

# Zaraxon™ Herbicide

GROUP

4

HERBICIDE



ADAMA

○ This product provides control of broadleaf annual and perennial weeds, and certain woody plants and vines on labeled crop sites, labeled non-crop sites, conifer and tree plantations, rangeland and permanent grass pastures, established turfgrass, fallow cropland, Conservation Reserve Program (CRP) acres including grazed areas on all of these sites.

○ **DO NOT apply to St. Augustine grass in the state of Florida.**  
**Not for Sale, Distribution, or Use in Nassau and Suffolk Counties, New York.**

○ **ACTIVE INGREDIENT:** **By Wt.**  
fluroxypyr 1-methylheptyl ester: ((4-amino-3,5-dichloro-6-fluoro-2-pyridinyl)oxy)acetic acid, 1-methylheptyl ester . . . . . 45.50%  
**OTHER INGREDIENTS:** . . . . . 54.50%  
**TOTAL:** . . . . . 100.00%

Acid Equivalent: fluroxypyr: ((4-amino-3,5-dichloro-6-fluoro-2-pyridinyl)oxy)acetic acid – 31.59% -2.8 lb/gal.

○ **EPA Reg. No. 81927-61-66222** **EPA Est. No. 37429-GA-001<sup>BT</sup>;**  
**37429-GA-002<sup>BO</sup>; 37429-GA-003<sup>BV</sup>;**  
**81927-AL-001<sup>PM</sup>; 7401-TX-001<sup>TX</sup>; 39578-TX-001<sup>ST</sup>**  
Letter(s) in lot number correspond(s) to superscript in EPA Est. No.

## ○ 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 someone to explain it to you in detail.)

○ See inside label booklet for additional Precautionary Statements and Directions for Use.

○ **How can we help? 1-866-406-6262**



#### 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.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.

#### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Causes moderate eye irritation. Avoid contact with eyes or clothing.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Shoes plus socks

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

#### ENGINEERING CONTROLS

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

#### USER SAFETY RECOMMENDATIONS

**Users should:**

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

#### ENVIRONMENTAL HAZARDS

This product is toxic to fish. Drift or runoff from treated areas may be hazardous to aquatic organisms and non-target plants. **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 cleaning equipment or disposing of equipment washwaters.

**Attention: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.**

#### PHYSICAL OR CHEMICAL HAZARDS

**DO NOT** mix or allow contact with oxidizing agents. Hazardous chemical reaction may occur.

### DIRECTIONS FOR USE

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

Read all Directions for Use carefully before applying.

**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.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves (made of any waterproof material)
- Shoes plus socks

### NON-AGRICULTURAL USE REQUIREMENTS

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

**Entry Restrictions for Non-WPS Uses: DO NOT** allow people (other than applicator) or pets on treatment area during application. **DO NOT** enter into treated area until sprays have dried.

### WEED RESISTANCE

Any weed population may contain plants that are naturally resistant to fluroxypyr, the active ingredient in this product, and to other herbicides with the same mode of action. **ATTENTION:** These resistant weed biotypes will not be controlled by this product. Consult advisors such as your agricultural extension service for agronomic management practices to minimize the occurrence of fluroxypyr resistance and considerations for supplemental control measures.

#### Weed Management

To minimize the occurrence of fluroxypyr resistant biotypes, observe the following general weed management practices:

- Scout application site before and after herbicide applications.
- Start with a clean application site, using either a burndown herbicide application or tillage.
- Control weeds early when they are relatively small.
- Add other herbicides (e.g. a selective and/or a residual herbicide) and cultural practices (e.g. tillage or crop rotation) where appropriate.
- Utilize the specified label rate for the most difficult to control weed in your field. Avoid tank mixtures with other herbicides that reduce this product's efficacy (through antagonism), or tank mixture directions that encourage application rates of this product below the label directions.
- Control weed escapes and prevent weeds from setting seeds.
- Clean equipment before moving from field to field to minimize the spread of weed seed or plant parts.
- Report any incidence of repeated non-performance of this product on a particular weed to your local retailer or county extension agent.

#### Management of Fluroxypyr Resistant Biotypes

Since the occurrence of fluroxypyr resistant weeds cannot be determined until after product use and scientific confirmation, manufacturer is not responsible for any losses that may result from the failure of this product to control fluroxypyr resistant weed biotypes.

The following good agronomic practices are recommended to reduce the spread of confirmed fluroxypyr resistant biotypes:

- If a naturally occurring resistant biotype is present in your application site, this product should be tank-mixed or applied sequentially with an appropriately labeled herbicide with a different mode of action to achieve control.
- Cultural and mechanical control practices (e.g., crop rotation or tillage) may also be used as appropriate.
- Scout treated application site after herbicide applications and control escaping weeds including resistant biotypes before they set seed.
- Thoroughly clean equipment before leaving fields known to contain resistant biotypes.

## Product Information

This product provides control of broadleaf annual and perennial weeds, and certain woody plants and vines on

- Airports, barrow ditches, communication transmission lines, electrical power and utility rights-of-way, fencerows, gravel pits, industrial sites, irrigation ditch banks, dry irrigation ditches or canals, military lands, mining and drilling areas, non-irrigation ditch banks, oil pads, parking lots, petroleum tank farms, pipelines, railroads, roadsides, storage areas, storm water retention areas, substations, unimproved rough turfgrasses, vacant lots and other non-crop residential areas;
- Natural areas (open space) for example, campgrounds, parks, prairie management, trails and trailheads, recreation areas, wildlife openings and wildlife habitat and management areas;
- Conifer and tree plantations;
- Rangeland and permanent grass pastures;
- Established turfgrass, including sod farms, residential lawns, golf courses, recreational, commercial and public turf areas;
- On-Farm non-cropland;
- CRP acres;
- Fallow cropland;
- Grasses grown for seed, forage, or hay;
- Small grains (wheat, barley, oats, triticale);
- Grain sorghum (Milo);
- Field corn;
- Sweet corn;
- Including grazed areas on all of these sites

## USE PRECAUTIONS

- **Management of Kochia Biotypes:** Research has suggested that many biotypes of kochia can occur within a single population. While kochia biotypes can vary in their susceptibility to this product, all will be suppressed or controlled at 12 fl. oz. per acre provided application timing and growing conditions are optimal. Application of this product at rates of less than 6 fl. oz. per acre can result in a shift to more tolerant biotypes within a population.
- Avoid applications where proximity of susceptible plants or other desirable plants is likely to result in exposure to spray or spray drift.
- Minimize overspray to open water when treating target vegetation non-flowing, quiescent or transient water. **Note:** Consult local public water control authorities before applying this product around public water; permits may be required to treat such areas.

## USE RESTRICTIONS

- **DO NOT** contaminate irrigation ditches or water used for domestic purposes.
- **Maximum Application Rate:** **DO NOT** apply more than 23 fl. oz. per acre of this product per year. Split applications of Zaraxon Herbicide™ may be made during a single year provided the total amount of product applied does not exceed the maximum labeled rate of 23 fl. oz. per acre.
- **Grazing restrictions:** There are no grazing restrictions for livestock, including lactating or non-lactating dairy animals.
- **Harvest restrictions:** **DO NOT** apply within 7 days of harvesting grass for hay or silage from treated areas.
- **Slaughter restrictions:** Meat animals must be withdrawn from treated forage at least 2 days before slaughter.
- **Chemigation:** **DO NOT** apply this product through any type of irrigation system.
- **In Arizona:** The state of Arizona has not approved this product for use on plants grown for agricultural/commercial production; such as on designated grazing areas.
- **DO NOT** store or handle other agricultural chemicals with the same containers used for this product. **DO NOT** apply other agricultural chemicals or pesticides with equipment used to apply this product unless equipment has been thoroughly cleaned (see Clean-Out Procedures for Spray Equipment).
- **Non-irrigation Ditch Banks and Seasonally Dry Wetland Sites:** It is permissible to treat non-irrigation ditch banks, seasonally dry wetlands (such as flood plains, deltas, marshes, swamps, or bogs), and transitional areas between upland and lowland sites. **DO NOT**

apply directly to water and take precautions to minimize spray drift to water. For control of woody plants and broadleaf weeds in these sites, follow use directions and application methods on this label for the specific site being treated.

