ground water which may be used as drinking water. Atrazine has been found in ground water. Users are advised not to apply atrazine to sand and loamy sand soils where the water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

This product may not be mixed/loaded or used within 50 ft. 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 ft. 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 spill 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 sites.

Additional state imposed requirements regarding well-head setbacks and operational area containment must be observed.

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

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



STORAGE AND DISPOSAL

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

Keep the container tightly closed and dry in a cool, well-ventilated place. Storage temperature should be between 32°F and 85°F, with a maximum of 125°F. Protect against direct sunlight.

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

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: Empty containers should be triple rinsed (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.

DIRECTIONS FOR USE

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

Do not use this product until you have read the entire label. 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 and restricted-entry intervals. 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.

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, waterproof gloves and shoes plus socks.

GENERAL INFORMATION

Field Corn, Silage Corn and Corn Seed Production

Liberty® ATZ Herbicide is a suspension concentrate herbicide intended for application as a foliar spray for the control of a broad spectrum of emerged annual and perennial grass and broadleaf weeds in corn. This product is for use only on corn tolerant to the active ingredient in this product. Bayer CropScience recommends use only on seed designated as LibertyLink® or warranted by Bayer CropScience as being tolerant to Liberty® ATZ Herbicide. The basis of selectivity of Liberty® ATZ Herbicide in corn is the presence of a gene in LibertyLink® or other Bayer CropScience warranted corn hybrids which results in a plant that is tolerant to the active ingredient of Liberty® ATZ Herbicide.

IMPORTANT CROP SAFETY INFORMATION

READ BEFORE USING THIS PRODUCT

Liberty® ATZ Herbicide is for use only on corn tolerant to glufosinate-ammonium, one of the active ingredients in this product. Bayer CropScience recommends use only on seed designated as LibertyLink® or warranted by Bayer CropScience as being tolerant to Liberty® ATZ Herbicide.

The basis of selectivity of Liberty® ATZ Herbicide in corn is the presence of a gene in LibertyLink® or other Bayer CropScience warranted corn hybrids which results in a plant that is tolerant to the active ingredient of Liberty® ATZ Herbicide. Corn not containing this gene will not be tolerant to Liberty® ATZ Herbicide and severe crop injury may result.

Use of Liberty® ATZ Herbicide on corn not designated as LibertyLink® or not warranted by Bayer CropScience may result in severe crop injury and/or yield loss.

Do not allow spray to contact foliage or green tissue of desirable vegetation other than corn tolerant to glufosinate-ammonium. This product may injure or kill all green vegetation contacted by the spray other than LibertyLink® corn or other corn hybrids warranted by Bayer CropScience.

Bayer CropScience does not warrant the crop safety or weed control of this product if used on corn other than that designated as LibertyLink® or warranted by Bayer CropScience to safely withstand the application of Liberty® ATZ Herbicide.

THOROUGH SPRAY COVERAGE IS VERY IMPORTANT. Visual effects and control from Liberty® ATZ Herbicide applications occur within 3 to 6 days after application under good growing conditions. Liberty® ATZ Herbicide works best when weeds are actively growing. To maximize weed control, no cultivation should occur in the period from 5 days before a Liberty® ATZ Herbicide application to 5 days after a Liberty® ATZ Herbicide application.

APPLICATION TIMING

Liberty® ATZ Herbicide is a foliar-active material with soil-residual activity. Liberty® ATZ Herbicide (alone and in tank mixes) may be applied following **any corn preplant incorporated or preemergence** herbicide applications. Best results are obtained when applications are made to actively growing weeds. Applications of Liberty® ATZ Herbicide following the use of soil-applied insecticides will not injure corn.

Applications of Liberty® ATZ Herbicide on corn may be made from emergence until corn is 12" tall.

