PULL HERE TO OPEN

RESTRICTED USE PESTICIDE

(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.

THIS PRODUCT IS A RESTRICTED-USE HERBICIDE DUE TO GROUND AND SURFACE WATER CONCERNS. USERS MUST READ AND FOLLOW ALL PRECAUTIONARY STATEMENTS AND INSTRUCTIONS FOR USE IN ORDER TO MINIMIZE POTENTIAL FOR ATRAZINE TO REACH GROUND AND SURFACE WATER.

Sale, use and distribution of this product in Nassau and Suffolk Counties in the State of New York is prohibited.

ATRAZINE	GROUP	5	HERBICIDE
BICYCLOPYRONE	GROUP	27	HERBICIDE

MESOTRIONE	GROUP	27	HERBICIDE
S-METOLACHLOR	GROUP	15	HERBICIDE

Acuron®

Herbicide

syngenta®

A Herbicide for Control of Annual Grass and Broadleaf Weeds in Field Corn, Seed Corn, Silage Corn, Sweet Corn and Yellow Popcorn

Active Ingredients:	
S-Metolachlor: (CAS No. 87392-12-9)	23.40%
Atrazine*: (CAS No. 1912-24-9)	10.93%
Mesotrione: (CAS No. 104206-82-8)	2.60%
Bicyclopyrone: (CAS No. 352010-68-5)	0.65%
Other Ingredients:	62.42%
Total:	100.00%

Acuron® Herbicide is a ZC formulation containing 1.0 pound Atrazine, 0.06 pound Bicyclopyrone, 0.24 pound Mesotrione, and 2.14 pounds *S*-metolachlor per gallon.

*Atrazine with a maximum of 0.45% related triazines.

KEEP OUT OF REACH OF CHILDREN.

CAUTION

See additional precautionary statements and directions for use on label.

EPA Reg. No. 100-1466

EPA Est. 100-LA-001

SCP 1466A-L1E 1121
4150591

2.5 gallons

Net Contents

®

FIRST AID	
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.
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 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.
If inhaled	• 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 further treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
HOT LINE NUMBER For 24 Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire or Accident), Call **1-800-888-8372**	

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Harmful if swallowed. Causes moderate eye injury. Avoid contact with eyes, skin, or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Personal Protective Equipment (PPE)

Mixers, Loaders, Applicators and other handlers must wear:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves made of barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, natural rubber ≥ 14 mils, polyethylene, polyvinyl chloride (PVC) ≥ 14 mils, or Viton® ≥ 14 mils
- Chemical-resistant footwear plus socks
- Chemical-resistant apron when mixing/loading, cleaning up spills, or cleaning equipment, or otherwise exposed to the concentrate
- Chemical-resistant headgear for overhead exposure

See engineering controls for additional requirements.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

Engineering Controls

When applicators use closed systems or 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.

continued...

PRECAUTIONARY STATEMENTS *(continued)*

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

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 contaminate water when disposing of equipment wash water or rinsate. This product contains atrazine, which has been shown to be toxic to aquatic invertebrates. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply when weather conditions favor drift from treated areas.

Groundwater Advisory

Acuron Herbicide contains the active ingredients atrazine, bicyclopyrone, mesotrione and *S*-metolachlor.

Atrazine can travel (seep or leach) through soil and can enter groundwater which 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.

Bicyclopyrone is known to leach through soil into groundwater under certain conditions as a result of label use. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

S-metolachlor is known to leach through soil into groundwater under certain conditions as a result of agricultural use. Use of this product in areas where soils are permeable, particularly where the water table is shallow may result in groundwater contamination.

Surface Water Advisory

This product has a high potential for reaching surface water via runoff for several months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of atrazine, bicyclopyrone, mesotrione and *S*-metolachlor from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

NON-TARGET ORGANISM ADVISORY STATEMENT

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

Reporting Ecological Incidents

To report ecological incidents, including mortality, injury, or harm to plants and animals, call 1-800-888-8372.

Mixing/Loading Instructions

Care must be taken when using this product to prevent back-siphoning into wells, spills, or improper disposal of excess pesticide, spray mixtures, or rinsates.

Check valves or antisiphoning devices must be used on mixing equipment.

This product must not be mixed/loaded or used within 50 ft of 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 spills or equipment leaks, container or equipment rinse or wash water, and rain water 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 well head setbacks and operational area containment must be observed.

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

Tile-Outletted Terraced Fields Containing Standpipes

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

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

Physical and Chemical Hazards

Do not use or store near heat or open flame.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, LLC or Seller. To the extent permitted by applicable law, Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions, or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and (2) Buyer and User assume the risk of any such use. TO THE EXTENT PERMITTED BY APPLICABLE LAW, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.

To the extent permitted by applicable law, in no event shall SYNGENTA be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

DIRECTIONS FOR USE

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

Endangered Species Protection Requirements

It is a Federal offense to use any pesticide in a manner that results in an unauthorized "take" (e.g., kill or otherwise harm) of an endangered species and certain threatened species, under the Endangered Species Act section 9. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the area in which you are applying the product. You must obtain a Bulletin no earlier than six months before using this product. To obtain Bulletins, consult http://www.epa.gov/espp/, call 1-844-447-3813, or email ESPP@epa.gov. You must use the Bulletin valid for the month in which you will apply the product.

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 Syngenta Crop Protection, LLC 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 24 hours.

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 and water, wear:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves made of barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, natural rubber ≥ 14 mils, polyethylene, polyvinyl chloride (PVC) ≥ 14 mils or Viton ≥ 14 mils
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL, CROP INJURY, OR ILLEGAL RESIDUES.

Sale, use and distribution of this product in Nassau and Suffolk Counties in the State of New York is prohibited.

Not for use in the states of Hawaii or Alaska, or in the U.S. territories (Puerto Rico, Guam, American Samoa, the U.S. Virgin Islands, and the North Mariana Islands).

PRODUCT INFORMATION

Acuron Herbicide may be used preemergence and postemergence in the culture of field corn, seed corn, and silage corn. Acuron Herbicide may also be used in the culture of sweet corn and yellow popcorn but the application must be made prior to crop emergence (i.e., preemergence), or severe crop injury may occur.

Acuron Herbicide is a combination of the herbicides: atrazine, bicyclopyrone, mesotrione and *S*-metolachlor plus the safener benoxacor. Acuron Herbicide is recommended for management of the weed species listed in Tables 1 and 2.

ATRAZINE, BICYCLOPYRONE, MESOTRIONE AND *S*-METOLACHLOR HERBICIDE RATE LIMITATIONS

Certain states may have established rate limitations within specific geographical areas for the use of atrazine. These more restrictive/protective requirements must be followed. Consult your state lead pesticide control agency for additional information. It is a violation of this label to deviate from state use regulations.

- When tank mixing or sequentially applying atrazine or products containing atrazine with Acuron Herbicide to corn, do not exceed an application rate of 2.0 lb active ingredient of atrazine per acre for any single application and the total pounds of atrazine applied (lb ai per acre) must not exceed 2.5 lb active ingredient per acre per year.
- Maximum broadcast application rates for atrazine in corn must be as follows:
  - If no atrazine was applied prior to corn emergence, apply a maximum of 2.0 lb ai/A broadcast. If a postemergence treatment is required following an earlier herbicide application, the total atrazine applied may not exceed 2.5 lb ai/A per calendar year.
  - Apply a maximum of 2.0 lb ai/A as a single preemergence application on soils that are not highly erodible or on highly erodible soils (as defined by the Natural Resource Conservation Service) if at least 30% of the soil is covered with plant residues.
  - Apply a maximum of 1.6 lb ai/A as a single preemergence application on highly erodible (as defined by the Natural Resource Conservation Service) soils if <30% of the surface is covered with plant residues; or 2.0 lb ai/A if only applied postemergence.

Note: For purposes of calculating total atrazine active ingredient applied, Acuron Herbicide contains 1.0 lb ai atrazine plus related per gallon.

Do not exceed label dosage rates, nor combined maximum annual rates for mesotrione (no more than 0.24 lb of mesotrione active ingredient must be applied per acre of corn per year), and *S*-metolachlor (the maximum annual use rate per year is 3.71 lb ai/A for corn). Do not apply more than 0.045 lb ai/A per year of bicyclopyrone for corn.

ACURON HERBICIDE USE PRECAUTIONS

- Applied according to directions and under normal growing conditions, Acuron Herbicide will not harm the treated crop. During germination and early stages of growth, extended periods of unusually cold and wet or hot and dry weather, insect or plant disease attack, carryover pesticide residues, the use of certain soil applied systemic insecticides, improperly placed fertilizers or soil insecticides, may weaken crop seedlings. Acuron Herbicide used under these conditions could result in crop injury.
- Where reference is made to weeds partially controlled, partial control can either mean erratic control from good to poor or consistent control at a level below that generally considered acceptable for commercial weed control.
- Dry weather following preemergence application of Acuron Herbicide or an Acuron Herbicide tank mixture may reduce effectiveness. If possible, cultivate if weeds develop.
- Applying Acuron Herbicide postemergence to corn that has received an at-plant application of Counter® insecticide can result in severe corn injury. Temporary corn injury may occur if Acuron Herbicide is applied to emerged corn where organophosphate insecticides other than Counter were applied at planting.
- Postemergence (emerged corn) applications of any organophosphate or carbamate insecticide within 7 days before or 7 days after an Acuron Herbicide application may result in severe corn injury.

ACURON HERBICIDE USE RESTRICTIONS

- Grazing Restriction: To avoid possible illegal residues, do not graze or feed forage from treated areas for 45 days following application.
- Pre-Harvest Interval (PHI): Corn (for grain, seed, or silage) may be treated up to 12 inches tall. Do not harvest forage within 60 days after application.
- Do not apply more than 3.0 qt of Acuron Herbicide per acre in a single application.
- Do not apply more than 3.0 qt of Acuron Herbicide per acre per year.
- Do not make more than two Acuron Herbicide applications per year.
- Do not make the second application within 14 days of the first application.

- Do not use aerial application to apply Acuron Herbicide.
- Do not apply Acuron Herbicide to sweet corn or yellow popcorn after the crop has emerged or severe crop injury may occur.
- Do not use Acuron Herbicide on any crop other than corn (for grain, seed, or silage), sweet corn (preemergence applications only) or yellow popcorn (preemergence applications only).
- Do not use Acuron Herbicide in the culture of white popcorn or ornamental (Indian) corn or injury may occur.
- Do not apply Acuron Herbicide by mechanically pressurized handguns in sweet corn.
- Do not contaminate irrigation water used for crops or water used for domestic purposes.
- Thoroughly clean sprayer or other application device before using. Dispose of cleaning solution in a responsible manner. Do not use a sprayer or applicator contaminated with other materials, or crop damage or sprayer clogging of the application device may occur.
- Read and observe all precautions and limitations on this label and the label of each product used in tank mixtures.
- Do not make postemergence (emerged corn) applications of Acuron Herbicide in a tank mix with any organophosphate or carbamate insecticide, or severe corn injury may occur.
- Do not apply under conditions which favor runoff or wind erosion of soil containing this product to non-target areas. To prevent off-site movement due to runoff or wind erosion:
  - Avoid treating powdery dry or light sand soils when conditions are favorable for wind erosion. Under these conditions, the soil surface should first be settled by rainfall or irrigation.
  - Do not apply to impervious substrates, such as paved or highly compacted surfaces.
  - Do not use tail water from the first flood or furrow irrigation of treated fields to treat nontarget crops, unless at least 1/2 inch of rainfall has occurred between application and the first irrigation.

WEED RESISTANCE MANAGEMENT

ATRAZINE	**GROUP**	**5**	**HERBICIDE**
BICYCLOPYRONE	**GROUP**	**27**	**HERBICIDE**
MESOTRIONE	**GROUP**	**27**	**HERBICIDE**
***S*-METOLACHLOR**	**GROUP**	**15**	**HERBICIDE**

Naturally occurring biotypes of certain weed species with resistance to triazines, ALS, PPO, Glycine (glyphosate) and HPPD herbicides are known to exist. If biotypes of weeds resistant to triazines, ALS, PPO and glycine inhibitors are present in the field, this herbicide should control them if they are listed in Tables 1 and 2.