- **Dry Irrigation Canals/Ditches:** **DO NOT** apply Zaraxon Herbicide to the inner banks of dry irrigation canals/ditches unless a 120-day restriction on use of irrigation water can be observed or residue levels of fluroxypyr (active ingredient in Zaraxon Herbicide) are determined by laboratory analysis, or other appropriate means of analysis, to be 1 ppb or less. **DO NOT** apply on ditches or canals currently being used to transport irrigation water or that will be used for irrigation within 4 months following treatment.
- **DO NOT apply to St. Augustine grass in the state of Florida.**

#### **Avoiding Drift Run-off to Surface Water or Adjacent Land**

Apply this product strictly in accordance with the run-off precautions on this label in order to minimize off-site exposure and potential effects on aquatic organisms and non-target plants.

Under certain conditions, this product may have a potential to run-off to surface water or adjacent land. Use vegetation filter strips or treatment setbacks along rivers, creeks, streams, wetlands, etc. or on the downhill side of treated areas where run-off could occur to minimize water runoff.

#### **Avoiding Injurious Spray Drift**

Spray drift produced during application is the responsibility of the applicator and care should be taken to minimize off-target movement of spray during application. A drift control agent suitable for agricultural use may be used with this product to aid in reducing spray drift but the first choice should be a coarser spray category nozzle set-up. If used, follow applicable use directions and precautions on the manufacturer's label.

**DO NOT apply where drift may be a problem due to proximity to susceptible crops or other non-target broadleaf plants. DO NOT apply or otherwise permit this product or sprays containing this product to contact crops or other desirable broadleaf plants,** including alfalfa, beans, cotton, grapes, melons, peas, potatoes, safflower, soybeans, sugar beets, sunflower, tobacco, tomatoes, and other vegetable crops, flowers, fruit trees, ornamentals, shade trees or other susceptible broadleaf plants. **DO NOT** permit spray mist or drift containing this product to contact susceptible plants because even very small quantities of the spray, that may not be visible, can cause severe injury during either active or dormant periods. **DO NOT** use in or around greenhouses.

**Ground Application:** To minimize spray drift, apply this product in a total spray volume of 5 gallons or more per acre using spray equipment designed to produce coarse or larger droplets per ASAE S-572 standard. Refer to the spray equipment manufacturer's recommendations for detailed information on nozzle types, arrangement, spacing and operating height and pressure. Operate equipment at spray pressures no greater than is necessary to produce a uniform spray pattern. Operate the spray boom no higher than is necessary to produce a uniformly overlapping pattern between spray nozzles. **DO NOT** apply with hollow cone-type insecticide nozzles or other nozzles that produce a fine-droplet spray.

**Aerial Application in Rights-of-Way (Helicopter Only):** In rights-of-way areas, **DO NOT** apply this product with fixed-wing aircraft.

**Aerial Application in Rangeland, Permanent Grass Pastures, and Conifer and Tree Plantations:** Both fixed wing and helicopter equipment may be used to apply this product on rangeland, permanent grass pastures and conifer and tree plantations, but fixed wing aircraft require additional drift mitigation measures.

To minimize spray drift, apply Zaraxon Herbicide in a total spray volume of 3 gallons or more per acre. Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Avoid applying below 2 mph due to variable wind direction and high potential for temperature inversion. Spray drift from aerial application can be minimized by applying a coarse spray at spray boom pressure no greater than 30 psi; by using straight-stream nozzles directed straight back, and by using a spray boom that does not exceed 75% of wing span or 90% of rotor diameter. For fixed wing aircraft, **DO NOT** exceed 140 mph during the application. **DO NOT** apply more than 10 feet above the vegetation canopy unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

**DO NOT** apply under conditions of a low level air temperature inversion. A temperature inversion is characterized by little or no wind and air temperature that is lower near the ground than at higher levels. The behavior of smoke generated by an aircraft-mounted device or continuous smoke column released at or near site of application will indicate the direction and velocity of air movement. A temperature inversion is indicated by layering of smoke at some level above the ground and little or no lateral movement.

## Spray Drift Management

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications.

1. The distance of the outer most operating nozzles on the boom must not exceed 75% of the wing span or 90% of the rotary diameter.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

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

The applicator should be familiar with and take into account the information covered in the following Aerial Drift Reduction Advisory. This information is advisory in nature and does not supersede mandatory label requirements.

## Aerial Drift Reduction Advisory

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

## Controlling Droplet Size:

- **Volume** – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** – **DO NOT** exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles** – Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** – Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.
- **Boom Length** – For some use patterns, reducing the effective boom length to less than 75% of the wingspan or 90% of rotor length may further reduce drift without reducing swath width.
- **Application Height** – Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

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

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

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

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

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

## MIXING DIRECTIONS

### Zaraxon Herbicide – Alone

1. Fill the spray tank with  $\frac{1}{2}$  to  $\frac{3}{4}$  of the total amount of water.
2. Start agitation.
3. Add the required amount of Zaraxon Herbicide.
4. Continue agitation while filling the spray tank to the required volume.
5. To ensure a uniform spray mixture, continuous agitation is required during application. If product is allowed to settle, thoroughly agitate to re-suspend the mixture before spraying. Apply mixture immediately after it is prepared.

### Zaraxon Herbicide – Tank Mix

If a broader spectrum of weed control is needed, Zaraxon Herbicide may be tank mixed with labeled rates of other herbicides provided (1) the tank mix product is labeled for the timing and method of application for the use site to be treated; and (2) tank mixing is not prohibited by the label of the tank mix product.

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

#### Tank Mixing Precautions:

- Read carefully and follow all applicable use directions, precautions, and limitations on the respective product labels.
- **DO NOT** exceed specified application rates for respective products or maximum allowable application rates for any active ingredient in the tank mix.
- **DO NOT** tank mix with products containing boron or mix in equipment previously used to apply a product mixture containing boron unless the tank and spray equipment have been adequately cleaned. (See Equipment Clean-Out Procedures.)
- Always perform a (jar) test to ensure the compatibility of products to be used in tank mixture.

**Tank Mix Compatibility Testing:** Conduct a jar test prior to tank mixing to ensure compatibility of Zaraxon Herbicide and other pesticides. Use a clear glass quart jar with lid and mix the tank mix ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately  $\frac{1}{2}$  hour. If the mixture balls up, forms flakes, sludges, jells, oily films or layers, or other precipitates, it is not compatible and the tank mix combination should not be used.

Vigorous, continuous agitation during mixing, filling and throughout application is required for all tank mixes. Sparger pipe agitators generally provide the most effective agitation in spray tanks. To prevent foaming in the spray tank, avoid stirring or splashing air into the spray mixture. Undiluted Zaraxon Herbicide and 2,4-D amine concentrates are not compatible and cannot be mixed together in the same supply tank when using injection equipment. Combinations of Zaraxon Herbicide and 2,4-D ester are compatible for this purpose.