Liberty® ATZ Herbicide is rainfast four (4) hours after application to most weed species, and rainfall within four (4) hours may necessitate retreatment or may result in reduced weed control. Applications should be made between dawn and one hour before sunset to avoid the possibility of reduced control of lambsquarters and velvetleaf. Do not apply when wind causes drift to off-site vegetation as injury may occur. Weed control may be reduced if application is made when heavy dew, fog and mist/rain are present or when weeds are under stress due to drought, cool temperatures or extended periods of cloudiness.

Apply Liberty® ATZ Herbicide at rates of 40 fluid ounces/acre (2.5 pints/acre) to 48 fluid ounces/acre (3 pints/acre). Refer to the *Rate Recommendation Tables for Weed Control* for selection of the proper rate dependent upon weed species and size. Do not apply more than one application of Liberty® ATZ Herbicide to the corn crop, however, Liberty® Herbicide may be used for retreatment.

RESTRICTIONS TO THE DIRECTIONS FOR USE

1. Where there are State or local requirements regarding atrazine use (including lower maximum rates and/or greater setbacks) 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.
2. DO NOT apply more than one application of Liberty® ATZ Herbicide to the corn crop.
3. DO NOT apply Liberty® ATZ Herbicide within 60 days of harvesting corn forage and within 70 days of harvesting corn grain and corn fodder.
4. DO NOT use liquid nitrogen fertilizers such as 28-0-0 or 10-34-0 as spray additives or as spray carriers. Antifoams may be added if needed.
5. DO NOT apply Liberty® ATZ Herbicide if corn shows injury from prior herbicide applications or environmental stress (drought, excessive rainfall, etc.).
6. DO NOT apply this product through any type of irrigation system.
7. Follow the following rotational crop restrictions:
 - Do not rotate to any crop except corn until the following year, or injury may occur.
 - If applied after June 10, do not rotate with crops other than corn or sorghum the next year, or crop injury may occur.
 - In the high plains and intermountain areas of the west where rainfall is sparse and erratic or where irrigation is required, use only when corn or sorghum is to follow corn or sorghum or when a crop of untreated corn or sorghum is to precede other rotational crops.
 - In eastern parts of the Dakotas, Kansas, western Minnesota, and Nebraska, do not rotate to soybeans if the rate of atrazine applied to corn or sorghum was more than 2 pounds of atrazine per acre or equivalent band application rate, or soybean injury may occur.
 - Injury may occur to soybeans planted the year following application on soils having a calcareous surface layer.
 - Do not plant sugar beets, tobacco, vegetables (including dry beans), spring-seeded small grains, or small-seeded legumes and grasses the year following application, or injury may occur.

SPRAY ADDITIVES

Liberty® ATZ Herbicide must be applied with ammonium sulfate (AMS). Use only fine-feed-grade or spray-grade AMS at 3 pounds per acre or 17 pounds per 100 gallons of water. Liberty® ATZ Herbicide is formulated to provide optimum herbicidal performance. Use of additional surfactants will not enhance weed control. Antifoams may be added if needed.

MIXING INSTRUCTIONS

Shake well before use. Liberty® ATZ Herbicide must be applied with properly calibrated and clean equipment. Prior to adding Liberty® ATZ Herbicide to the spray tank, ensure that the spray tank is thoroughly clean, particularly if a herbicide with the potential to injure crops was previously used (see *Cleaning Instructions*).

Liberty® ATZ Herbicide must be mixed with water to make a finished spray solution as follows:

1. Shake product container well before opening and using.
2. Fill the spray tank half full with water.
3. Start agitation.
4. Prepare a slurry of the proper amount of dry flowable/wettable powder tank mix partners in a small amount of water.
5. Add the slurry of dry materials to the spray tank.
6. Add the appropriate amount of AMS to the spray tank.
7. Add the proper amount of liquid tank mix partners.

- 8. Complete filling the spray tank with water.
- 9. Add the proper amount of Liberty® ATZ Herbicide and continue agitation.
- 10. If foaming occurs, use an antifoam agent.