To reduce the risk of weeds developing resistance to HPPD inhibitors, implement a program including both preemergence and/or postemergence herbicides that provide effective control of all weeds using multiple modes of action. This includes scouting fields before application to ensure the herbicide will be appropriate for the weeds present. Scout fields and eliminate weed escapes. If suspected weed resistance is observed against a particular weed species contact your Syngenta or retailer representative or call Syngenta Customer Service (1-800-334-9481). Lack of weed control is not necessarily an indicator of weed resistance.

Consider weed resistance management strategies that include two or more modes of action where a minimum of two modes of action are effective at controlling the target weed when either are applied alone.

Read and follow all label directions.

Acuron Herbicide contains four herbicide active ingredients and three modes of action and can be an effective component of a weed resistance management strategy.

Principles of Herbicide Resistant Weed Management

Scout and know your field

- Know weed species present in the field to be treated through scouting and field history. An understanding of weed biology is useful in designing a resistance management strategy. Ensure the weed management program will control all weeds present.
- Fields should be scouted prior to application to determine species present and growth stage. Always apply this herbicide at the full labeled rate and correct timing for the weeds present in the field.

Utilize non-herbicidal practices to add diversity

- Use diversified management tactics such as cover crops, mechanical weed control, harvest weed seed control, and crop rotation as appropriate.

Use good agronomic practices, start clean and stay clean

- Use good agronomic practices that enhance crop competitiveness.
- Plant into weed-free fields utilizing tillage or an effective burndown herbicide for control of emerged weeds.
- Sanitize farm equipment to avoid spreading seed or vegetative propagules prior to leaving fields.

Difficult to control weeds

- Fields with difficult to control weeds should be planted in rotation with crops that allow the use of herbicides with an alternative mode of action or different management practices.
- Difficult to control weeds may require sequential applications, such as a broad spectrum preemergence herbicide followed by one or more postemergence herbicide applications. Utilize herbicides containing different modes of action effective on the target weeds in sequential applications.

Do not overuse the technology

- Do not use more than two applications of this or any other herbicide with the same mode of action in a single growing season unless mixed with an herbicide with a different mode of action which provides overlapping spectrum for the difficult to control weeds.

Scout and inspect fields following application

- Prevent an influx of weeds into the field by controlling weeds in field borders.
- Scout fields after application to verify that the treatment was effective.
- Suspected- herbicide resistant weeds may be identified by these indicators
    - Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
    - A spreading patch of non-controlled plants of a particular weed species; and
    - Surviving plants mixed with controlled individuals of the same species.
- Report non-performance of this product to your Syngenta retailer, Syngenta representative, or call 1-866-Syngent(a) (866-796-4368). If resistance is suspected ensure weed escapes are controlled using an herbicide with an effective mode of action and/or use non-chemical means to prevent further seed production.

Prevent weed escapes before, during, and after harvest

- Do not allow weed escapes to produce seed or vegetative structures such as tubers or stolons which contribute to spread and survival. Consider harvest weed seed management and control weeds post-harvest to prevent seed production.

Resistant weeds

- Contact your local Syngenta representative, retailer, crop advisor or extension agent to determine if weeds resistant to modes of action contained in this product are present in your area. Do not assume that each listed weed is being controlled by multiple modes of action. Premixes are intended to broaden the spectrum of weeds that are controlled. Some weeds may be controlled by only one of the active ingredients in this product. If resistant biotypes have been reported, use the full labeled rate of this product, apply at the labeled timing, and tank mix with an additional different mode of action product so there are multiple effective modes of application for each suspected resistant weed.

SOIL ORGANIC MATTER

Determine the organic matter of the soil on which the application is to be made prior to application. The use rate of Acuron Herbicide is based on percent soil organic matter.

REDUCED AND NO-TILL SYSTEMS

Acuron Herbicide may be used in reduced and no-till systems. The highest levels of control will be obtained when applications are made as close to planting as possible. It is advised that a burndown herbicide including Gramoxone®, Roundup®, glyphosate or 2,4-D be tank mixed with Acuron Herbicide in reduced or no-till systems if weeds are present at application and the corn has not yet emerged.

WEEDS CONTROLLED

Acuron Herbicide applied as directed in this label will control or suppress the weeds listed in Tables 1 and 2. Additional weeds may be controlled with tank mixes. See the **Acuron Herbicide Tank Mix Combinations** section for specified tank mix combinations. Always consult the tank mix product labels for specific rates and use directions.

Table 1. Weeds Controlled or Partially Controlled by Preemergence Applications of Acuron Herbicide

Common Name	Scientific Name	Weed Rating[1]
Broadleaf Weeds		
Amaranth, Palmer	*Amaranthus palmeri*	C
Amaranth, Powell	*Amaranthus powellii*	C
Bedstraw, catchweed	*Galium aparine*	PC
Beggarweed, Florida	*Desmodium tortuosum*	C
Buckwheat, wild	*Polygonum convolvulus*	C
Buffalobur	*Solanum rostratum*	C
Carpetweed	*Mollugo verticillata*	C
Chickweed, common	*Stellaria media*	C
Cocklebur, common	*Xanthium strumarium*	C[2]
Deadnettle, purple	*Lamium purpureum*	C
Devil's-claw	*Proboscidea louisianica*	C
Galinsoga	*Galinsoga parviflora*	C
Henbit	*Lamium amplexicaule*	C
Horseweed (marestail)	*Conyza canadensis*	C
Jimsonweed	*Datura stramonium*	C
Kochia	*Kochia scoparia*	C
Lambsquarters, common	*Chenopodium album*	C
Mallow, Venice	*Hibiscus trionum*	C
Morningglory, ivyleaf/entireleaf	*Ipomoea hederacea*	C[2]
Mustard, wild	*Brassica kaber*	C
Nightshade, black	*Solanum nigrum*	C
Nightshade, eastern black	*Solanum ptycanthum*	C
Nightshade, hairy	*Solanum sarrachoides*	C
Pigweed, redroot	*Amaranthus retroflexus*	C
Pigweed, smooth	*Amaranthus hybridus*	C
Puncturevine	*Tribulus terrestris*	C
Purslane, common	*Portulaca oleracea*	C
Pusley, Florida	*Richardia scabra*	C
Radish, wild	*Raphanus raphanistrum*	C
Ragweed, common	*Ambrosia artemisiifolia*	C
Ragweed, giant	*Ambrosia trifida*	C
Sesbania, hemp	*Sesbania exaltata*	C
Shepherd's-purse	*Capsella bursa-pastoris*	C
Sicklepod	*Cassia obtusifolia*	C
Sida, prickly	*Sida spinosa*	PC

Common Name	Scientific Name	Weed Rating[1]
Broadleaf Weeds		
Smartweed, ladysthumb	*Polygonum persicaria*	C
Smartweed, Pennsylvania	*Polygonum pensylvanicum*	C
Sunflower, common	*Helianthus annus*	PC
Thistle, Russian	*Salsola tragus*	C
Velvetleaf	*Abutilon theophrasti*	C
Waterhemp, common	*Amaranthus rudis*	C
Waterhemp, tall	*Amaranthus tuberculatus*	C
Grass Weeds		
Barnyardgrass	*Echinochloa crus-galli*	C
Crabgrass	*Digitaria* spp.	C
Crowfootgrass	*Dactyloctenium aegyptium*	C
Cupgrass, prairie	*Eriochloa contracta*	C
Cupgrass, Southwestern	*Eriochloa gracilis*	C
Cupgrass, woolly	*Eriochloa villosa*	PC
Foxtail, giant	*Setaria faberi*	C
Foxtail, green	*Setaria viridis*	C
Foxtail, robust (purple, white)	*Setaria* spp.	C
Foxtail, yellow	*Setaria pumila*	C
Goosegrass	*Eleusine indica*	C
Johnsongrass, seedling	*Sorghum halepense*	PC
Millet, foxtail	*Setaria italica*	C
Millet, wild proso	*Panicum miliaceum*	PC
Panicum, Texas	*Panicum texanum*	PC
Rice, red	*Oryza sativa*	C
Sandbur, field	*Cenchrus incertus*	PC
Shattercane	*Sorghum bicolor*	PC
Signalgrass, broadleaf	*Brachiaria platyphylla*	C[2]
Signalgrass, narrowleaf	*Brachiaria piligera*	C
Sprangletop, red	*Leptochloa filiformis*	C
Starbur, bristly	*Acanthospermum hispidum*	C
Witchgrass	*Panicum capillare*	C
Sedges		
Nutsedge, Yellow	*Cyperus esculentus*	C

[1]C = Control, PC = Partial Control
[2]May require a tank mix partner (e.g. atrazine) for control of heavy populations

Thoroughly till soil or make an application of a burndown herbicide to control emerging weeds. Plant crop immediately after tillage.

If a significant rainfall does not occur within 7 days after application, weed control may be decreased. If irrigation is available, apply 1/2 to 1 inch of water. If irrigation is not available, a uniform shallow cultivation is advised as soon as weeds emerge.

Table 2. Weeds Controlled or Partially Controlled by Early Postemergence Applications of Acuron Herbicide

Common Name	Scientific Name	Weed Rating[1]
Broadleaf Weeds		
Amaranth, Palmer	*Amaranthus palmeri*	C
Amaranth, Powell	*Amaranthus powellii*	C
Bedstraw, catchweed	*Galium aparine*	PC
Beggarweed, Florida	*Desmodium tortuosum*	C
Buckwheat, wild	*Polygonum convolvulus*	C
Buffalobur	*Solanum rostratum*	C
Carpetweed	*Mollugo verticillata*	C
Chickweed, common	*Stellaria media*	C
Cocklebur, common	*Xanthium strumarium*	C
Dandelion	*Taraxacum officinale*	PC
Deadnettle, purple	*Lamium purpureum*	C
Devil's-claw	*Proboscidea louisianica*	C
Galinsoga	*Galinsoga parviflora*	C
Hemp	*Cannabis sativa*	C
Henbit	*Lamium amplexicaule*	C
Horsenettle	*Solanum carolinense*	C
Horseweed (marestail)	*Conyza canadensis*	C
Jimsonweed	*Datura stramonium*	C
Kochia	*Kochia scoparia*	C
Lambsquarters, common	*Chenopodium album*	C
Mallow, Venice	*Hibiscus trionum*	C
Marestail	*Hippuris vulgaris*	C
Morningglory, ivyleaf/entireleaf	*Ipomoea hederacea*	C
Mustard, wild	*Brassica kaber*	C
Nightshade, black	*Solanum nigrum*	C
Nightshade, eastern black	*Solanum ptycanthum*	C
Nightshade, hairy	*Solanum sarachoides*	C
Pigweed, redroot	*Amaranthus retroflexus*	C
Pigweed, smooth	*Amaranthus hybridus*	C

Common Name	Scientific Name	Weed Rating[1]
Broadleaf Weeds		
Pokeweed	*Phytolacca americana*	C
Potatoes, volunteer	*Solanum* spp.	C
Purslane, common	*Portulaca oleracea*	C
Pusley, Florida	*Richardia scabra*	C
Radish, wild	*Raphanus raphanistrum*	C
Ragweed, common	*Ambrosia artemisiifolia*	C
Ragweed, giant	*Ambrosia trifida*	C
Sesbania, hemp	*Sesbania exaltata*	C
Shepherd's-purse	*Capsella bursa-pastoris*	C
Sida, prickly	*Sida spinosa*	C
Smartweed, ladysthumb	*Polygonum persicaria*	C
Smartweed, Pennsylvania	*Polygonum pensylvanicum*	C
Sunflower, common	*Helianthus annus*	C
Thistle, Canada	*Cirsium arvense*	C
Velvetleaf	*Abutilon theophrasti*	C
Waterhemp, common	*Amaranthus rudis*	C
Waterhemp, tall	*Amaranthus tuberculatus*	C
Grass Weeds		
Barnyardgrass	*Echinochloa crus-galli*	PC[2]
Crabgrass, large	*Digitaria sanguinalis*	C[2]
Foxtail, giant	*Setaria faberii*	PC[2]
Signalgrass, broadleaf	*Brachiaria platyphylla*	C[2]

[1]C = Control, PC = Partial Control

[2]Apply before the weed exceeds 2 inches in height

ROTATIONAL CROPS

When Acuron Herbicide is applied as directed on this label, follow the crop rotation intervals in Table 3. If Acuron Herbicide is tank mixed with other products, follow the most restrictive product's crop rotation interval. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Do not rotate to food or feed crops other than those listed on this label.