#### Mixing Order for Tank Mixes

1. Fill the spray tank to  $\frac{1}{4}$  to  $\frac{1}{3}$  of the total spray volume required with water.
2. Start agitation.
3. Add different formulation types in the following order: (1) dry flowables; (2) wettable powders; (3) aqueous suspensions, flowables or liquids. Maintain agitation and fill spray tank to  $\frac{3}{4}$  of the total spray volume. Allow time for complete mixing and dispersion after each addition.
4. Add Zaraxon Herbicide and other emulsifiable concentrates and any solutions.
5. Finish filling the spray tank. Maintain continuous agitation during mixing and throughout application. If product is allowed to settle, thoroughly agitate to resuspend the mixture before spraying. Apply mixture immediately after it is prepared.

If application or agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. Settled materials must be re-suspended before spraying is resumed. A sparger agitator is particularly useful for this purpose. Settled material may be more difficult to re-suspend than when originally mixed.



## Clean-Out Procedures for Spray Equipment

To avoid injury to or exposure of non-target crops, thoroughly clean and drain spray equipment used to apply this product after use. Clean equipment as soon as possible after application. Spray equipment should be cleaned by the following procedure:

1. Drain any remaining spray mixture from the application equipment.
2. Hose down the interior surfaces of the tank while filling the tank 1/2 full with water.
3. Flush tank, hoses, boom, and nozzles with clean water for 10 minutes. Fill the tank with water and recirculate for 15 minutes. Spray part of the mixture through the hoses, boom, and nozzles and drain the tank.
4. Remove all spray nozzles and screens and clean separately.
5. If spray equipment will be used for pesticide application to crops other than those labeled for this product, repeat steps 1 and 2 and thoroughly wash the outside of spray tank and the boom.

**Note:** Rinsate may be disposed of on-site according to label use directions or at an approved waste disposal facility.

## Application Directions

### Application Timing

Apply to actively growing weeds. Extreme growing conditions such as drought or near freezing temperatures prior to, at and following time of application may reduce weed control. **Only susceptible weeds that are emerged at the time of application will be controlled.** If foliage is wet at the time of application, control may be decreased. Applications of Zaraxon Herbicide are rain-fast within 1 hour after application.

### Effect of Temperature on Herbicidal Activity

Herbicidal activity of Zaraxon Herbicide is influenced by weather conditions. Optimum activity requires active plant growth. The temperature range for optimum herbicidal activity is 55°F to 85°F. Reduced activity will occur when temperature is below 45°F. Frost before application (3 days) or shortly after (3 days) may reduce weed control.

### Application Rates

Generally, application rates at the lower end of the specified rate range will be satisfactory for young, succulent growth of sensitive weed species. For less sensitive species, perennials, brush and under conditions where control is more difficult (plant stress conditions such as drought or extreme temperatures, dense weed stands and/or larger weeds) the higher rates within the rate range will be needed. Weeds growing in the absence of competition from other vegetation generally require higher rates to obtain satisfactory control or suppression.

### Spray Coverage

Use sufficient spray volume to provide through coverage and a uniform spray pattern. **DO NOT** broadcast apply in less than 3 gallons per acre by air or 5 gallons per acre by ground equipment. Inadequate spray volume and coverage may result in decreased weed control. As vegetative canopy and weed density increase, increase spray volume to obtain equivalent weed control. Refer to manufacturer's directions for information on relationships between spray volume, and nozzle size and arrangement.

### Spot Treatments

Spot treatments may be applied with a calibrated boom or hand sprayer according to directions provided below.

**Hand-Held Sprayers:** Hand-held or backpack sprayers may be used for spot applications of Zaraxon Herbicide if care is taken to apply the spray uniformly and at a rate equivalent to a broadcast application. Application rates in the table are based on an area of 1,000 sq. ft. Mix the amount of Zaraxon Herbicide (fl. oz. or ml) listed in the table with 1 gallon or more of water and apply to an area of 1,000 sq. ft. To calculate the amount of product required for larger areas, multiply the table value (fl. oz. or ml) by the area treated in "thousands" of square feet, e.g., if the area to be treated is 3,500 sq. ft., multiply the table value by 3.5 (Calculation:  $3,500 \div 1,000 = 3.5$ ). An area of 1000 sq. ft. is approximately 10.5 x 10.5 yards in size.

## CROP USE AND ON FARM NON-CROPLAND USE

- On-Farm non-cropland
- CRP acres
- Fallow cropland
- Grasses grown for seed, forage, and hay
- Small grains (wheat, barley, oats, triticale)
- Grain sorghum (Milo)
- Field corn
- Sweet corn

### Amount of Zaraxon Herbicide to Equal Specified Broadcast Rate (Mix with 1 Gallon or More of Water and Apply to 1,000 sq. ft.)

0.4 pt/acre	0.55 pt/acre	0.7 pt/acre
0.15 fl oz (4.4 ml)	0.20 fl oz (5.9 ml)	0.26 fl oz (7.7 ml)

1 fl oz = 29.6 (30) ml

### Weeds Controlled or Suppressed

(Numbers in parentheses (-) refer to footnotes below):

Weeds Controlled	Weeds Suppressed <sup>(2)</sup>
bedstraw (cleavers) chickweed clover, white cocklebur coffeeweed flax, volunteer grape species hemp dogbane kochia <sup>(1)</sup> mallow, Venice morningglory prickly lettuce puncturevine purslane, common ragweed, common ragweed, giant sunflower velvetleaf	Bindweed, field Buckwheat, wild Canola, volunteer Devilsclaw Field horsetail Horseweed (marestail) Knotweed Mallow, common Marestail Marshelder Mustard Nightshade species Pennycress, field Potato, volunteer Russian thistle

<sup>1</sup>Includes herbicide-tolerant or resistant biotypes.

<sup>2</sup>Suppression is expressed as a reduction in weed competition (reduction in population or vigor) as compared to untreated areas. The degree of weed control and duration of effect may vary with weed size, density, application rate, coverage, and growing conditions before, during and after treatment.

## Application Sites

### On-Farm Non-Cropland

Apply as a single broadcast treatment or spot treatment to control susceptible broadleaf weeds in on-farm non-cropland areas such as fencerows, building perimeters, around irrigation equipment and on-farm private roadways. Apply at the rate of 0.4 to 0.7 pints per acre when weeds are small and actively growing, but before weeds are 8 inches tall or vining. Spot treatments should be applied at rates and spray volumes equivalent to broadcast application. See instructions for "Spot Application" in "Application Directions" section. See "Weeds Controlled or Suppressed" section for a complete listing of weeds controlled or suppressed.

### CRP Acres

**DO NOT use on CRP acres that are underseeded with desirable legumes, clovers, or other sensitive broadleaf plants.**

Zaraxon Herbicide may be applied to Conservation Reserve Program (CRP) acres. For best results, apply as a single broadcast treatment by ground or aerial equipment to control susceptible broadleaf weeds. Apply at the rate of 0.4 to 0.7 pints per acre when weeds are small and actively growing, but before weeds are 8 inches tall or vining. Spot treatments should be applied at rates and spray volumes equivalent to broadcast application. See instructions for Spot Application in Application Directions section. See Weeds Controlled or Suppressed section for a complete listing of weeds controlled or suppressed.