Ensure that all spray system lines including pipes, booms, etc. have the correct concentration of Liberty® ATZ Herbicide/water mixture before the application is started. Flush out any remaining air or water from the spray system lines before starting the crop application. Keep bypass line on or near bottom of tank to minimize foaming.

If tank mix partners are added, maintain good agitation at all times until contents of the tank are sprayed. If the spray mixture is allowed to settle, thorough agitation is required to resuspend the mixture before spraying is resumed. Keep bypass line on or near bottom of tank to minimize foaming. Screen size in nozzles or line strainers should be no finer than 50 mesh.

CLEANING INSTRUCTIONS

Before mixing Liberty® ATZ Herbicide, thoroughly clean nurse tanks, spray tank, lines and filter, particularly if a herbicide with the potential to injure crops was previously used. Spray equipment should be thoroughly rinsed using a strong detergent solution.

After using Liberty® ATZ Herbicide, triple rinse sprayer and use a commercial tank cleaner before using in crops not labeled LibertyLink® or warranted by Bayer CropScience. Make sure any rinsate or foam is thoroughly removed from spray tank and boom. Rinsate may be disposed of according to the requirements contained in the *Environmental Hazards* section of this label.

APPLICATION METHOD

Refer to the *Rate Recommendation Tables for Weed Control* in the following section for the proper application rates. Uniform, thorough spray coverage is important to achieve consistent weed control.

Ground Application: Liberty® ATZ Herbicide should be applied broadcast in a minimum of 15 gallons of water per acre. Under dense weed/crop canopies, 20 to 40 gallons of water per acre should be used so that thorough spray coverage will be obtained.

Use 80-degree or 110-degree flat-fan nozzles and a spray pressure of 30 to 60 pounds per square inch (measured at the nozzle) to optimize spray coverage and canopy penetration. Droplet size should be set at about 300 microns for best results. If using Turbo TeeJet® spray tips, use a minimum pressure of 60 pounds per square inch so that thorough spray coverage will be obtained. Flood-jet nozzles, raindrop nozzles, controlled droplet application equipment, or air-assisted spray equipment do not provide adequate coverage characteristics; and therefore, are not recommended because weed control is likely to be reduced.

DO NOT apply when winds are gusty or when conditions will favor movement of spray particles off the desired spray target. To avoid drift and insure consistent weed control, apply Liberty® ATZ Herbicide with the spray boom as low as possible while maintaining a uniform spray pattern.

Aerial Application: Use only the 48 fluid ounces per acre rate of Liberty® ATZ Herbicide for aerial application. Poor coverage will result in reduced weed control. Liberty® ATZ Herbicide should be applied in a minimum of 5 gallons per acre of total spray solution using spray nozzle tips and sufficient pressure to provide a uniform pattern and median droplet size of 350 to 450 microns. Aerial applications with this product should be made at a maximum height of 10 feet above the crop with low drift nozzles at a maximum pressure of 40 psi.

Avoid application under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur. Do not apply when wind causes drift to off-site vegetation.

The distance of the outermost nozzles on the boom must not exceed ¾ the length of the wingspan or rotor.

Nozzles must always point backward parallel with the air stream and never be pointed downward more than 45 degrees

Information on 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

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 ¾ 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 downwind. 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.

RATE RECOMMENDATION TABLES FOR WEED CONTROL

Apply Liberty® ATZ Herbicide at rates of 40 fluid ounces/acre (2.5 pints/acre) to 48 fluid ounces/acre (3 pints/acre). Rates in ounces of formulated product per acre for the control of weeds at selected heights are shown in the following tables. In weed populations with mixed species, apply the rates needed for all species present.