Table 3. Time Interval Between Acuron Herbicide Application and Replanting or Planting of Rotational Crop

Crop	Replant/Rotational Interval
Field corn Seed corn Silage corn Sweet corn Yellow popcorn	Anytime[1]
Small grain cereals including wheat, barley and rye	4 Months
Cotton Dry beans[2] Peanuts Potato Rice Soybeans[3,4] Sorghum (all types)	10 Months[5,6]
All other rotational crops	18 Months

[1]Do not apply more than 3.0 qt of Acuron Herbicide per acre per year.

[2]This rotational interval applies only to areas west of US highway 83 in the states of Colorado and Nebraska: If Acuron Herbicide was applied to ground that was under center pivot irrigation and the soil pH is greater than 6.5, dry beans can be planted 10 months following application.

[3]Injury may occur to soybeans planted the year following application on soils having a calcareous surface layer if additional atrazine or atrazine-containing products are used.

[4]In eastern parts of the Dakotas, KS, western MN, and NE, do not rotate to soybeans for 18 months following application if the combined atrazine rate applied was more than 2.0 lb ai/A, or equivalent band application rate, or soybean injury may occur.

[5]If applied after June 1, rotating to crops other than corn (all types) may result in crop injury.

[6]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 (all types) or sorghum is to follow corn, or a crop of untreated corn (all types) or sorghum is to precede other rotational crops.

Cover Crops

A cover crop can be an important tool for the overall farm cropping system. Cover crops are planted for conservation purposes, soil erosion control, soil health improvement, water quality improvement and weed management. A cover crop can be a single crop or a combination of crops, including grasses and/or broadleaf crops.

After harvest of an Acuron Herbicide treated crop, planting of a cover crop is allowed provided the cover crop is not grazed or fed to livestock nor harvested for food. Terminate the cover crop through natural causes such as frost or intentional termination by herbicide application, crimping, rolling, tillage or cutting.

All possible cover crops or cover crop combinations have not been tested for crop safety to Acuron Herbicide. Before planting the cover crop, determine the level of crop safety for the intended cover crops by conducting a field bioassay. Refer to the **Field Bioassay for Cover Crops** section below for instructions.

Field Bioassay for Cover Crops

A field bioassay is a method of determining if herbicide residues are present in the soil at concentrations high enough to adversely affect crop growth.

Conduct the field bioassay by planting several strips of the desired cover crop across the field which has been previously treated with Acuron Herbicide. Plant the cover crop strips perpendicular to the direction of the Acuron Herbicide application. The strips should be located so that all the different field conditions are encountered, including differences in field terrain, soil texture, organic matter, pH, and drainage.

If the cover crop does not show adverse effects such as crop injury and/or stand reduction, the field can be planted to this cover crop. If injury and/or stand reduction are visible, wait two to four weeks for further herbicide degradation to occur and repeat the bioassay. Alternatively, select a different cover crop and repeat the bioassay. Only plant cover crops that show acceptable crop safety in the field bioassay.

APPLICATION PROCEDURES

ADJUVANTS

When an adjuvant is to be used with this product, the use of an adjuvant that meets the standards of the Chemical Producers and Distributors Association (CPDA) adjuvant certification program is recommended.

Where Acuron Herbicide is applied after the corn has emerged, a non-ionic surfactant (NIS) at 0.25% v/v (1 qt/100 gal) may be used. In addition to NIS, a spray grade ammonium sulfate (AMS) at 8.5-17.0 lb/100 gallons of water may also be used. When using liquid AMS products, use a rate that delivers an AMS equivalent of 8.5-17.0 lb/100 gallons of water. The use of crop oil concentrate (COC) may result in temporary crop injury. Do not use methylated seed oil (MSO) or urea ammonium nitrate (UAN) with Acuron Herbicide when applied alone to emerged corn, or when Acuron Herbicide is applied as a postemergence tank mixture with other products, unless directed for a specific tank mix on this label or as part of a supplemental Acuron Herbicide label. Any of these adjuvants may be used at a preemergence or preplant timing, i.e. where the corn crop has not yet emerged to increase burndown activity on existing weeds. Do not apply Acuron Herbicide to emerged sweet corn or yellow popcorn or severe crop injury may occur.

For Acuron Herbicide tank mixtures with Ignite® or Liberty® Herbicides applied to emerged field corn (LibertyLink® hybrids only), AMS may be added as directed on the Ignite or Liberty label. However, AMS must be the only adjuvant added to this tank mixture, or severe crop injury may occur. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Sprinkler Irrigation: Do not apply Acuron Herbicide by sprinkler irrigation. Use a sprinkler system only to incorporate Acuron Herbicide after application. After Acuron Herbicide has been applied, a sprinkler irrigation system set to deliver 1/2-1 inch of water may be used to incorporate the product. Using more than 1 inch of water could result in reduced performance. On sandy soil low in organic matter, use no more than 1/2 inch of water. Do not use flood irrigation to apply or incorporate Acuron Herbicide.

FERTILIZER IMPREGNATION

Acuron Herbicide may be impregnated or coated onto dry bulk fertilizers including ammonium phosphate-sulfate, ammonium sulfate (AMS), diammonium phosphate (DAP), monoammonium phosphate (MAP), potash (potassium chloride), potassium sulfate, urea, or blends of these dry bulk fertilizer types.

When applying Acuron Herbicide on dry bulk fertilizer, follow all directions for use and precautions on the product label regarding target crops, application rate, timing of application and all precautions and restrictions.

All individual state regulations relating to dry bulk granular fertilizer blending, registration, labeling, and application are the responsibility of the mixer and applicator.

Apply a minimum of 200 lb of dry bulk fertilizer impregnated with Acuron Herbicide at the specified broadcast rate per acre. For best results, apply the mixture uniformly to the soil with properly calibrated equipment immediately after blending. Uniform application of the blended fertilizer/herbicide mixture is essential to prevent possible crop injury and achieve weed control. Non-uniform application will result in unsatisfactory weed control. In areas where tillage is practiced, a shallow incorporation of the blended fertilizer/herbicide mixture is advised for improved weed control.

Calculate amount of Acuron Herbicide needed by the following formula:

$$\frac{2{,}000}{\text{lb of fertilizers per acre}} \times \text{qt/A of Acuron Herbicide} = \text{qt of Acuron Herbicide per ton of fertilizer}$$

Restriction: The impregnation of dry bulk commercial fertilizer is restricted to 340 tons per worker per day for no more than 30 days per calendar year for use on corn.

Blended Mixing Instructions

Prepare the fertilizer/herbicide mixture by using any closed drum, belt, ribbon, or other commonly used dry bulk fertilizer blender. Nozzles used to spray Acuron Herbicide onto the fertilizer must be placed to provide uniform spray coverage. Care must be taken to aim the spray directly onto the fertilizer and avoid spraying the walls of the blender.

If the fertilizer/herbicide blend is too wet for uniform application, adding a drying agent is advised. Add the drying agent slowly to the fertilizer/herbicide blend until the mixture is suitable for uniform application. The amount of drying agent needed will depend on fertilizer type, Acuron Herbicide application rate and amount of fertilizer used.

Apply the fertilizer/herbicide blend immediately following impregnation.

Pneumatic (Compressed Air) Application:

Acuron Herbicide may be applied through pneumatic applicators, whether the fertilizer/herbicide mixture is blender-mixed or on-board fertilizer impregnation system.

Acuron Herbicide must not be mixed with any other liquid or dry material in on-board fertilizer impregnation system tanks. Use high quality fertilizer with a minimum of fines when applying Acuron Herbicide with on-board impregnation equipment.

Drying agents are not advised for use with on-board impregnation systems.

Precautions

(1) To avoid potential for explosion, do not impregnate Acuron Herbicide onto ammonium nitrate, potassium nitrate, or sodium nitrate either alone or in blends with other fertilizers.

(2) Do not impregnate Acuron Herbicide onto single super phosphate or triple superphosphate fertilizers.

(3) Do not impregnate Acuron Herbicide on straight unadulterated agricultural limestone, since absorption will not be achieved.

CULTIVATION

Should weeds develop; a shallow cultivation or rotary hoeing will generally result in improved weed control. If Acuron Herbicide was incorporated, cultivate less than half the depth of incorporation.

If cultivation is necessary due to soil crusting, compaction, or escaped weeds, adjust equipment to run shallow and minimize soil movement. This will decrease the possibility of diluting or moving the herbicide from the weed control zone.

SPRAY EQUIPMENT

Ground Application

Spray nozzles should be uniformly spaced, the same size and type, and should provide accurate and uniform application. Ensure that all in-line strainer and nozzle screens in the sprayer are 50-mesh or coarser. Use a pump that can maintain the manufacturer's recommended pressure at the nozzles and provide proper agitation within the tank to keep the product dispersed. Lower pressures may be used with extended range or drift reduction nozzles as long as adequate coverage is maintained. Always ensure that agitation is maintained until spraying is completed, even if stopped for brief periods of time. If the agitation is stopped for more than 5 minutes, re-suspend the spray solution by running on full agitation prior to spraying.

Preemergence: Apply in a spray volume of 10-80 gal/A.

Early Postemergence: Good weed coverage is essential for optimum weed control. Boom height for broadcast over-the-top applications must be based on the height of the crop – at least 15 inches above the crop canopy, but only high enough to give uniform coverage. Apply in a spray volume of 10-30 gal/A. When weed foliage is dense, use a minimum spray volume of 20 gal/A. Flat fan nozzles of 80° or 110° are recommended for optimum postemergence coverage. Do not use floodjet nozzles or controlled droplet application equipment for postemergence applications. Nozzles may be angled forward 45° to enhance penetration of the crop and provide better coverage.

Aerial Prohibition

Do not apply by air.

SPRAY DRIFT MANAGEMENT

MANDATORY SPRAY DRIFT MANAGEMENT

Ground Boom Applications

- User must only apply with the release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a coarse or coarser droplet size (ASABE S572).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.
- User must maintain a 15 foot (4.6 m) in-field downwind buffer (in the direction in which the wind is blowing) from the edge of streams and rivers, as well as high-tide line for all estuarine/marine environments.

Boomless Ground Applications

- Applicators are required to use a coarse or coarser droplet size (ASABE S572).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.
- User must maintain a 15 foot (4.6 m) in-field downwind buffer (in the direction in which the wind is blowing) from the edge of streams and rivers, as well as high-tide line for all estuarine/marine environments.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size – Ground Boom

- Volume – Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure – Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle – Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

BOOM HEIGHT – Ground Boom

- For ground equipment, the boom should remain level with the crop and have minimal bounce.

SHIELDED SPRAYERS

- Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

- When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

- Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or 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.

WIND

- Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.
- Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

Boomless Ground Applications

- Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

Handheld Technology Applications

- Take precautions to minimize spray drift.

Cleaning Equipment After Application

Special attention must be given to cleaning equipment before spraying a crop other than corn. Mix only as much spray solution as needed.

1. Flush tank, hoses, boom, and nozzles with clean water.
2. Prepare a cleaning solution of 1 gal of household ammonia per 25 gal of water. Many commercial spray tank cleaners may be used.
3. Use a pressure washer to clean the inside of the spray tank with this solution. Take care to wash all parts of the tank, including the inside top surface. If a pressure washer is not available, completely fill the sprayer with the cleaning solution to ensure contact of the cleaning solution with all internal surfaces of the tank and plumbing. Start agitation in the sprayer and thoroughly recirculate the cleaning solution for at least 15 minutes. Remove all visible deposits from the spraying system.
4. Flush hoses, spray lines, and nozzles for at least 1 minute with the cleaning solution.
5. Dispose of rinsate from steps 1-3 in an appropriate manner.
6. Repeat steps 2-5.
7. Remove nozzles, screens, and strainers and clean separately in the ammonia solution after completing the above procedures.
8. Rinse the complete spraying system with clean water.

MIXING PROCEDURES

CARRIER

Preemergence Applications: Either clean water or liquid fertilizers, excluding suspension fertilizers, may be used as carriers for preemergence applications. If fluid fertilizers are used, a compatibility test must be done. See Compatibility Test section for compatibility testing. Even if Acuron Herbicide is physically compatible with a fluid fertilizer, constant agitation is necessary to maintain a uniform mixture during application.