**Restriction:** Grazing or haying of treated CRP acres is prohibited.

### Fallow Cropland

Apply as a single broadcast treatment by ground or aerial equipment to control susceptible broadleaf weeds. Apply when weeds are actively growing, but before kochia is 8 inches tall and before wild buckwheat is vining. Zaraxon Herbicide may be applied alone or in tank mix combination with other herbicides (See tank mixing precautions in "Mixing Instructions" section).

#### Broadcast Application Rates:

Weed Size or Species <sup>1</sup>	Application Rate (pint/acre)
Susceptible broadleaf weed seedlings less than 8 inches tall or vining Volunteer potatoes	0.4 – 0.7

<sup>1</sup> See Weeds Controlled or Suppressed section for a complete listing of weeds controlled or suppressed.

Control may be reduced if weeds are under stress from drought or extreme temperatures. Use lower rates to control light to moderate infestations and under good growth conditions. Use higher rates for moderate to heavy infestations and to compensate for less than ideal growth conditions.

### Grasses Grown for Seed, Forage, and Hay

**Zaraxon Herbicide may be applied for broadleaf weed control in the following grasses grown for seed, forage, or hay:** bermudagrass, bluegrass (perennial and annual), brome grass, fescue, hay grazer, orchardgrass, ryegrass (perennial and annual), redbud cane, sorghum, sorghum-Sudan, Sudan, sudex, and timothy. **Zaraxon Herbicide may be applied for broadleaf weed control in the following grasses grown for hay or forage only:** sorghum and triticale.

Apply Zaraxon Herbicide as a broadcast postemergence treatment using ground equipment or by air. A second application may be made a minimum of 14 days after the first. Zaraxon Herbicide may be applied in tank mix combination at labeled rates with other herbicides registered for these uses. All applicable use directions, precautions, and limitations on the labels of the tank mix products must be followed. When tank mixing, the most restrictive limitations on each label must apply.

**Application Timing:** Apply to established grasses in the spring when weeds are actively growing and before weeds are 8 inches tall. Only weeds emerged at the time of treatment will be controlled. New plantings of grass crops may be treated from the 2 true leaf stage of growth prior to early boot stage. **DO NOT** apply during boot, flowering, or seed development stage of growth if grass crop is to be harvested for seed.

**Broadcast Application Rates:** (Numbers in parentheses (-) refer to footnotes following table.)

Weed Size or Species <sup>(1)</sup>	Application Rate (pint/acre)
Susceptible broadleaf weed seedlings less than 4 inches tall <sup>(2)</sup>	0.3
Susceptible broadleaf weed seedlings less than 8 inches tall or vining	0.4

<sup>1</sup> Refer to the Weeds Controlled or Suppressed section in the label booklet for Zaraxon Herbicide for a complete listing of weeds controlled or suppressed.

<sup>2</sup> The 0.3 pint/acre rate will generally provide satisfactory control of kochia seedlings less than 4 inches tall (including ALS resistant biotypes). However, when conditions for control are less favorable, such as under drought or cool temperatures, the 0.4 pint/acre rate will provide more consistent control of kochia seedlings 1 to 4 inches tall. The 0.4 pint/acre rate should be used for optimal control of dicamba tolerant kochia populations (see Management of Kochia Biotypes in the Product Information section of this label for Zaraxon Herbicide.)

**Restrictions:**

- **DO NOT** apply more than 0.7 pint per acre of Zaraxon Herbicide per growing season.
- **Grazing Restrictions:** There are no grazing restrictions for lactating or non-lactating dairy animals.
- **Harvest Restrictions:** **DO NOT** harvest grass for hay or silage from treated areas within 7 days of application.
- **Slaughter Restrictions:** Meat animals must be withdrawn from treated forage at least 2 days before slaughter.

**Wheat – Barley – Oats – Triticale**

Apply as a broadcast postemergence treatment to actively growing wheat, barley, oats, or triticale from the 2 leaf crop growth stage up to and including flag leaf emergence (Zadoks scale 39) for control of broadleaf weeds. Apply when weeds are actively growing, but before weeds are 8 inches tall or vining. For control of volunteer potatoes, apply before potato plants are 8 inches tall. Only weeds emerged at the time of treatment will be controlled. Extreme growing conditions such as drought or near freezing temperatures prior to, at, and following time of application may reduce weed control and increase the risk of crop injury at all stages of growth. **DO NOT** use if cereal crop is underseeded with a legume.

**Spot Application:** Spot applications may be made, however, to prevent over-application spot treatments should be applied at rates and spray volumes equivalent to broadcast application. See instructions for Spot Application in Application Directions section.

**Broadcast Application Rates:**

(Numbers in parentheses (-) refer to footnotes following table.)

Weed Size or Species <sup>(1)</sup>	Application Rate (pint/acre)
Susceptible broadleaf weed seedling less than 4 inches tall <sup>(2)</sup>	0.3
Susceptible broadleaf weed seedlings less than 8 inches tall or vining	0.4
Volunteer Potatoes	0.7

<sup>1</sup> See “Weeds Controlled or Suppressed” section for a complete listing of weeds controlled or suppressed.

<sup>2</sup> The 0.3 pint/acre rate will generally provide satisfactory control of kochia seedlings less than 4 inches tall (including ALS resistant biotypes). However, when conditions for control are less than favorable, such as under drought or cool temperatures, the 0.4 pint/acre rate will provide more consistent control of kochia seedlings 1 to 4 inches tall. Control of small kochia with reduced rates will be more consistent if kochia is at least 1 inch tall. The 0.4 pint/acre rate should be used for optimal control of dicamba tolerant kochia populations (see “Management of Kochia Biotypes” in the Product Information section of this label).

**Restrictions:**

- **DO NOT** allow livestock to graze treated areas or harvest treated forage within 7 days of application.
- **DO NOT** apply more than 0.7 pint per acre of Zaraxon Herbicide per growing season.
- **Preharvest Interval:** **DO NOT** apply closer than 14 days before cutting of hay or 40 days before harvesting of grain and straw.

## Grain Sorghum (Milo)

Apply Zaraxon Herbicide as a broadcast treatment using ground equipment or by air. See the Product Information section for details on application timing, effect of temperature on herbicidal activity, application rates, spray coverage and instructions for spot application.

Zaraxon Herbicide may be applied in tank mix combination with labeled rates of other herbicides such as atrazine. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

### Weeds Controlled or Suppressed

(Numbers in parentheses (-) refer to footnotes below.)

Key Weeds Controlled <sup>(1)</sup>	Key Weeds Suppressed <sup>(3)</sup>	Application Rate (pint/acre)
cocklebur common ragweed giant ragweed hemp dogbane hedge bindweed kochia <sup>(2)</sup> morningglory puncturevine sunflower velvetleaf Venice mallow	devilsclaw field bindweed field pennycress maretail (horseweed) mustard nightshade species Russian thistle wild buckwheat	0.4

<sup>1</sup> See Weeds Controlled or Suppressed section of this label for a complete listing.

<sup>2</sup> Includes herbicide tolerant or resistant biotypes.

<sup>3</sup> Suppression is expressed as a reduction in weed competition (reduced population or vigor) as compared to untreated areas. The degree of weed control and duration of effect may vary with weed size, density, application rate, coverage, and growing conditions before, during and after treatment.