Grass Weeds Controlled with Liberty® ATZ Herbicide Plus Ammonium Sulfate

Weed Species	Maximum Weed Height or Diameter (Inches)	
	40 Fl. Oz./A (2.5 Pts./A)	48 Fl. Oz./A (3 Pts./A)
Barnyardgrass	*	2
Bluegrass, annual	3	5
Corn, volunteer	*	10 ^{1,2}
Crabgrass, large	3 ³	3 ³
Crabgrass, smooth	3 ³	3 ³
Cupgrass, woolly	6	8
Foxtail, bristly	4	6
Foxtail, giant	4	6
Foxtail, giant (ALS resistant)	4	6
Foxtail, green	4	6
Foxtail, robust purple	4	6
Foxtail, yellow	2 ³	3 ³
Johnsongrass, seedling	4	6
Millet, wild-proso	3	6
Millet, proso volunteer	3	6
Oat, wild	3 ³	4 ³

Weed Species	Maximum Weed Height or Diameter (Inches)	
	40 Fl. Oz./A (2.5 Pts./A)	48 Fl. Oz./A (3 Pts./A)
Panicum, fall	2	3
Panicum, Texas	3	3
Rice, red	3	4
Sandbur, field	*3	*3
Shattercane	6	8
Shattercane (ALS resistant)	6	8
Signalgrass, broadleaf	3	4
Sprangletop	3	4
Sorghum, volunteer	3	6
Stinkgrass	3	4
Witchgrass	3	4

* indicates suppression

¹ Volunteer corn arising from a previous corn crop containing a glufosinate tolerance gene will not be controlled.

² A timely cultivation 7 to 10 days after application and/or retreatment within 2 weeks is recommended for controlling dense clumps of volunteer corn arising from a previous corn crop that was not tolerant to glufosinate-ammonium.

³ Yellow foxtail, field sandbur, crabgrass and wild oats must be treated prior to tiller initiation for best results.

Broadleaf Weeds Controlled with Liberty® ATZ Herbicide Plus Ammonium Sulfate

Weed Species	Maximum Weed Height or Diameter (Inches)	
	40 Fl. Oz./A (2.5 Pts./A)	48 Fl. Oz./A (3 Pts./A)
Amaranth, Palmer	4	6
Beggarweed, Florida	4	6
Black medic	5	6
Buckwheat, wild	6	7
Buffalobur	6	6
Burcucumber	6	8
Carpetweed	4	6
Chickweed, common	6	6
Cocklebur, common	6	8
Cocklebur, common (ALS resistant)	6	8
Copperleaf, hophornbeam	4	6
Eclipta	4	6
Fleabane, annual	6	8
Galinsoga, hairy	6	8
Galinsoga, small-flower	6	7
Groundcherry, cutleaf	4	6
Geranium, cutleaf	4	6
Java bean	4	6
Jimsonweed	6	8
Kochia	4	6
Kochia (ALS resistant)	4	6
Ladysthumb	6	8
Lambsquarters, common	4	6

Weed Species	Maximum Weed Height or Diameter (Inches)	
	40 Fl. Oz./A (2.5 Pts./A)	48 Fl. Oz./A (3 Pts./A)
Lambsquarters, common (triazine resistant)	4	6
Mallow, common	4	6
Mallow, Venice	6	7
Marestail	6	8
Marshelder	4	6
Morningglory, entireleaf	6	7
Morningglory, ivyleaf	6	7
Morningglory, pitted	6	7
Morningglory, smallflower	4	6
Morningglory, tall	6	7
Mustard, wild	4	7
Nightshade, eastern black	6	6
Nightshade, hairy	6	6
Pennycress	4	6
Pigweed, redroot	4	6
Pigweed, redroot (ALS resistant)	4	6
Pigweed, prostrate	4	6
Pigweed, spiny	4	6
Pigweed, smooth	4	6
Pigweed, tumble	4	6
Puncturevine	4	6
Ragweed, common	6	8
Ragweed, common (ALS resistant)	6	8
Ragweed, giant	6	8
Ragweed, giant (ALS resistant)	6	8
Sesbania, hemp	6	8
Shepherd's-Purse	6	8
Sicklepod	6	7
Sida, prickly	6	7
Smartweed, Pennsylvania	6	8
Smellmelon	4	6
Sowthistle, annual	6	7
Sunflower, common	6	8
Sunflower, common (ALS resistant)	6	8
Sunflower, volunteer	6	8
Thistle, Russian	4	6
Velvetleaf	5	6
Waterhemp, common	4	6
Waterhemp, common (ALS resistant)	4	6
Waterhemp, tall	4	6