Postemergence Applications: Use only clean water as the carrier when applying Acuron Herbicide after corn emergence. Do not apply Acuron Herbicide to emerged sweet corn or yellow popcorn.

ADDING ACURON HERBICIDE TO THE SPRAY TANK

The spray tank must be clean, thoroughly rinsed and decontaminated before adding either Acuron Herbicide alone or with tank mix partners. If water is used as the carrier, use clean water.

Acuron Herbicide Applied Alone: When Acuron Herbicide is used alone, add the specified amount of Acuron Herbicide to the spray tank when the tank is half full of the carrier, then add the rest of the water or fluid fertilizer. Provide sufficient agitation during mixing and application to maintain a uniform mixture.

Acuron Herbicide Applied in Tank Mixtures: Refer to the sections on this label for specified tank mixes. Always refer to labels of the tank mix partners for mixing directions and precautions. Do not exceed label dosage rates, nor combined maximum yearly doses for atrazine, bicyclopyrone, mesotrione, or *S*-metolachlor. This product cannot be mixed with any product bearing a label prohibition against such mixing. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. If a tank mixture is used, a compatibility test must be done. See Compatibility Test section for details on the procedure for such a test.

If the tank mix partner is compatible, fill the tank half full of the carrier. Start and continue agitation throughout mixing and spraying. All return lines to the spray tank must discharge below the liquid level. Prepare the components and add in the following order:

1. If a wettable powder or dry flowable formulation is used, make a slurry with water and add it slowly through the screen into the tank. Agitate during the procedure.
2. If a flowable formulation is used, add slowly through screen into the tank. Mixing and compatibility may be improved when a dry flowable is diluted with water before adding to the tank.
3. Add Acuron Herbicide.
4. Add any other tank mix products next with emulsifiable concentrates added last.
5. Add an adjuvant last, if needed.
6. Complete filling the sprayer tank and continue agitation. Apply as soon as possible after spray mixture is prepared. Do not leave mixture in spray tank overnight without agitation or unattended.

TANK MIX COMPATIBILITY TEST

A compatibility test is advised before tank mixing to ensure compatibility of Acuron Herbicide with other pesticides. The following test assumes a spray volume of 25 gal/A. For other spray volumes, make appropriate changes in the ingredients.

Note: Nitrogen solutions or complete liquid fertilizers, excluding suspension fertilizers, may replace all or part of the water in the spray. Because liquid fertilizers vary, even within the same analysis, **always check compatibility with pesticide(s) before use.** Incompatibility of tank mixtures is more common with mixtures of fertilizer and pesticides.

Test Procedure

1. Add 1.0 pt of carrier (fertilizer or water) to each of two 1 qt jars with tight lids. **Note:** Use the same source of water that will be used for the tank mix and conduct the test at the temperature the tank mix will be applied.
2. To one of the jars, add 1/4 tsp or 1.2 milliliters of a compatibility agent approved for this use, such as Compex® or Unite® (1/4 tsp is equivalent to 2.0 pt/100 gal spray). Shake or stir gently to mix.
3. To both jars, add the appropriate amount of pesticide(s) in their relative proportions based on specified label rates. If more than one pesticide is used, add them separately with dry pesticides first, flowables next, and emulsifiable concentrates last. After each addition, shake or stir gently to thoroughly mix.
4. After adding all ingredients, put lids on and tighten, and invert each jar 10 times to mix. Let the mixtures stand 15-30 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 pesticide(s) in water before addition, or (b) add 1/2 the compatibility agent to the fertilizer or water and the other 1/2 to the emulsifiable concentrate or flowable pesticide before addition to the mixture. If incompatibility is still observed, do not use the mixture.
5. After compatibility testing is complete, dispose of any pesticide wastes in accordance with the **Storage and Disposal** section in this label.

CROP USE DIRECTIONS

Acuron Herbicide is to be used for preemergence use for control of most annual grass and broadleaf weeds in field corn, seed corn, silage corn, sweet corn and yellow popcorn. Acuron Herbicide may also be applied early postemergence for the control of broadleaf weeds in field corn, seed corn and silage corn. Do not apply Acuron Herbicide to emerged sweet corn or yellow popcorn or severe crop injury will occur.

See Table 1 and 2 for a list of weeds controlled.

Acuron Herbicide Use Rate: Determine the soil organic matter content of the field on which Acuron Herbicide is to be applied and then refer to Table 4 to determine application rate. On soils with greater than 10% organic matter, Acuron Herbicide activity may be affected resulting in reduced or poor weed control.

Table 4: Acuron Herbicide Application Rates[1]

Soil Organic Matter Content	Application rate[2,3]
<3%	2.5 qt/A
≥3%	3.0 qt/A

[1]These rates apply to all application method timings.

[2]Do not exceed 3.0 qt/A of Acuron Herbicide per year.

[3]For extended residual or control of heavy weed infestations, 3.0 qt/A of Acuron Herbicide may be applied to soils with <3% OM.

ACURON HERBICIDE APPLIED ALONE

Early Preplant: Acuron Herbicide may be applied up to 28 days prior to planting.

Preemergence Surface: Acuron Herbicide may be applied to the soil surface as a broadcast or banded application.

Early Postemergence: Acuron Herbicide may be applied after corn (for grain, seed, or silage) emergence. See the **"Adjuvants"** section of this label for specific directions. Do not apply early postemergence to corn in liquid fertilizer or severe crop injury may occur. Apply this treatment to small broadleaf weeds (less than 3 inches tall). Occasional corn leaf burn may result, but this will not affect later growth or corn yield. Do not apply Acuron Herbicide to emerged sweet corn or yellow popcorn or severe crop injury may occur. Postemergence applications to corn must be made before crop reaches 12 inches in height.

This product will not provide consistent control of emerged grass weeds. For control of emerged grass weeds a grass herbicide tank mix may be required (see tank mix section of this label).

If Bicep II Magnum®, Bicep Lite II Magnum®, AAtrex® (atrazine), Dual Magnum®, or Dual II Magnum® alone or in tank mixtures have been applied early preplant, preplant surface, preplant incorporated, or preemergence, limit the Acuron Herbicide early post application to not exceed a total of 2.5 lb of active ingredient of atrazine or 3.75 lb of *S*-metolachlor active per acre, or illegal residues may result.

Split Application: Acuron Herbicide may be applied as a split application in corn (for grain, seed, or silage). For a split application program, apply 1/2 to 2/3 of the labeled rate of Acuron Herbicide prior to crop emergence followed by a second Acuron Herbicide application at 1/3 to 1/2 of the labeled rate as a post application after corn emergence. The total amount of Acuron Herbicide applied in the split application program cannot exceed 3.0 qt/A per year. Do not make more than two Acuron Herbicide applications per year. Do not make the second application within 14 days of the first application. Refer to the **Early Postemergence** section above for instructions on postemergence applications.

ACURON HERBICIDE TANK MIX COMBINATIONS

Use of Spray Adjuvants with Tank Mixtures

When Acuron Herbicide is used as a preemergence herbicide, and before weeds have emerged, spray adjuvants have little or no influence on performance. However, in burndown situations where the weeds have emerged and the corn has not, an adjuvant may be used with Acuron Herbicide applied alone or when applied in tank mixture with a burndown herbicide as allowed on the individual product labels. Use only those adjuvants approved for agricultural crop use. See the **"Adjuvants"** section under **"Application Procedures"** for further instructions.

Burndown Combinations for Reduced Tillage Situations

In reduced or no-till corn and before the crop has emerged, Acuron Herbicide tank mixes with Gramoxone, Roundup or glyphosate will burndown emerged weeds. For best results, apply tank mixes of Acuron Herbicide plus Gramoxone to emerged weeds that are 1-6 inches in height. Consult the Gramoxone, Roundup or glyphosate product label for further information on weeds controlled and application timings.

Preemergence Tank Mixtures Applied Before Corn Emergence

The tank mix partners listed in Table 5 may be used in either conventional, reduced, or no-till systems and be applied by the same methods and at the same timings as Acuron Herbicide unless otherwise specified in the tank mix product label. Follow all tank mix product labels for use rates and restrictions. Perform a compatibility test prior to spraying the tank mix application. Tank mixtures with 2,4-D are allowed, but must only be done with extreme care with regard to ensuring compatibility before mixing a load. 2,4-D products, and even batches, vary greatly with regard to compatibility and must be checked each time a water or carrier source, water or carrier temperature, product source, or tank mixture recipe is changed.

Table 5: Tank Mixtures for Preemergence Applications with Acuron Herbicide

Tank Mix	Rate (Max)	Objective
AAtrex or other solo Atrazine products	0.5-1.25 lb ai/A	Improved broadleaf and grass weed control
Princep®	0.5-1.3 lb ai/A	Improved broadleaf and grass weed control
Gramoxone brands	See product label	Burndown existing weeds
Roundup or other glyphosate brands	See product label	Burndown existing weeds
Warrior® brands	See product label	To control insects, such as cutworm

Early Postemergence Tank Mixtures Applied After Corn Emergence

The tank mix partners listed in Table 6 may be used in conventional, reduced or no-till systems and can be applied by the same methods and at the same timings as Acuron Herbicide unless otherwise specified in the tank mix product label. Follow all tank mix product labels for use rates and restrictions. Perform a compatibility test prior to spraying the tank mix application. Do not apply Acuron Herbicide tank mixtures to emerged sweet corn or yellow popcorn.

Table 6: Tank Mixtures for Early Postemergence Weed Control with Acuron Herbicide

Tank Mix[1]	Rate (Max)	Objective
AAtrex or other solo Atrazine products	0.5-1.25 lb ai/A	Improved broadleaf and annual grass weed control and weed resistance management
Warrior brands	As per product label	To control insects, such as cutworm
Accent® Q	As per product label	Emerged grass control
Basis® brands	As per product label	Emerged grass control
Status®	As per product label	Improved broadleaf control and weed resistance management
Steadfast® Q	As per product label	Emerged grass control

[1]Consult the **"Adjuvant"** section of this label for directions when applying Acuron Herbicide alone or in tank mixture to emerged corn (for grain, seed, or silage).

Acuron Herbicide Programs with Glyphosate in Roundup Ready® or Agrisure® GT Corn

Acuron Herbicide may be applied early postemergence at a rate of 1.5-3.0 qt/A in tank mixture with a solo glyphosate product (e.g. Roundup) that is registered for use over-the-top in Roundup Ready or Agrisure GT field corn. To minimize weed competition with the crop, target the application of this mixture to weeds in the 1 to 2 inch range. Do not apply this mixture to corn that is greater than 12 inches tall. If the glyphosate product has a built-in adjuvant system (i.e. the product label does not ask for additional adjuvant), only spray-grade ammonium sulfate (AMS) at 8.5 lb/100 gal may be added to this mixture. If the glyphosate product label calls for an adjuvant in addition to AMS, add a non-ionic surfactant (NIS) at 0.25% v/v and AMS to this spray mixture. Do not add urea ammonium nitrate (UAN), crop oil concentrate (COC), or methylated seed oil (MSO) type adjuvants to these mixtures, or crop injury may occur. Follow all directions for use and restrictions on the glyphosate product label.

Alternatively, Acuron Herbicide may be applied preemergence at a rate down to 2 qt/A as part of a two-pass weed control system when followed by a postemergence application of a glyphosate based product in Roundup Ready or Agrisure GT corn. When used in this way, Acuron Herbicide will provide reduced competition of the weeds listed in Table 1 for a period of 30 or more days, thus improving the timing flexibility and effectiveness of the glyphosate based product application. Follow all directions for use and restrictions on the glyphosate product label.

Acuron Herbicide may be applied preemergence at 1.25-1.5 qt/A as part of a two-pass weed control system when followed by Halex® GT postemergence in Roundup Ready or Agrisure GT corn. Follow all directions for use and restrictions on each product label.

Acuron Herbicide Programs for LibertyLink Corn

Acuron Herbicide may be applied early postemergence at a rate of 1.5-2.0 qt/A in tank mixture with Ignite or Liberty and applied over-the-top in field corn designated as LibertyLink. To minimize weed competition with the crop, target the application of this mixture to weeds in the 1 to 2 inch range. Do not apply this mixture to corn that is greater than 12 inches tall. Ammonium sulfate (AMS) may be added as a spray adjuvant as directed on the Ignite or Liberty label. However, AMS must be the only adjuvant added to this tank mixture. Do not add urea ammonium nitrate (UAN), crop oil concentrate (COC), non-ionic surfactants (NIS), or methylated seed oil (MSO) type adjuvants to these mixtures, or crop injury may occur. Follow all directions for use and restrictions on the Ignite or Liberty product label.