### Application Timing

- **Pre-emergence:** For no-till or burndown applications, apply to emerged weeds after planting, but prior to grain sorghum emergence.
- **Post emergence:** Zaraxon Herbicide may be broadcast applied from the 3-leaf growth stage of grain sorghum through the 7-leaf stage. Use drop nozzles and directed spray from the 8-leaf stage to boot stage. Drop nozzles should direct the spray toward the soil surface to avoid contact with grain sorghum foliage and reduce the potential for crop injury. **DO NOT** apply after boot stage.
- For both pre-emergence and postemergence applications, apply when weeds are actively growing, but before weeds are 8 inches tall and before wild buckwheat is vining. Only weeds that have emerged at the time of application will be controlled.
- To control heavy weed populations, a pre-emergence application may be followed by a post emergent application. **DO NOT** exceed two applications per season.

### Restrictions:

- **DO NOT** make more than two applications or apply more than 0.7 pint per acre per crop season.
- **Pre-Harvest Interval:** **DO NOT** allow livestock to graze or harvest forage within 40 days of application.
- **DO NOT** apply within 70 days of harvesting grain or stover.

**Tank Mixing:** Zaraxon Herbicide may be applied alone or in tank mix combination with other herbicides registered for post emergence application in grain sorghum unless tank mixing is specifically prohibited by the label of the tank mix product. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. **DO NOT** apply in combination with Ally herbicide.

**Adjuvants:** Generally, this product does not require the use of an adjuvant to achieve satisfactory weed control when applied alone. Adjuvants may be used when required by a tank mix partner. Follow all applicable directions on the label for the tank mix partner. Use of a high quality adjuvant may improve weed control under hot, dry conditions.

## Field Corn

Apply Zaraxon Herbicide as a broadcast post emergence treatment using ground equipment or by air. Zaraxon Herbicide may also be applied as a pre-plant treatment for control of emerged volunteer potato or for burndown of emerged weeds (refer to "Special Directions for Control of Volunteer Potato" below). Refer to the Product Information section of this label for detailed information on application timing, effect of temperature on herbicidal activity, application rates, spray coverage and instructions for spot application. Zaraxon Herbicide may be applied in tank mix combination with labeled rates of other registered herbicides. Read and follow all label directions, including applicable use directions, precautions, and limitations on each product label.

### Weeds Controlled or Suppressed

(Numbers in parentheses (-) refer to footnotes below.)

Key Weeds Controlled <sup>(1)</sup>	Key Weeds Suppressed <sup>(3)</sup>	Application Rate (pint/acre)
catchweed bedstraw (cleavers) chickweed cocklebur common purslane common ragweed giant ragweed hedge bindweed hemp dogbane jimsonweed kochia <sup>(2)</sup> morningglory puncturevine sunflower velvetleaf Venice mallow	devilsclaw field bindweed field pennycress marestail (horseweed) marshelder mustard nightshade species Russian thistle volunteer potato <sup>(4)</sup> wild buckwheat	0.4

<sup>1</sup> See Weeds Controlled or Suppressed section of this label for a complete listing.

<sup>2</sup> Includes herbicide tolerant or resistant biotypes.

<sup>3</sup> Suppression is expressed as a reduction in weed competition (reduced population or vigor) as compared to untreated areas. The degree of weed control and duration of effect may vary with weed size, density, application rate, coverage, and growing conditions before, during and after treatment.

<sup>4</sup> See Special Directions for Control or Suppression of Volunteer Potato below.

### Application Timing

Apply as a broadcast or band treatment to field corn up to, and including, 5 fully exposed leaf collars (V5 growth stage). **DO NOT** broadcast apply to field corn with 6 fully exposed leaf collars (V6 growth stage). Applications to field corn beyond the V5 growth stage should be made as a directed spray using drop nozzles (see crop safety precaution below). Apply when broadleaf weeds are actively growing, but before weeds are 8 inches tall. If wild buckwheat is present, apply before vining stage of growth. Only weeds emerged at the time of application will be controlled or suppressed.

- **Pre-plant Burndown:** For no-till or burndown applications to control emerged weeds, apply alone or in tank mix combination with a labeled herbicide prior to planting.

### Special Directions for Control or Suppression of Volunteer Potato:

- **Preplant Application (Suppression):** Apply 0.4 pint per acre prior to planting corn when the majority of volunteer potato plants are 4 to 8 inches tall. For best results, leave soil undisturbed and plant field corn two weeks following application.
- **Sequential Applications (Control):** To control heavy populations of volunteer potato, a preplant application may be followed by a postemergence application of 0.4 pint per acre. **DO NOT** exceed two applications per season.
- **Postemergence Application (Suppression):** Apply 0.4 pint per acre when the majority of volunteer potato plants are 4 to 8 inches tall.

**Restrictions:**

- **DO NOT** make more than two applications or apply more than 0.7 pint per acre per crop season.
- **Preharvest Interval: DO NOT** allow livestock to graze or harvest forage from treated areas within 47 days of application. **DO NOT** apply less than 90 days before harvest of grain and stover.

**Crop Tolerance Precaution:** Crop injury (stem curvature, stunting, or brace root injury) may occur with some corn hybrids or lines when Zaraxon Herbicide is applied as a broadcast treatment. Hybrids or lines that are susceptible to phenoxy injury may also be susceptible to injury from Zaraxon Herbicide. Consult current seed corn company herbicide management guides for further information.

**Tank Mixing:** Zaraxon Herbicide may be applied alone or in tank mix combination with other herbicides registered for post emergence application in field corn unless tank mixing with Zaraxon Herbicide is specifically prohibited by the label of the tank mix product. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. If an adjuvant is added to the spray mixture as a requirement of the tank mix partner, follow label directions for both the tank mix partner and the adjuvant product.

**Adjuvants:** Generally, this product does not require use of an adjuvant to achieve satisfactory weed control when applied alone. Adjuvants may be used when required by a tank mix partner. Follow all applicable directions on the label for the tank mix partner. Use of a high quality adjuvant may improve weed control in hot, dry conditions.

**Sweet Corn**

Apply Zaraxon Herbicide as a broadcast postemergence treatment using ground equipment or by air. Zaraxon Herbicide may also be applied as a pre-plant treatment for control of emerged volunteer potato or for burndown of emerged weeds (refer to "Special Directions for Control of Volunteer Potato" below). Refer to the Product Information section of this label for detailed information on application timing, effect of temperature on herbicidal activity, application rates, spray coverage and instructions on spot application. Zaraxon Herbicide may be applied in tank mix combination with labeled rates of other registered herbicides. Read and follow all label directions, including applicable use directions, precautions, and limitations on each product label.

**Weeds Controlled or Suppressed**

(Numbers in parentheses (-) refer to footnotes below.)

Key Weeds Controlled <sup>(1)</sup>	Key Weeds Suppressed <sup>(3)</sup>	Application Rate (pint/acre)
catchweed bedstraw (cleavers) chickweed cocklebur common purslane common ragweed giant ragweed hedge bindweed hemp dogbane jimsonweed kochia <sup>(2)</sup> morningglory puncturevine sunflower velvetleaf Venice mallow	devilsclaw field bindweed field pennycress marestail (horseweed) marshelder mustard nightshade species Russian thistle volunteer potato <sup>(4)</sup> wild buckwheat	0.4

<sup>1</sup> See Weeds Controlled or Suppressed section of this label for a complete listing.

<sup>2</sup> Includes herbicide tolerant or resistant biotypes.

<sup>3</sup> Suppression is expressed as a reduction in weed competition (reduced population or vigor) as compared to untreated areas. The degree of weed control and duration of effect may vary with weed size, density, application rate, coverage, and growing conditions before, during and after treatment.

<sup>4</sup> See Special Directions for Control or Suppression of Volunteer Potato below.