Rate Recommendation Table for Biennial/Perennial Weed Control

Liberty® ATZ Herbicide applied at 48 fluid ounces per acre (3 pints per acre) may provide top-growth control or suppression of the biennial/perennial weed species shown in the following table. A subsequent application of Liberty® Herbicide or a tank mix with other herbicides selected from those listed on this label is required for control.

Biennial/Perennial Weeds Suppressed with Liberty® ATZ Herbicide Plus Ammonium Sulfate

Alfalfa	Clover, red	Muhly, wirestem
Artichoke, Jerusalem	Dandelion	Orchardgrass
Bindweed, field	Dock, smooth	Poinsettia, wild
Bindweed, hedge	Dogbane, hemp	Pokeweed
Bluegrass, Kentucky	Goldenrod, gray	Quackgrass
Bromegrass, smooth	Johnsongrass, rhizome	Thistle, bull
Burdock	Milkweed, common	Thistle, Canada
Chickweed, Mouse-ear	Milkweed, honeyvine	Timothy
Clover, Alsike		

TANK MIX RECOMMENDATIONS FOR LIBERTY® ATZ HERBICIDE

When using Liberty® ATZ Herbicide in tank mix combinations, follow the precautions and directions of use of the most restrictive label.

Herbicide Tank Mix Partners for Liberty® ATZ Herbicide

To enhance weed control and/or provide residual control in corn, Liberty® ATZ Herbicide may be mixed with the following herbicides.

2,4-D	Distinct™ Herbicide	Prowl® 3.3 EC Herbicide
Accent® Herbicide	Dual II Magnum™ Herbicide	Pursuit® Herbicide
Accent® Gold™ Herbicide	Exceed® Herbicide	Python® WDG Herbicide
Atrazine	Frontier® 6.0 Herbicide	Scorpion® III Herbicide
Banvel® Herbicide	Harness® Herbicide	Spirit™ Herbicide
Basagran® Herbicide	Hornet® Herbicide	Stinger® Herbicide
Beacon® Herbicide	Liberty® Herbicide	Surpass® EC Herbicide
Buctril® 4EC Herbicide	Lightning™ Herbicide	Topnotch™ Herbicide
Callisto™ Herbicide	NorthStar™ Herbicide	Tough® 5 EC Herbicide
Celebrity™ Herbicide	Permit® Herbicide	
Clarity® Herbicide		

Apply tank mixes of Lightning and Pursuit only to corn designated as Clearfield™ tolerant and LibertyLink or warranted by Bayer CropScience as being tolerant to Liberty® ATZ Herbicide.

Applications of 2,4-D, Banvel Herbicide, Celebrity Herbicide, Clarity Herbicide, Distinct Herbicide, Marksman® Herbicide, and NorthStar Herbicide to corn during periods of rapid growth may result in temporary leaning or green snap. If these symptoms occur, cultivation should be delayed until after corn is growing normally to avoid breakage. Tank mixing with Prowl 3.3 EC Herbicide may result in reduced control of barnyardgrass, fall panicum, field sandbur, yellow foxtail, and volunteer corn.

Insecticide Tank Mix Partners for Liberty® ATZ Herbicide

To provide weed and insect control in corn, Liberty® ATZ Herbicide may be mixed with the following insecticides:

Ambush® Insecticide	Furadan® 4F Insecticide	Pounce® 3.2EC Insecticide
Asana® XL Insecticide	Lorsban® 4E Insecticide	Warrior™ Insecticide

IMPORTANT: READ BEFORE USE

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

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Net Contents: 2.5 Gallons

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Produced for



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