Alternatively, Acuron Herbicide may be applied preemergence at a rate down to 2 qt/A as part of a two-pass weed control system when followed by a postemergence application of Ignite or Liberty in field corn designated as LibertyLink. When used in this way, Acuron Herbicide will provide reduced competition of the weeds listed in Table 1 for a period of 30 or more days, thus improving the timing flexibility and effectiveness of the Ignite or Liberty application. Follow all directions for use and restrictions on the Ignite or Liberty product label.

STORAGE AND DISPOSAL

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

Pesticide Storage

Keep container tightly closed when not in use. Do not store near seeds, fertilizers, or foodstuffs. Keep away from heat and flame. Ground water contamination may be reduced by diking and flooring of permanent liquid bulk storage sites with an impermeable material.

Pesticide Disposal

Open dumping is prohibited. Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Rinse spray equipment. Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of as described above, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

Container Handling (equal to or less than 5 gallons)

Non-refillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, by other procedures allowed by state and local authorities.

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

Container Handling (greater than 5 gallons)

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, by other procedures allowed by state and local authorities.

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

CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER.

For non-emergency information (e.g., current product information), call
Syngenta Crop Protection at 1-800-334-9481

Manufactured for:
Syngenta Crop Protection, LLC
P. O. Box 18300
Greensboro, North Carolina 27419-8300

SCP 1466A-L1E 1121
4150591

RESTRICTED USE PESTICIDE

(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.

THIS PRODUCT IS A RESTRICTED-USE HERBICIDE DUE TO GROUND AND SURFACE WATER CONCERNS. USERS MUST READ AND FOLLOW ALL PRECAUTIONARY STATEMENTS AND INSTRUCTIONS FOR USE IN ORDER TO MINIMIZE POTENTIAL FOR ATRAZINE TO REACH GROUND AND SURFACE WATER.

Sale, use and distribution of this product in Nassau and Suffolk Counties in the State of New York is prohibited.

ATRAZINE	GROUP	5	HERBICIDE
BICYCLOPYRONE	GROUP	27	HERBICIDE
MESOTRIONE	GROUP	27	HERBICIDE
S-METOLACHLOR	GROUP	15	HERBICIDE

Acuron® Herbicide

A Herbicide for Control of Annual Grass and Broadleaf Weeds in Field Corn, Seed Corn, Silage Corn, Sweet Corn and Yellow Popcorn

Active Ingredients:

S-Metolachlor: (CAS No. 87392-12-9)	23.40%
Atrazine*: (CAS No. 1912-24-9)	10.93%
Mesotrione: (CAS No. 104206-82-8)	2.60%
Bicyclopyrone: (CAS No. 352010-68-5)	0.65%
Other Ingredients:	62.42%
Total:	100.00%

Acuron® Herbicide is a ZC formulation containing 1.0 pound Atrazine, 0.06 pound Bicyclopyrone, 0.24 pound Mesotrione, and 2.14 pounds *S*-metolachlor per gallon.

*Atrazine with a maximum of 0.45% related triazines.

See additional directions for use and Storage and Disposal in attached booklet.

AGRICULTURAL USE REQUIREMENTS

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

EPA Reg. No. 100-1466 EPA Est. 100-LA-001

Manufactured for:
Syngenta Crop Protection, LLC
P. O. Box 18300
Greensboro, North Carolina 27419-8300

SCP 1466A-L1E 1121 4150591

2.5 gallons

Net Contents

KEEP OUT OF REACH OF CHILDREN.

CAUTION

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION: Harmful if swallowed. Causes moderate eye injury. Avoid contact with eyes, skin, or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

FIRST AID **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. **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 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. **If inhaled:** 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 further treatment advice. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. **HOT LINE NUMBER:** For 24 Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire or Accident), Call **1-800-888-8372**.

Environmental Hazards: 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 contaminate water when disposing of equipment wash water or rinsate. This product contains atrazine, which has been shown to be toxic to aquatic invertebrates. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply when weather conditions favor drift from treated areas.

Groundwater Advisory: Acuron Herbicide contains the active ingredients atrazine, bicyclopyrone, mesotrione and *S*-metolachlor. Atrazine can travel (seep or leach) through soil and can enter groundwater which 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. Bicyclopyrone is known to leach through soil into groundwater under certain conditions as a result of label use. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow. *S*-metolachlor is known to leach through soil into groundwater under certain conditions as a result of agricultural use. Use of this product in areas where soils are permeable, particularly where the water table is shallow may result in groundwater contamination.

Surface Water Advisory: This product has a high potential for reaching surface water via runoff for several months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of atrazine, bicyclopyrone, mesotrione and *S*-metolachlor from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

NON-TARGET ORGANISM ADVISORY STATEMENT

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

Reporting Ecological Incidents: To report ecological incidents, including mortality, injury, or harm to plants and animals, call 1-800-888-8372.

Mixing/Loading Instructions: Care must be taken when using this product to prevent back-siphoning into wells, spills, or improper disposal of excess pesticide, spray mixtures, or rinsates. Check valves or antisiphoning devices must be used on mixing equipment. This product must not be mixed/loaded or used within 50 ft of wells, including abandoned wells, drainage wells, and sink holes.* This product must not be mixed or loaded within 50 ft of perennial or intermittent streams and rivers, natural or impounded lakes and reservoirs. This product may not be applied within 66 ft of the points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 ft from the edge of 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, or seeded with grass or other suitable crop.*

*For exceptions to these restrictions, see the **Environmental Hazards** section of the **Precautionary Statements** in attached booklet.

Tile-Outletted Terraced Fields Containing Standpipes: One of the following restrictions must be used in applying atrazine to tile-outletted terraced fields containing standpipes:

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

Physical and Chemical Hazards: Do not use or store near heat or open flame.

STORAGE AND DISPOSAL

Container Handling: Non-refillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, by other procedures allowed by state and local authorities.

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

CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER.

syngenta®

(01) 0 07 02941 60285 4


66 feet
66 feet

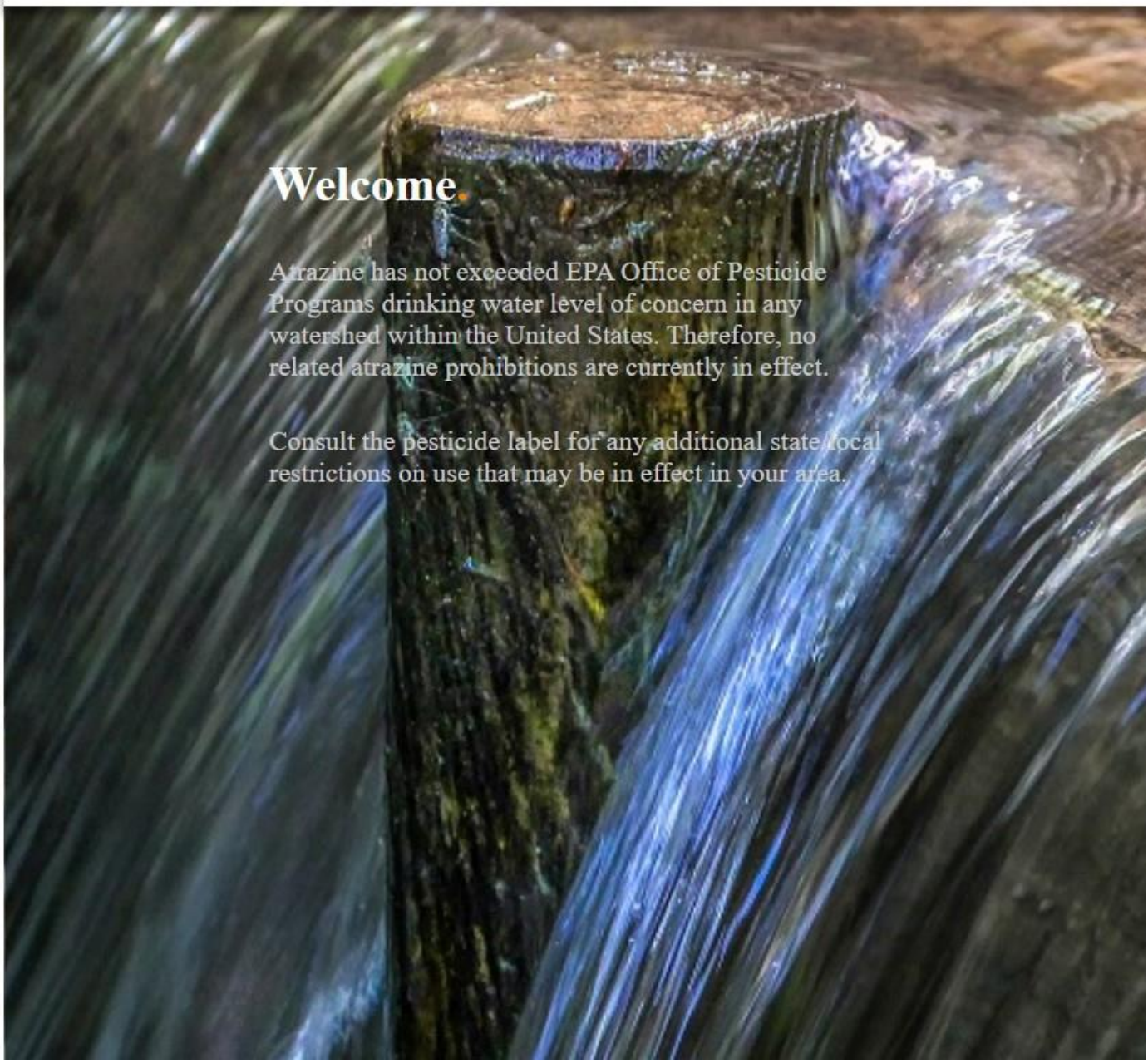

Browns River
66 feet
3D


<----------200 feet ---------->
200 feet

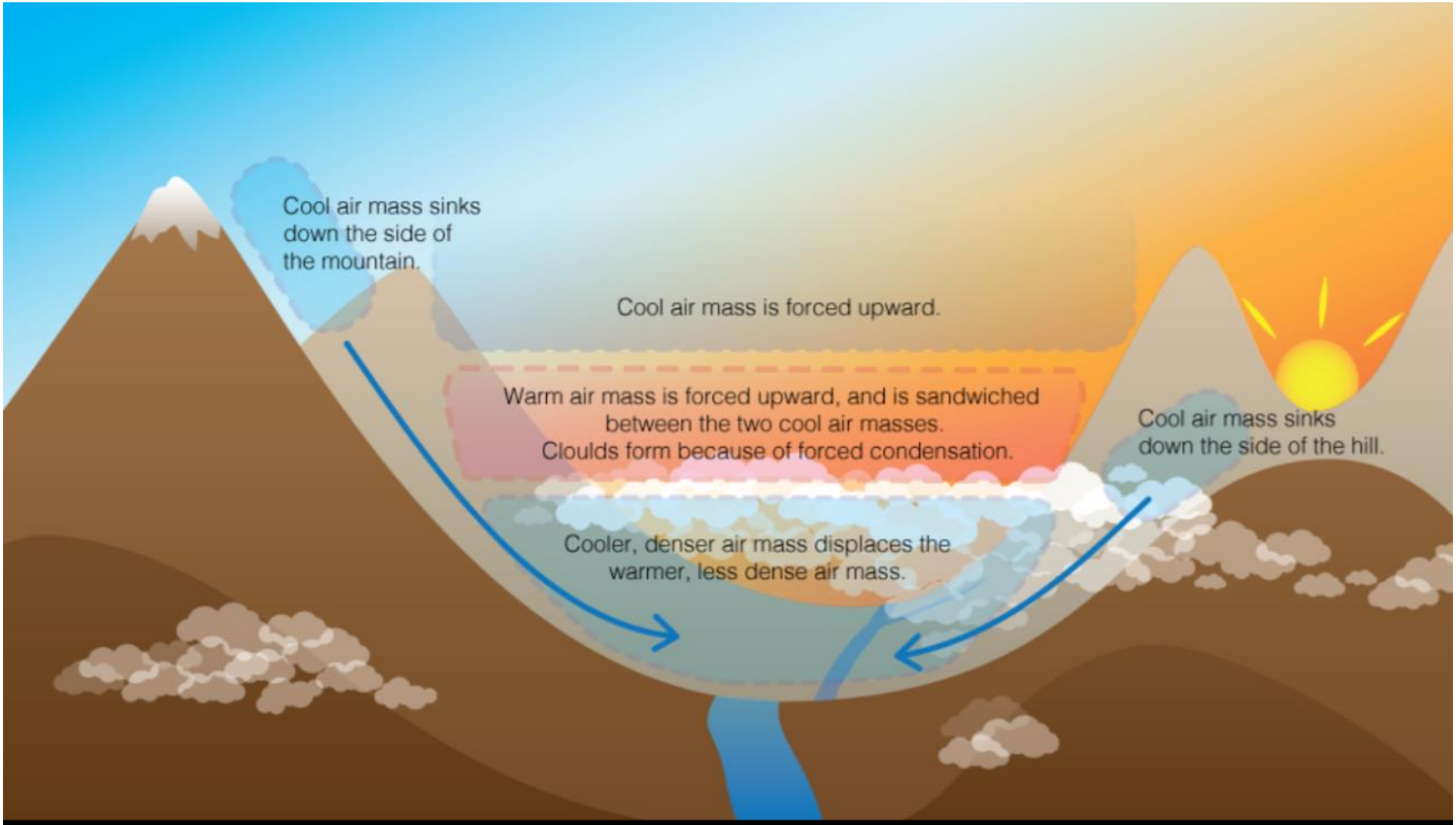
atrazine-watershed.info

VTHR VISION Plants Microsoft Office Ho... Google News Google HOTMAIL

Atrazine Watershed Information Center



Low-lying mist in West Sussex. Conditions can be surprisingly clear and warm at higher altitudes. Photograph: Alamy