### Application Timing

Apply as a broadcast or band treatment to sweet corn up to, and including, 4 fully exposed leaf collars (V4 growth stage). **DO NOT** broadcast apply to sweet corn with 5 fully exposed leaf collars (V5 growth stage). Application to sweet corn beyond the V4 growth stage should be made as a directed spray using drop nozzles (see crop tolerance precaution below). Apply when broadleaf weeds are actively growing, but before weeds are 8 inches tall. If wild buckwheat is present, apply before vining stage of growth. Only weeds emerged at the time of application will be controlled or suppressed.

- **Pre-Plant Burndown:** For no-till or burndown applications to control emerged weeds, apply alone or in tank mix combination with a labeled herbicide prior to planting.

### Special Directions for Control or Suppression of Volunteer Potato:

- **Preplant Application (Suppression):** Apply 0.4 pint per acre prior to planting corn when the majority of volunteer potato plants are 4 to 8 inches tall. For best results, leave no soil undisturbed and plant sweet corn two weeks following application.
- **Sequential Applications (Control):** To control heavy populations of volunteer potato, a preplant application may be followed by a postemergence application of 0.4 pint per acre. **DO NOT** exceed two applications per season.
- **Postemergence Application (Suppression):** Apply 0.4 pint per acre when the majority of volunteer potato plants are 4 to 8 inches tall.

### Restrictions:

- **DO NOT** allow livestock to graze treated areas within 31 days after application.
- **DO NOT** make more than two applications or apply more than 0.7 pint per acre per crop season.
- **Preharvest Interval:** **DO NOT** harvest from treated areas within 31 days of application. **DO NOT** apply less than 31 days before harvesting ears.

**Crop Tolerance Precaution:** Not all sweet corn hybrids have been screened for tolerance to Zaraxon Herbicide. Crop injury (stem curvature, stunting, brace root injury) may occur with some hybrids or lines when Zaraxon Herbicide is applied as a broadcast treatment. Take particular care to manage for environmental conditions such as unfavorable combinations of temperature and humidity. Hybrids or lines that are susceptible to phenoxy injury may also be susceptible to injury from Zaraxon Herbicide. Consult current seed corn company herbicide management guides for further information.

**Tank Mixing:** Zaraxon Herbicide may be applied alone or in tank mix combination with other herbicides registered for post emergence application in sweet corn unless tank mixing is specifically prohibited by the label of the tank mix product. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Use of Spray Adjuvants in Tank Mixes:** **DO NOT** use a spray adjuvant when applying Zaraxon Herbicide alone. Use of an adjuvant may increase effectiveness on weeds but may reduce selectivity to the crop, particularly under conditions of plant stress such as drought or cold temperatures. If an adjuvant is added to the spray mixture as a requirement of a tank mix partner, follow all manufacturer's instructions. **DO NOT** apply Zaraxon Herbicide in combination with crop oil concentrates, petroleum-based oils, or methylated seed oils unless the risk of injury is acceptable.

### NON-CROP USE

- Airports, barrow ditches, communication transmission lines, electrical power and utility rights-of-way, fencerows, gravel pits, industrial sites, irrigation ditch banks, dry irrigation ditches or canals, military lands, mining and drilling areas, non-irrigation ditch banks, oil pads, parking lots, petroleum tank farms, pipelines, railroads, roadsides, storage areas, storm water retention areas, substations, unimproved rough turfgrasses, vacant lots and other non-crop residential areas; and
- Natural areas (open space) for example, campgrounds, parks, prairie management, trails and trailheads, recreation areas, wildlife openings and wildlife habitat and management areas;
- Conifer and tree plantations, and
- Rangeland and permanent grass pastures,
- Established turfgrass, including sod farms, residential lawns, golf courses, recreational, commercial and public turf areas
- Including grazed areas on all of these sites



Amount of Zaxaron Herbicide to Equal Specified Broadcast Rate (Mix with 1 Gallon or More of Water and Apply to 1,000 sq. ft.)				
6 fl. oz./acre	9 fl. oz./acre	12 fl. oz./acre	17 fl. oz./acre	23 fl. oz./acre
0.14 fl. oz. (4.1 ml)	0.21 fl. oz. (6.2 ml)	0.28 fl. oz. (8.3 ml)	0.4 fl. oz. (11.7 ml)	0.59 fl. oz. (17.5 ml)

1 fl. oz. = 29.6 (30) ml

### Weeds Controlled or Suppressed

(Numbers in parentheses (-) refer to footnotes):

Weeds Controlled			Weeds Suppressed <sup>(3)</sup>
6-12 fl. oz./acre	12 fl. oz./acre	23 fl. oz./acre	23 fl. oz./acre
bedstraw (cleavers) common purslane hairy buttercup hemp dogbane kochia <sup>(1)</sup> ; <sup>(2)</sup> , <sup>(4)</sup> marshelder <sup>(2)</sup> sericea lespedeza <sup>(2)</sup> tropic croton	chickweed cocklebur coffeeweed, common ragweed curly dock cutleaf primrose dandelion dogfennel grape horseweed/marestail morningglory prickly lettuce puncturevine stinging nettle sunflower vetch velvetleaf venice mallow western ragweed white clover white cockle	blackberry catsear giant ragweed goldenrod henbane hop clover horsenettle ironweed lantana musk thistle prickly pear cactus wild carrot	buckhorn plantain Carolina geranium common mallow common mullein cudweed field bindweed field horsetail field pennycress knotweed leafy spurge mustard narrowleaf plantain nightshade species spiny amaranth wild buckwheat yellow thistle

<sup>1</sup>Includes ALS and some other herbicide-tolerant or resistant biotypes.

<sup>2</sup>Use the higher rate in the range to control these weeds.

<sup>3</sup>Suppression is expressed as a reduction in weed competition (reduction in population or vigor) as compared to untreated areas. The degree of weed control and duration of effect may vary with weed size, density, application rate, coverage, and growing conditions before, during and after treatment.

<sup>4</sup>For best results, add a methylated or ethylated seed oil surfactant (i.e. MSO or ESO) at the rate of 1-2 quarts per acre for control of kochia. For kochia infestations with larger plants as more advanced growth stages, increasing the rate of Zaxaron Herbicide to 13-17 or 23 fl. oz. or addition of the label specified rate per acre of 2,4-D ester along with the 1-2 quarts of seed oil surfactant per acre will improve control.

### Uses

- Airports, barrow ditches, communication transmission lines, electrical power and utility rights-of-way, fencerows, gravel pits, industrial sites, irrigation ditch banks, dry irrigation ditches or canals, military lands, mining and drilling areas, non-irrigation ditch banks, oil pads, parking lots, petroleum tank farms, pipelines, railroads, roadsides, storage areas, storm water retention areas, substations, unimproved rough turfgrasses, vacant lots and other non-crop residential areas; and

- Natural areas (open space) for example, campgrounds, parks, prairie management, trails and trailheads, recreations areas, wildlife openings and wildlife habitat and management areas;

Includes rights-of-way, industrial sites, seasonally dry wetlands, non-irrigation ditch banks, and irrigation banks. Use on irrigation banks includes application of Zaraxon Herbicide on the tops and outer banks of the canals and ditches. Use of Zaraxon Herbicide on the inner portion of dry irrigation canals or ditches can be done as long as water is not used for irrigation for 120 days or residue levels of Zaraxon Herbicide are determined by laboratory analysis, or other appropriate means of analysis, to be 1 ppb or less. See use precautions above for more information.

Apply at the broadcast rate of 6 to 23 fl. oz. per acre when weeds are small and/or actively growing. Split applications of Zaraxon Herbicide may be made during a single year, provided the total amount of Zaraxon Herbicide applied does not exceed the maximum-labeled rate of 23 fl. oz. per acre. See listing of Weeds Controlled or Suppressed and use directions under the Conifer and Tree Plantations section.

Apply spot treatments at rates and spray volumes equivalent to broadcast application. See Spot Treatments in the Application Directions section.

## Conifer and Tree Plantations

**Herbaceous Weed Control:** Apply this product at the broadcast rate of 6 to 23 fl. oz. per acre when weeds are small and/or actively growing. See listing of Weeds Controlled or Suppressed.

**Brush Control:** Zaraxon Herbicide may be tank-mixed with Alligare Triclopyr 4, Alligare Triclopyr 3, Alligare Picloram 22K, Alligare Picloram+D, glyphosate products or other registered herbicides for these sites at timings specified on the respective labels and at the indicated rates to increase control of undesirable pine species, manzanita, squaw carpet, shingle oak, red maple, red oak and other woody species.

**Directed Sprays Application for Conifer Release:** To release conifers from competing brush and weeds such as manzanita and squaw carpet, mix 2 to 4 qts. of this product in enough water to make 100 gallons of spray mixture (0.5 to 1% v/v). This spray mixture should be directed onto foliage of competitive brush using calibrated sprayers any time after the hardwoods and brush have reached full leaf size including fall applications. Care should be taken to direct spray solutions away from contact with conifer foliage, particularly foliage of desirable conifers.

### Restrictions:

- **DO NOT** apply Zaraxon Herbicide to conifer and tree plantations as an over-the-top broadcast treatment during active terminal growth (from initiation of budbreak/growth flush until seasonal terminal growth has hardened off and over-wintering buds have formed). Directed spray applications may be made to conifer and tree plantations during periods of active growth, but care should be taken to avoid spray contact with actively growing foliage.
- **DO NOT** apply Zaraxon Herbicide in tank mix combination to conifer and tree plantations unless the tank mix product is labeled for weed or brush control in conifers by the application method being employed. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.
- Maximum application rate: **DO NOT** apply more than 23 fl. oz. of this product per acre per year.

### Tank Mixes

#### Western Woody Brush

Mix Zaraxon Herbicide at 16-23 fl. oz. with the label specified rate of a glyphosate isopropylamine salt tank mix partner for control of blackberry.

Mix Zaraxon Herbicide at 16-23 fl. oz. with the label specified rate of a triclopyr, butoxyethyl ester tank mix partner for control of blackberry and manzanita.

#### All Areas

Mix Zaraxon Herbicide at 17-23 fl. oz. with the label specified rate of a triclopyr, butoxyethyl ester or triclopyr, triethylamine salt tank mix partner for control of bay species, black cherry, dogwood, water oak or willow oak.

Mix Zaraxon Herbicide at 17-23 fl. oz. with the label specified rates of a triclopyr, triethylamine salt and picloram, triisopropanolamine salt + 2,4-D triisopropanolamine salt tank mix partners, or, the specified label rates of triclopyr, triethylamine salt and picloram potassium salt partners for control of pine species, red maple, red oak, shingle oak, Virginia pine, water oak.

For control of dogwood, gollberry, pines and wax myrtle, mix Zaraxon Herbicide at 17-23 fl. oz. with the label specified rate of a glyphosate isopropylamine salt tank mix partner.

## Rangeland and Permanent Grass Pastures

Broadcast apply Zaraxon Herbicide as a single treatment or as sequential postemergence treatment using ground or aerial application equipment. Apply as a broadcast treatment when weeds are actively growing, but prior to bud stage of weed growth. Zaraxon Herbicide may be applied in tank mix combination with other foliar-applied herbicides labeled for use on rangeland and permanent grass pastures to control additional weeds and woody plants. Read and follow applicable use directions, precautions and limitations on each product label.

### Spot Treatment for Control of Prickly Pear or Other Species

Apply in a total spray volume of 20 to 100 gallons per acre. To prevent misapplication, spot treatments should be applied with hand sprayers according to directions provided below. **DO NOT** exceed maximum application rates for Zaraxon Herbicide for a given treatment site per acre. On rangeland and permanent grass pastures, spot treatments may be applied at 0.5% v/v, however **DO NOT** apply more than 23 fl. oz. of this product per acre per year. Repeat treatments may be applied as necessary, but total use must not exceed the maximum amount specified.

**Tank Mix:** For control of additional weeds and woody plants listed below, Zaraxon Herbicide may be tank mixed with products containing the triisopropanolamine salt of aminopyralid; aminopyralid potassium salt plus metsulfuron; triclopyr, butoxyethyl ester; or picloram, potassium salt or other herbicides registered for use on rangeland or grass pastures. Refer to the product labels for a list of weeds/brush controlled and specific rates.

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

### Additional Weeds/Brush Controlled

Bindweed, field	Dogfennel	Mullein	Sneezeweed, bitter
Blackberry	Goldenrod	Mustards	Spotted, diffuse and Russian or other knapweeds
Broomweed, annual	Horsenettle	Persimmon	Sumac
Butter cup, hairy	Horseweed/marestail	Plantain	Sunflower
Canada thistle	Ironweed	Plum, wild	Thistle, musk
Cocklebur	Kochia	Prickly pear cactus	Tropical soda apple
Croton	Lantana	Ragweeds	Vetch
Dandelion	Lespedeza, sericea	Rose, Cherokee	Wax myrtle
Dock, curly	Locust	Rose, Macartney	Whitetop
Dogbane, hemp	Marshelder	Rose, multiflora	Yellow starthistle

### Restrictions:

- **Grazing and harvest restrictions:** There are no grazing restrictions for livestock, including lactating or non-lactating dairy animals for pasture and rangeland uses. Withdraw meat animals from treated forage at least 2 days before slaughter. **DO NOT** harvest grass for hay or silage from treated areas within 7 days of application.
- **Plantback restriction:** Only forage grasses, wheat, barley, oats, field corn, sweet corn and grain sorghum may be planted in treated fields within 120 days following application of Zaraxon Herbicide.
- **Zaraxon Herbicide may injure or kill legumes. DO NOT** apply if the injury to legumes cannot be tolerated. Legumes may be less sensitive to herbicide injury after plant growth is mature and seed has set.
- **Maximum Application Rate: DO NOT** apply more than 23 fl. oz. of Zaraxon Herbicide per acre per year.

## Established Turfgrass

Zaraxon Herbicide provides postemergence control of annual and perennial broadleaf weeds in established turfgrass, including sod farms, residential lawns, golf courses, recreational, commercial and public turf areas.

### Precautions

- Apply only to turfgrass species that are well established. Mow newly-seeded turfgrass two or three times before applying this product.
- To minimize the potential for unacceptable turfgrass injury, **DO NOT** make additional applications within 4 weeks of a previous application unless injury can be tolerated.

### Restrictions

- **DO NOT** use this product on golf course putting greens or tees.
- **DO NOT** allow sprays of this product to contact exposed suckers or exposed roots of shallow rooted trees and shrubs or injury may occur.
- **DO NOT** reseed turfgrass for three weeks after application.
- **DO NOT** apply this product to warm season turfgrass while they are transitioning from winter dormancy to active growth in late winter or early spring as spring green-up can be significantly delayed. Warm season turfgrass species (except St. Augustine grass) may be treated with up to 11 fl. oz. of this product per acre during winter if warm season turfgrass is completely dormant when making applications to control winter annual broadleaf weeds.
- Maximum application rate: **DO NOT** apply more than 23 fl. oz. of this product per acre per year.