Inversions form when cooling air sinks into valleys and there is a lack of active weather to mix out the pooling air. Credit: Black Mountain Nordic Club

ASABE S572.1 Droplet Size Classification

The American Society of Agricultural and Biological Engineers (ASABE) developed the ASABE S572.1 standard to measure and interpret spray quality from tips.

Spray Quality*	Size of Droplets	VMD Range (Microns**)	Color Code	Retention on Difficult to Wet Leaves	Used for	Drift Potential
Extremely Fine	Small	<60	Purple	Excellent	Exceptions	High
Very Fine		61-105	Red	Excellent	Exceptions	
Fine		106-235	Orange	Very Good	Good Cover	
Medium		236-340	Yellow	Good	Most Products	
Coarse		341-403	Blue	Moderate	Systemic Herbicides	
Very Coarse		404-502	Green	Poor	Soil Herbicides	
Extremely Coarse		503-665	White	Very Poor	Liquid Fertilizer	
Ultra Coarse	Large	>665	Black	Very Poor	Liquid Fertilizer	Low

The ASABE S572.1

*Always read the pesticide label to determine which spray quality is required.

**Estimated from sample reference graph in ASABE/ANSI/ASAE Standard S572.1

ASABE S572.1 standard uses eight droplet classification categories, six of which are common for agriculture and horticulture:

Very Fine | **Fine** | **Medium** | **Coarse** | **Very Coarse** | **Extremely Coarse**

Most agrochemical applications recommend a fine, medium, or coarse spray:

Fine sprays provide enhanced retention for directed spraying on the target including:

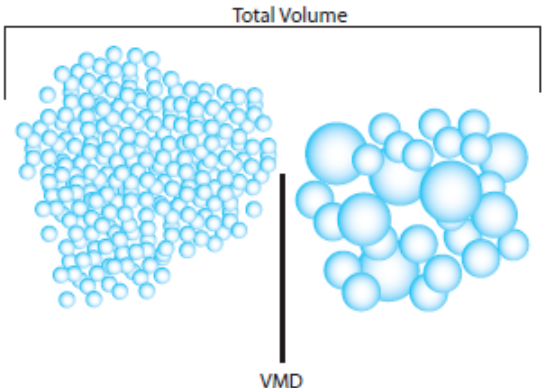
- Foliar-acting weed control
- Contact-acting fungicides and insecticides

Medium sprays are the most widely used spray type.

- Used by default by most applicators when spray quality is not defined by the label
- Systemic-acting fungicides, insecticides and herbicides.

Coarse sprays are used with systemic, residual, and soil-applied herbicides.

A. Understanding Droplet VMD



VMD is the droplet size at which 50% of the spray volume is in droplets larger than the VMD and 50% of the volume is in droplets smaller than the VMD (adapted from Matthews 1992).

Degree of Atomization	Droplet Size (Microns)	Relative Size Related to Common Objects
Fog	Up to 25	Point of a Needle (25 Microns)
Fine Mist	20-100	Human Hair (100 Microns)
Fine Drizzle	100-250	Sewing Thread (150 Microns)
Heavy Drizzle	250-500	Toothbrush Bristle (300 Microns)
Light Rain	500-800	Staple (550 Microns)
Heavy Rain	800-1000	Paper Clip (850 Microns)
Thunderstorm Rain	1000-4000	#2 Pencil Lead (2000 Microns)

Droplet sizes are usually expressed in microns (micrometers). One micron equals one thousandth of a millimeter. Other than the effects of the specific material being sprayed, the four major factors effecting droplet size are: tip style, capacity, spraying pressure and spray pattern type. Lower spraying pressures provide larger droplet sizes, while higher spraying pressures yield smaller droplet sizes. The smallest droplet sizes are achieved by air atomizing tips. Generally speaking, the largest spray droplets are produced by wide-angle, flat hydraulic spray tips. In the hydraulic spray tip series, the smallest droplet sizes are produced by hollow-cone spray tips.

The Agricultural Health Study (AHS) has found significant associations between pesticide exposure and increased risks of several cancers, including prostate, bladder, lung, pancreatic, and colon cancer, as well as leukemia and multiple myeloma, with the most consistent effects seen in individuals with high occupational exposure to pesticides, like farmers and pesticide applicators; additionally, the study has also linked pesticide exposure to potential neurological effects like loss of sense of smell.

Key findings from the AHS regarding pesticides and human health:

- **Cancer risks:**

  Studies have shown a link between pesticide exposure and increased incidence of various cancers, including prostate, bladder, lung, pancreatic, colon, leukemia, and non-Hodgkin's lymphoma.

- **Dose-dependent relationship:**

  The risk of cancer often appears to increase with higher levels of pesticide exposure.

- **Vulnerable populations:**

  Agricultural workers, especially those with frequent pesticide exposure, are considered at higher risk for developing pesticide-related health issues.

- **Neurological effects:**
  Recent AHS research has indicated a potential link between high pesticide exposure and loss of sense of smell.

Important points to consider:

- **Study limitations:**

  While the AHS provides valuable data, it is important to note that establishing a definitive causal relationship between pesticide exposure and specific health outcomes can be complex due to factors like confounding variables and limitations in exposure assessment.

- **Pesticide type matters:**

  Different types of pesticides may have varying levels of toxicity and associated health risks.

- **Individual susceptibility:**
  Genetic factors and other personal health conditions can influence how an individual responds to pesticide exposure.

2,4-D QUINCLORAC DICAMBA	GROUP	4	HERBICIDE
SULFENTRAZONE	GROUP	14	HERBICIDE

Q4 Plus® Turf Herbicide for Grassy & Broadleaf Weeds

For use in New York State by spot treatment only. Not for sale, distribution, or use in Nassau or Suffolk Counties in New York State.

ACTIVE INGREDIENTS:

Quinclorac	8.43%
Sulfentrazone	0.69%
2,4-D, dimethylamine salt	11.81%
Dicamba, dimethylamine salt	1.49%
OTHER INGREDIENTS:	77.58%
TOTAL	100.00%

THIS PRODUCT CONTAINS:

0.75 lb. 3,7-dichloro-8-quinolinecarboxylic acid per gallon or 8.43%.
0.06 lb. N-[2,4-dichloro-5-[4-(difluoromethyl)-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4-triazol-1-yl] phenyl]methanesulfonamide per gallon or 0.69%.
0.88 lb. 2,4-dichlorophenoxyacetic acid equivalent per gallon or 9.81%.
0.10 lb. 3,6-dichloro-o-anisic acid equivalent per gallon or 1.24%.

Isomer Specific By AOAC Methods.

CAS Registry Numbers: Quinclorac (84087-01-4), Sulfentrazone (122836-35-5), Dicamba, dimethylamine salt (2300-66-5), 2,4-D, dimethylamine salt (2008-39-1).

KEEP OUT OF REACH OF CHILDREN

CAUTION

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 some one to explain it to you in detail.)

READ THE ENTIRE LABEL FIRST. OBSERVE ALL PRECAUTIONS AND FOLLOW DIRECTIONS CAREFULLY.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION: Causes moderate eye irritation. Avoid contact with eyes or clothing. Harmful if swallowed.

Personal Protective Equipment (PPE)

All mixers, loaders, applicators, and other handlers must wear*:

- long-sleeved shirt and long pants,
- protective eyewear (such as goggles, face shield, or safety glasses),
- shoes and socks,
- chemical-resistant gloves made of barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride, or viton (except for applicators using ground boom equipment) and
- chemical-resistant apron when mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate.

*Applicators may choose not to wear protective eyewear when dilution is with water only and dilution rates are greater (higher) than 5:1 or greater (higher) than 5 parts of water to 1 part of product.

User Safety Requirements

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations

- Users should wash hands thoroughly with soap and water before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. If pesticide gets on skin, wash immediately with soap and water.
- Users should 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.

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.
If on skin or on 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 1-877-800-5556 for emergency medical treatment information.

Environmental Hazards

This pesticide may be toxic to fish and 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. Drift and runoff may be hazardous to plants, and to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash waters or rinsate.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater.

Physical and Chemical Hazards

Combustible. Do not use or store near heat or open flame.

DIRECTIONS FOR USE

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

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 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 48 hours.

(cont. on next page)

Agricultural Use Requirements *(cont.)*

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 worn over short-sleeved shirt and short pants,
- chemical-resistant footwear plus socks,
- chemical-resistant gloves made of any water-proof material and,
- protective eyewear

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.

Reentry Statement: Do not enter or allow people (or pets) to enter the treated area until sprays have dried.

1. Product Description

4-in-1 Herbicide

Q4® Plus Turf Herbicide for Grassy & Broadleaf Weeds contains 4 active ingredients that broaden the spectrum of weed control. Q4 Plus Turf Herbicide for Grassy & Broadleaf Weeds is a versatile herbicide that will control many troublesome grassy and broadleaf weeds in established turfgrass when used as directed.

- Versatile post-emergent herbicide for turfgrass to control both grassy and broadleaf weeds.
- Q4® Plus Turf Herbicide for Grassy & Broadleaf Weeds is absorbed by foliage and roots and translocated throughout the plant where it uses multiple modes of action to control both grassy and broadleaf weeds. One mode of action involves an auxin-type herbicidal activity which disrupts plant growth in broadleaf weeds, while another mode of action works as an enzyme/cell wall disruptor to control crabgrass and other grassy weeds.
- The effects on grassy weeds include stunting, gradual reddening, yellowing and followed by tissue death. Symptoms typically appear 7 to 14 days after application.
- Q4 Plus Turf Herbicide for Grassy & Broadleaf Weeds provides post emergent weed control for common weed species in turfgrass such as spurge. Foliar contact of Q4 Plus Turf Herbicide for Grassy & Broadleaf Weeds on emerged, susceptible weeds results in rapid dessication and plant tissue death.
- Wide window of application for broadleaf weeds beginning at emergence and active weed growth.
- The symptoms of susceptible broadleaf weeds include leaf and stem curl or twisting, and tissue death.

2. Use Restrictions

- The maximum single application rate for Q4 Plus Turf Herbicide for Grassy & Broadleaf Weeds is 8 pints of product per acre per application, the equivalent of 0.75 lb quinclorac ai, 0.06 lb sulfentrazone ai, 0.88 lb 2,4-D ae, and 0.10 lb dicamba ae per acre per application.
- The maximum annual application rate for Q4 Plus Turf Herbicide for Grassy & Broadleaf Weeds is 16 pints of product per acre per year the equivalent of 1.50 lb quinclorac ai, 0.12 lb sulfentrazone ai, 1.76 lb 2,4-D ae, and 0.20 lb dicamba ae per acre per year.
- The maximum number of broadcast applications for commercial sod farms is limited to 2 per year with a minimum of 21 days between applications.
- The maximum number of broadcast applications for ornamental turf and non-cropland areas is limited to 2 per year with a minimum of 30 days between applications.

3. Weed Resistance Management

For resistance management, this product contains Group 4 and Group 14 herbicides. Any weed population may contain or develop plants naturally resistant to this product and other Group 4 or Group 14 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same area. Appropriate resistance management strategies should be followed.

To delay herbicide resistance take one or more of the following steps:

- Rotate the use of this product or other Group 4 or Group 14 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or pest control advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use, and that considers mechanical control methods, cultural (e.g., timing to favor the turf and not the weeds), biological (weed-competitive varieties) and other management practices.
- Scout area prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective.
- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: 1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; 2) a spreading patch of non-controlled plants of a particular weed species; 3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method. Prevent movement of resistant weed seeds to other areas by cleaning equipment.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or pest control advisor for additional pesticide resistance-management and/or integrated weed-management recommendations for specific types of turf and weed biotypes.
- For further information or to report suspected resistance, call 877-800-5556.

4. Where To Use

This product provides broadleaf control in warm-season and cool-season turfgrass in 5 use sites. See tables 2 and 3 below for turfgrass species that can be treated with Q4 Plus Turf Herbicide for Grassy & Broadleaf Weeds.

- **Residential/domestic sites** are defined as areas associated with the household or home life including, but not limited to apartment complexes, condominiums, and patient care areas of nursing homes, mental institutions, hospitals, or convalescent homes.
- **Ornamental sites** include turfgrass established around residences, parks, streets, retail outlets, cemeteries, industrial and institutional buildings, recreation areas, fairgrounds, areas adjacent to athletic fields and paved areas.
- **Institutional sites** are defined as turf areas around properties or facilities providing a service to public or private organizations including, but not limited to hospitals, nursing homes, schools, museums, libraries, sport facilities, golf courses (fairways and roughs), and office buildings.
- **Non-cropland sites** include Highway rights-of-way (principal, interstate, county, private, and unpaved roads); roadsides, roadside ditches, road shoulders, road embankments, dividers and medians; municipal, state and federal lands; airports and military installations.
- **Agricultural site:** Commercial sod production

Prohibitions of Sites:

- Do not apply to any body of water such as lakes, streams, rivers, ponds, reservoirs, or estuaries (salt water bays). Do not apply to any shorelines (non-cropland sites adjacent to the edges of a body of water) for lakes, streams, rivers, ponds, reservoirs, or estuaries (salt water bays).
- Do not apply to wetlands (swamps, bogs, potholes, or marshes).
- Do not apply to agricultural irrigation water or on agricultural irrigation ditchbanks and canals.
- Do not apply to agricultural drainage water or on agricultural ditchbanks.
- **DO NOT** apply Q4 Plus Turf Herbicide for Grassy & Broadleaf Weeds to the following:

Bahiagrass
Bentgrass
Carpetgrass
Centipedegrass
Dichondra
St. Augustinegrass
Greens and collars at golf courses
Lawns with desirable clovers or legumes
Ornamentals (flowers, trees, groundcovers, landscape beds and shrubs)

Turfgrass tolerance:

- **Turfgrass tolerance to this product may vary and temporary turfgrass yellowing may occur on fine fescues, Bermudagrass, and zoysiagrass (see specific Bermudagrass and zoysiagrass sections). Apply only to fine fescue when it is part of a mixed stand of cool-season turf/cool-season blends.**
- **Tolerant turf species listed on this label may exhibit temporary turf injury. The best tolerance occurs under optimal conditions for the turfgrass.**
- Adverse environmental conditions may reduce the selectivity on the turfgrass. Injury may occur under marginal conditions (e.g. low temperatures and drought stress) or under extreme conditions (e.g. high temperatures and high humidity). To avoid turf injury, use only on turfgrass that is reasonably free of stress from diseases, insects, excess heat or cold, drought or excess rainfall/irrigation, shaded areas, low soil pH, nematodes, improper mowing or improper applications of fertilizer and pesticides. Under any of these stress conditions, any turf damage caused by the use of this product is beyond the control of PBI/Gordon Corporation and all risk is assumed by the buyer and/or user.
- Certain spray tank additives (adjuvants, wetting agents, surfactants), liquid fertilizers, and tank mixtures containing emulsifiable concentrates may reduce the selectivity on the turfgrass. Use adjuvants and spray additives or tank-mix combinations only when your experience indicates that the tank mixture will not result in objectionable turf injury.
- Do not broadcast apply this product when temperatures are above 90°F; some injury can also be expected with spot treatments when air temperatures exceed 90°F.

5. Cultural Tips

For newly seeded areas:
Delay application of this product to grass seedlings until after the second or third mowing, or 28 days after emergence.

For newly sodded, sprigged, or plugged areas:
The application of this product to newly sodded, sprigged, or plugged grasses should be delayed until 3 to 4 weeks after the sodding, sprigging, or plugging operations.

Seeding:
Turf species on this label can be seeded into the treated areas 7 days after application with the exception of Kentucky bluegrass. Kentucky bluegrass can be seeded 14 days after application unless slight growth regulation can be tolerated..

Irrigation:
Do not apply this product immediately before rainfall or irrigation. For best results, do not irrigate or water the turfgrass within 24 hours after application. If dry conditions exist, a scheduled irrigation or watering 24 hours before and 24 hours after application is recommended. If rainfall does not occur in 2 to 7 days after application, irrigation of at least one-half inch is recommended.

Mowing:
Delay mowing 2 days before and until 2 days after the application of this product. Additional stress from low mowing heights may increase the possibility of turf injury. Clippings from the first three mowings should be left on the treated area. Do not use these clippings as mulch or compost around flowers, ornamentals, trees, or in vegetable gardens.

6. Spray Preparation

Mixing with Water:
Add one-half the required amount of water to the spray tank, then add Q4 Plus Turf Herbicide for Grassy & Broadleaf Weeds slowly with agitation, and complete filling the tank with water. Mix thoroughly and continue agitation while spraying.

When this product is left standing for extended periods of time, re-agitate to assure uniformity of the spray mixture.

Mixing with Liquid fertilizers:
In certain applications, liquid fertilizer may replace part of the water as a diluent.

ALWAYS PREMIX Q4 PLUS TURF HERBICIDE FOR GRASSY & BROADLEAF WEEDS WITH WATER BEFORE ADDING TO FLUID FERTILIZERS. For liquid nitrogen solutions such as UAN or urea solutions, use a premix of 1 part of this product with 4 parts of water or use a premix with a 1:4 ratio of product to water. For other fluid fertilizers such as suspensions, use a premix of 1 part of this product with 50 to 60 parts of water.

Use suitable sources and rates of fertilizer based upon local recommendations. Refer to the mixing directions on the labels of the liquid fertilizers. Always perform a jar test for compatibility before large scale mixing.

The jar test can be conducted by mixing all components in a small container in proportionate quantities. If the mixture separates after standing and can be mixed readily by shaking, then the mixture can be used and applied with spray equipment providing continuous agitation. If large flakes, sludge, gels or other precipitates form, or if a separate oily layer or oil globules appear, then the herbicide and the liquid fertilizer should not be prepared as a tank mixture.

7. Spray Equipment

Ground equipment: Power sprayers fitted with a boom or spray wand/gun may be used for broadcast applications and spot treatments. Boom sprayers equipped with appropriate flat fan nozzles, tips, and screens are suitable for broadcast applications. For best spray distribution and coverage, select a spray volume and delivery system that will ensure accurate and uniform coverage.

Hand-operated sprayers including backpack sprayers and compression sprayers are appropriate for small turfgrass areas. Calibration and proper application are essential when using this product.

Cleaning spray equipment: Clean sprayer before and after using this product. Use soap, household ammonia, detergent and water, or an approved spray tank cleaner and rinse thoroughly. Cross-contamination may cause physical incompatibility (mixing problems) or result in turf injury.

Spray distribution:

- The accuracy and uniformity of the herbicide distribution is the sole responsibility of the applicator.
- Uniform applications are essential when using this product. Over-application, excessive overlaps, or rates above those specified on this label can cause turf injury.
- Avoid spray overlaps with hand-held equipment: Wands fitted with flat fan nozzle tips may be used with the appropriate technique. Spray wands fitted with flat fan nozzles should not be waved in a back-and-forth motion, or in a side-to-side motion, or in a swinging arm motion. Instead, the nozzle should be held stationary at the proper height. Side-to-side motion results in uneven coverage. To avoid excessive spray pattern overlaps, a spray colorant may be used.
- This product may cause injury to susceptible/non-target plants at the use site by contacting the foliage, stems, or roots. To prevent injury to susceptible crops and other desirable broadleaf plants including but not limited to cotton, legumes, tobacco, tomatoes, garden/vegetable crops, and ornamentals (flowers, trees, and shrubs) avoid contact with the spray solution, spray droplets, and spray mist (fine droplets).

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

Aerial application: Do not apply as an aerial application.

8. Spray Drift

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and method of ground application can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

Droplet Size
Select nozzles and application pressure that deliver medium to coarse or larger spray droplets as indicated in the nozzle manufacturer's recommendations and in accordance with ASABE* Standard S-572.

Select coarse to very coarse droplet size when sulfentrazone is used as a preemergent/preplant application.

Select medium to very coarse droplet size when sulfentrazone is used postemergence with a contact burndown herbicide. Do not apply as spray droplets smaller than medium to coarse (defined by the ASABE* standard).

*ASABE – American Society for Agricultural and Biological Engineers.

Wind Speed
Applicators may spray only when wind speed is between 3 and 10 mph. Only apply this product if the wind direction favors on-target deposition and there are not sensitive areas (including, but not limited to, bodies of water, known habitat for nontarget species, nontarget crops) within 250 feet downwind. If applying a Medium spray, leave one swath unsprayed at the downwind edge of the treated field.

Susceptible Plants
Do not apply under circumstances where spray drift may occur to food, forage, or other plantings that might be damaged or crops thereof rendered unfit for sale, use or consumption. Susceptible crops include, but are not limited to, cotton, okra, flowers, grapes (in growing stage), fruit trees (foliage), soybeans (vegetative stage), ornamentals, sunflowers, tomatoes, beans, and other vegetables, or tobacco. Small amounts of spray drift that might not be visible may injure susceptible broadleaf plants.

Other State and Local Requirements
Applicators must follow all state and local pesticide drift requirements regarding application of 2,4-D herbicides. Where states have more stringent regulations, they must be observed.

Equipment
All ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates. Additional requirements for ground boom application: Do not release spray at a height higher than 30 inches above the ground.

Spray Volume
Ground applicators must use a minimum finished spray volume of 10 gallons per acre. When sulfentrazone is tank mixed with a contact burndown herbicide, ground applicators must use a minimum spray volume of 15 gallons per acre.

9. Post Emergent Control of Grassy Weeds

Q4 Plus Turf Herbicide for Grassy & Broadleaf Weeds can provide post emergent control and suppression of the grassy weeds listed in Table 1. Apply to weeds during the growth stages as shown in Table 1. Applications under adequate soil moisture conditions are preferred. Early summer treatments are generally more effective. Applications in the summer (approximately July 15 to August 15) to older, drought stressed grassy weeds are less effective. Late summer applications (after August 15) to mature crabgrass can be very effective. Weed control is affected by the spray volume, timing and the weed growth stages (see Tables 1, 2, and 3).

TABLE 1. Leaf stages of grassy weeds and yellow nutsedge for optimum control.

Weed species	1 to 3 leaf	4 to 5 leaf (1 tiller)	6 leaf (2 tillers)	7 leaf (3 tillers)	8 leaf (4 tillers)	Mature (late season)
Crabgrass, (large and smooth), Barnyardgrass, Foxtail, (green, yellow and giant), Signalgrass, (broadleaf)	X	X	X	Footnote 1	Footnote 1 (reduced control)	X
Nutsedge, (yellow)	X	Footnote 1	Footnote 1	Footnote 1	Footnote 1 (reduced control)	X

[1]Second or follow-up applications on ornamental turfgrass may be required. Early summer treatments are generally more effective. Applications in the summer (approximately July 15 to August 15) to older, drought stressed grassy weeds are less effective. Late summer applications (after August 15) to mature crabgrass can be very effective.