Users who wish to use this product on a turfgrass species not identified on this label may determine the suitability for such use by treating a small area at a listed rate. Prior to treatment or larger areas, observe the treated area for any sign of herbicidal injury during 30 days of typical growing conditions. The user assumes the responsibility for any plant damage or other liability resulting from use of this product on turfgrass species not identified on this label.

### Use Zaraxon Herbicide on the following established turfgrass species:

Common Name	Scientific Name
<b>Established Cool Season Turfgrass</b>	
bentgrass <sup>1</sup>	<i>Agrostis</i> spp.
bluegrass, Kentucky	<i>Poa pratensis</i>
fescue, chewing	<i>Festuca rubra</i> var. <i>commutata</i>
fescue, creeping red	<i>Festuca rubra</i>
fescue, sheep	<i>Festuca ovina</i>
fescue, tall	<i>Schedonorus arundinaceus</i>
ryegrass, perennial	<i>Lolium perenne</i>
<b>Established Warm Season Turfgrass<sup>2</sup></b>	
bahiagrass	<i>Paspalum notatum</i> var. <i>saurae parodi</i>
bermudagrass <sup>1</sup>	<i>Cynodon dactylon</i>
centipedegrass	<i>Eremochloa ophiuroides</i>
St. Augustine grass <sup>3</sup>	<i>Stenotaphrum secundatum</i>
zoysiagrass	<i>Zoysia japonica</i>
zoysiagrass	<i>Zoysia tenuifolia</i>
fescue, tall (growing in warm season areas)	<i>Schedonorus arundinaceus</i>

<sup>1</sup> Use this product on these species only at the 6 fl. oz. per acre rate and only if some injury can be tolerated.

<sup>2</sup> Use no more than 11 fl. oz. per acre on warm season turfgrass species unless some injury can be tolerated. **DO NOT** apply this product to warm season turfgrass while it is transitioning from winter dormancy to active growth in late winter or early spring as spring green-up can

be significantly delayed. Warm season turfgrass species (except St. Augustine grass) may be treated with up to 11 fl. oz. per acre during winter if warm season turfgrass is completely dormant when making applications to control winter annual broadleaf weeds.

<sup>3</sup> **DO NOT apply this product to St. Augustine grass in the state of Florida.** In states other than Florida, **DO NOT** apply more than 6 fl. oz. of this product per acre to St. Augustine grass and **DO NOT** make applications to St. Augustine grass between April 1 and October 31.

### Weeds Controlled or Suppressed and Application Rates

See the Handheld Sprayer information and chart above

Weeds Controlled	Application Rate <sup>1</sup>	
	(fl. oz./acre)	(fl. oz./1000 sq. ft.)
bedstraw, catchweed deadnettle, purple purslane, common	6-8	0.14 – 0.19 (4.1 – 5.5 ml)
bindweed, field burnweed, American burweed, lawn buttonweed, Virginia catsear, common chickweed cinquefoil, oldfield clover, white ivy, ground lespedeza, common medic, black sida, southern speedwell, slender strawberry, wild velvetleaf woodsorrel, common woodsorrel, yellow	8 – 11	0.19 – 0.25 (5.5 – 7.6 ml)
clover, hop dandelion, common henbit knotweed, prostrate matchweed plantain, broadleaf plantain, buckhorn spurge, spotted	23	0.59 (17.5 ml)
dollarweed (suppression only) veronica species (suppression only)	8 – 23	0.19 – 0.59 (5.5 – 17.5 ml)

<sup>1</sup> Generally, application rates at the lower end of the rate range will be satisfactory for young, succulent growth of sensitive weed species. For less sensitive species, perennials, and other conditions where control is more difficult (plant stress conditions, such as drought or extreme temperatures, dense weed stands and/or larger weeds), the higher rates within the rate range will be needed. Weeds growing in the absence of competition from other vegetation generally will require higher rates to obtain satisfactory control or suppression.

## STORAGE AND DISPOSAL

**DO NOT** contaminate water, food, or feed by storage or disposal.

**PESTICIDE STORAGE:** Store above 10°F or warm and agitate before use to ensure any crystallization that may have occurred redissolves.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. 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.

### **CONTAINER HANDLING:**

#### **NONREFILLABLE CONTAINERS:**

Nonrefillable container. **DO NOT** reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying.

**Nonrefillable container ≤ 5 gallons:** 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  $\frac{1}{4}$  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. **DO NOT** burn unless allowed by state and local ordinances.

**Nonrefillable > 5 gallons:** Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container  $\frac{1}{4}$  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. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill or by incineration. **DO NOT** burn unless allowed by state and local ordinances.

### **CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

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

By using this product, user or buyer accepts the following **CONDITIONS, DISCLAIMER OF WARRANTIES** and **LIMITATIONS OF LIABILITY**.

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of ADAMA. All such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** To the extent consistent with applicable law, ADAMA makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. No agent of ADAMA is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, ADAMA disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

**LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or at ADAMA's election, the replacement of product.

Zaraxon Herbicide is a trademark of Adama Group Company.

**Distributed By:**

Makhteshim Agan of North America, Inc. (d/b/a ADAMA)  
8601 Six Forks Road, Suite 300  
Raleigh, NC 27615

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# Zaraxon™ Herbicide

GROUP 4 HERBICIDE

This product provides control of broadleaf annual and perennial weeds, and certain woody plants and vines on labeled crop sites, labeled non-crop sites, conifer and tree plantations, rangeland and permanent grass pastures, established turfgrass, fallow cropland, Conservation Reserve Program (CRP) acres including grazed areas on all of these sites.

**DO NOT apply to St. Augustine grass in the state of Florida.**

**Not for Sale, Distribution, or Use in Nassau and Suffolk Counties, New York.**

## ACTIVE INGREDIENT:

By Wt.

fluroxypyr 1-methylheptyl ester: ((4-amino-3,5-dichloro-6-fluoro-2-pyridinyl)oxy)acetic acid, 1-methylheptyl ester . . . . . 45.50%

**OTHER INGREDIENTS:** . . . . . 54.50%

**TOTAL:** . . . . . 100.00%

Acid Equivalent: fluroxypyr: ((4-amino-3,5-dichloro-6-fluoro-2-pyridinyl)oxy)acetic acid – 31.59% -2.8 lb/gal.

EPA Reg. No. 81927-61-66222

EPA Est. No. 37429-GA-001<sup>BT</sup>;

37429-GA-002<sup>BO</sup>; 37429-GA-003<sup>ST</sup>;

81927-AL-001<sup>PM</sup>; 7401-TX-001<sup>TA</sup>; 39578-TX-001<sup>ST</sup>

Letter(s) in lot number correspond(s) to superscript in EPA Est. No.

## 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 someone to explain it to you in detail.)

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### CAUTION

Causes moderate eye irritation. Avoid contact with eyes or clothing.

See inside label booklet for additional Precautionary Statements and Directions for Use.

**How can we help?**  
**1-866-406-6262**

## Distributed By:

Makhteshim Agan of North America, Inc.

(d/b/a ADAMA)

8601 Six Forks Road, Suite 300

Raleigh, NC 27615



## 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.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.

## STORAGE AND DISPOSAL

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## CONTAINER HANDLING:

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**Nonrefillable container ≤ 5 gallons:** 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 ¼ 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. **DO NOT** burn unless allowed by state and local ordinances.

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PEEL BACK BOOK HERE

Net Contents  
**2.5 gallons**