10. Post Emergent Control of Broadleaf Weeds

Apply this product to broadleaf weeds that are young and actively growing for the best results. Spring and fall treatments under adequate soil moisture conditions are preferred to the summer treatments. Generally, summer broadcast applications to older, drought stressed weeds are less effective. Fall applications provide improved control for emerged winter annuals and perennials such as henbit, chickweed, clover and ground ivy.

11. Applications

The maximum number of broadcast applications is limited to 2 per year. Spot treatments during the spring and summer are suitable for sparse infestations or as a follow-up treatment to a broadcast application on an “as-needed” basis. Second or follow-up applications as either broadcast or spot treatments should be made after the initial application on ornamental turfgrass and are recommended for more mature weeds, for dense infestations and for adverse environmental conditions.

Other situations that may need two broadcast or follow-up treatments include the following:

- Under certain conditions, applications of this product at the 3 to 4 tiller stage of the annual grasses may not provide complete control.
- All weed grasses do not germinate at the same time. The period of germination for crabgrass and annual grasses can extend into the summer after the initial application of this product and results may be poor and erratic.
- Dense infestations of weeds may prevent thorough spray coverage of the target weeds.
- Biotypes of large and smooth crabgrass in California have shown varied response to quinclorac. If control failure occurs following a second application, do not reapply this product. Change to a herbicide with a different mode of action.

Extremes in environmental conditions, i.e. temperature and moisture, soil conditions, and cultural practices may affect the activity of this product. Under warm moist conditions, herbicide symptoms may be accelerated. Under dry conditions, the expression of herbicide symptoms is generally delayed, and weeds hardened off by drought may be less susceptible to this product.

If objectionable turf injury occurs with the first application, then avoid making the second application of this product until the turfgrass recovery is complete.

Do not broadcast apply this product when temperatures are above 90°F temporary turfgrass discoloration can also be expected with spot treatments when air temperatures exceed 90°F.

State Restrictions:
Arizona: Do not use this product on sod farms in Arizona.

California: Make broadcast applications only between March 1 and September 1. If troublesome weeds appear during other times of the year, a spot application can be made. While irrigation is necessary and important for plant growth, apply irrigation water efficiently so that no more than 125% of the net irrigation requirement is applied for any irrigation event. Apply efficient irrigations for six months following application of sulfentrazone containing products. Do not apply product to bare ground.

New York: For use in New York State by spot treatment only. Spray individual weeds only. Adjust the sprayer to coarse spray to minimize wind drift. Apply to center of the weed and spray lightly to cover. Not for sale, distribution, or use in Nassau or Suffolk Counties in New York State.

TABLE 2. BROADCAST TREATMENTS FOR COOL-SEASON TURFGRASS

Application Site	Use Rate per Application
Kentucky Bluegrass, Perennial ryegrass, Fescues, Annual Bluegrass *(Poa annua)*, Rough Bluegrass *(Poa trivialis)*, Annual Ryegrass	**7 to 8 pints/A (2.6 to 3.0 fl. oz./1000 sq. ft.)**
Spray Volume For Conventional Spray Equipment: Use 50 to 220 gal./A (1.2 to 5.0 gal./1000 sq. ft.).	
For Low Volume Spray Equipment (such as PermaGreen Equipment and backpack sprayers): Equipment should be calibrated to apply at least 20 gallons per acre (0.45 gallons/1,000 sq. ft.). Use this lower spray volume (0.45 gallons/1,000 sq. ft.) only when your experience indicates that this volume provides effective weed coverage, adequate weed control, acceptable turf safety/tolerance, and will not result in objectionable turf injury.	
Note: Use the higher spray volumes (more than 50 gpa) for dense weed populations.	

TABLE 3. BROADCAST TREATMENTS FOR BERMUDAGRASS AND ZOYSIAGRASS	
Application Site	**Use Rate per Application**
Bermudagrass (common and hybrid) Zoysiagrass	**5 to 7 pints/A (1.8 to 2.6 fl. oz./1000 sq. ft.)**

Spray Volume For Conventional Spray Equipment: Use 50 to 220 gal./A (1.2 to 5.0 gal./1000 sq. ft.).

For Low Volume Spray Equipment (such as PermaGreen Equipment and backpack sprayers):
Equipment should be calibrated to apply at least 20 gallons per acre (0.45 gallons/1,000 sq. ft.). Use this lower spray volume (0.45 gallons/1,000 sq. ft.) only when your experience indicates that this volume provides effective weed coverage, adequate weed control, acceptable turf safety/tolerance, and will not result in objectionable turf injury.

- Apply only when Bermudagrass and zoysiagrass are actively growing.
- Expect temporary discoloration.
- Some Bermudagrass hybrids and zoysiagrass cultivars are moderately tolerant to this product and may be more susceptible to discoloration.
- For Bermudagrass hybrids, use lower rates until tolerance to injury can be determined.
- It is impossible to test all environmental conditions and all Bermudagrass hybrids or zoysiagrass cultivars. We suggest testing this product on a small area and observe the treated area for 30 days (during normal growing conditions) to determine the acceptability of turf discoloration.
- Some stunting of the Bermudagrass or zoysiagrass should be expected and turf generally recovers in 7 to 21 days.
- Do not apply in the fall during fall-to-winter transition period.
- Do not apply in the spring during winter-to-spring transition period.
- To avoid turf injury, use only on Bermudagrass or zoysiagrass that is not under stress from diseases, insects, excess heat or cold, drought or excess rainfall/irrigation, shaded areas, low soil pH, nematodes, improper mowing or improper applications of fertilizer and pesticides.
- **For optimum results:**
  - Irrigate 24 hours before and 24 hours after application with 1/2 inch of water.
  - The addition of nitrogen fertilizer or chelated iron may reduce some turf discoloration.
  - Spray in the morning hours and avoid application during extreme hot or dry conditions.
  - Equipment calibration is essential and avoid spray overlaps.
  - Do not use higher pressure equipment, spray pressure should be 40 psi or lower.

SPOT TREATMENTS:

- Calibration and proper application are essential when using this product. Spray coverage should be uniform and complete.
- Over applications can result in turfgrass injury.
- **Cool-Season Turf listed in Table 2:** Mix 2.6 to 3.0 fl. oz. of this product with 1.0 gallons of water for treatment of approximately 1,000 sq. ft. of turfgrass. Apply to weeds during the growth stages as shown in Table 1.
- **Warm-Season:** See specific Bermudagrass and zoysiagrass directions in Table 3. Mix 1.84 to 2.57 fl. oz.. of this product with 1.0 gallons of water for treatment of approximately 1,000 sq. ft. of turfgrass. Apply to weeds during the growth stages as shown in Table 1.

12. Weeds Controlled

Q4 Plus Turf Herbicide for Grassy & Broadleaf Weeds will control or suppress the following. Apply when weeds are young and actively growing.

WEEDS

Aster, white heath & white prairie
Barnyardgrass
Bedstraw
Beggarweed, creeping
Bindweed
Black medic
Broadleaf plantain
Buckhorn plantain
Bull thistle
Burdock, common
Buttercup, creeping
Carpetweed
Chickweed, common
Chicory
Cinquefoil
Clovers
Crabgrass[1, 2] (large and smooth)
Curly dock
Dandelion
Dayflower
Deadnettle
Dock
Dogfennel
Dollarweed (*pennywort)
English Daisy[1]
False dandelion (*spotted catsear & common catsear)
Field bindweed (*morningglory & creeping jenny)
Field oxeye-daisy (*creeping oxeye)
Filaree, whitestem & redstem
Florida betony
Florida pusley
Foxtail[1] (green, yellow and giant)
Ground ivy
Groundsel
Geranium (Carolina)
Hawkweed
Healall
Henbit
Innocence (Blue-eyed Mary)
Knotweed
Lambsquarters
Lawn burweed
Lespedeza, common
Mallow, common
Matchweed
Morningglory spp.
Mouseear chickweed
Nutsedge, yellow
Old world diamond flower
Oxalis (*yellow woodsorrel & creeping woodsorrel)
Parsley-piert
Pennsylvania smartweed
Pepperweed
Pigweed
Pineappleweed
Plantain
Poison ivy
Poison oak
Prickly lettuce (*compass plant)
Puncturevine
Purple cudweed
Purslane

(cont. on next column)

WEEDS *(cont.)*

Ragweed
Redweed
Red sorrel (*sheep sorrel)
Shepherd's purse
Signalgrass[1] (Broadleaf)
Speedwell *Veronica (Common, Slender and Thymeleaf)
Spurge
Thistles
Virginia buttonweed[1]
White clover (*Dutch clover, honeysuckle clover, white trefoil, & purplewort)
Wild carrot
Wild garlic
Wild geranium
Wild lettuce
Wild mustard
Wild onion
Wild strawberry
Wild Violet[1]
Yarrow
Yellow rocket

*Synonyms
[1]Follow-up application may be required.
[2]Biotypes of large and smooth crabgrass in California have shown varied response to quinclorac. If control failure occurs following a sequential (or follow-up) application, do not reapply this product. Change to a herbicide with a different mode of action.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in original container in a locked storage area inaccessible to children or pets. Keep from freezing.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

For Plastic Containers - Nonrefillable with capacities equal to or less than 5 gallons:

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available, 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.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

OR

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

For Plastic Containers - Nonrefillable with capacities greater than 5 gallons:

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available, 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.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

OR

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

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STORAGE AND DISPOSAL *(cont.)*

For Refillable Containers:

CONTAINER HANDLING: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.

Container cleaning: Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

LIMITED WARRANTY AND DISCLAIMER

IMPORTANT: Read this LIMITED WARRANTY AND DISCLAIMER before buying or using this product. By opening and using this product, buyer and all users agree to accept the terms of this LIMITED WARRANTY AND DISCLAIMER in their entirety and without exception. If the terms are not acceptable, return this product unopened immediately to the point of purchase, and the purchase price will be refunded in full.

It is impossible to eliminate all risks inherently associated with use of this product. Damage to the treated article, ineffectiveness, or other unintended consequences can result from use of the product under abnormal conditions such as weather, presence of other materials, or the manner or use of application, etc. Such factors and conditions are beyond the control of the manufacturer, and **BY PURCHASING AND USING THIS PRODUCT THE BUYER AND ALL USERS OF THIS PRODUCT AGREE TO ACCEPT ALL SUCH RISKS**. Buyer and all users further agree to assume all risks of loss or damage from the use of the product in any manner that is not explicitly set forth in or that is inconsistent with label instructions, warnings and cautions.

The manufacturer warrants only that this product conforms to the chemical description given on the label, and that the product is reasonably suited for the labeled use when applied according to the Directions for Use, subject to the inherent risks described below. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE MANUFACTURER NEITHER MAKES NOR INTENDS ANY OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY EXPRESSLY DISCLAIMED.**

THE EXCLUSIVE REMEDY OF BUYER AND ALL USERS OF THIS PRODUCT, AND THE EXCLUSIVE LIABILITY OF THE MANUFACTURER, FOR ANY AND ALL LOSES, DAMAGES, OR INJURIES RESULTING FROM THE USE OF HANDLING OF THIS PRODUCT, WHETHER OR NOT BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE, SHALL BE LIMITED, AT THE MANUFACTURER'S OPTION, TO REPLACEMENT OR THE REPAYMENT OF THE PURCHASE PRICE FOR THE QUANTITY OF PRODUCT WITH RESPECT TO WHICH DAMAGES ARE CLAIMED. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO CASE SHALL THE MANUFACTURER BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THE PRODUCT. The Manufacturer must be promptly notified in writing of any claims, whether based in contract, tort, negligence, strict liability, or otherwise, to be eligible to receive either remedy stated above.

The terms of this LIMITED WARRANTY AND DISCLAIMER cannot be varied by any written or verbal statements or agreements at the point of sale or elsewhere. No employee or agent of the manufacturer or seller is authorized to vary or exceed the terms of this LIMITED WARRANTY AND DISCLAIMER in any manner.

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ATTENTION: This specimen label is provided for informational use only. This product may not yet be available for sale in your state or area. The information found in this label may differ from the information found on the product label you are using. Always follow the instructions for use and precautions on the label of the product you are using.

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