

# Specimen Label

TOLPYRALATE	GROUP	27	HERBICIDE
BROMOXYNIL	GROUP	6	HERBICIDE



# Tolvera™

## HERBICIDE

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**For broadleaf and grass weed control in wheat (including spring, winter and durum) and barley. Not for use in California.**

**Active Ingredient:** % By Weight

tolpyralate: 1-[[1-Ethyl-4-[3-(2-methoxyethoxy)-2-methyl-4-(methylsulfonyl)benzoyl]-1H-pyrazol-5-yl]oxy]ethyl methyl carbonate.....	1.76%
octanoic acid ester of bromoxynil: 3,5-dibromo-4-hydroxybenzoxynitrile.....	25.62%
Other Ingredients.....	72.62%
Total .....	100.00%

Contains 0.156 lb of tolpyralate per gallon and 1.557 lb of bromoxynil (a.e.) per gallon.

Contains petroleum distillates.

FIRST AID	
<b>IF SWALLOWED</b>	<ul style="list-style-type: none"><li>• Immediately call a poison control center or doctor.</li><li>• <b>DO NOT</b> induce vomiting unless told to do so by a poison control center or doctor.</li><li>• <b>DO NOT</b> give any liquid to the person.</li><li>• <b>DO NOT</b> give anything by mouth to an unconscious person.</li></ul>
<b>IF ON SKIN OR CLOTHING</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>IF IN EYES</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>IF INHALED</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>

## FIRST AID (Cont.)

<b>Note to Physician</b>	<ul style="list-style-type: none"><li>• Contains petroleum distillate.</li><li>• Vomiting may cause aspiration pneumonia</li></ul>
<b>HOT LINE NUMBERS</b>	<ul style="list-style-type: none"><li>• Have the product container or label with you when calling the poison control center or doctor or going for treatment. For medical emergencies, call the poison control center at 1-800-222-1222, or Corteva at 1-800-992-5994. For non-emergency information on this product, contact Corteva at 1-800-258-3033 or the National Pesticides Information Center (NPIC) at 1-800-858-7378, Monday through Friday, 8 AM to 12 PM PST or at <a href="http://npic.orst.edu">http://npic.orst.edu</a>.</li></ul>

## Precautionary Statements

### Hazards to Humans and Domestic Animals

EPA Reg. No. 62719-761

### Keep Out of Reach of Children

## WARNING / AVISO

**May be fatal if swallowed • May be fatal if absorbed through skin • Causes moderate eye irritation • DO NOT get in eyes, on skin, or on clothing • Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet • Wear chemical-resistant gloves and protective eyewear • Remove and wash contaminated clothing before reuse • Causes moderate eye irritation • Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals**

### Personal Protective Equipment (PPE)

**Applicators and other handlers must wear:**

- Coveralls worn over short-sleeved shirt and short pants
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves composed of barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils or viton ≥ 14 mils
- When mixing and loading wear a chemical-resistant apron
- Protective eyewear

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

### USER SAFETY REQUIREMENTS

Follow the 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 Statements

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.

If you will handle a total of 30 gallons or more of this product per day, you must use a mechanical transfer system for all mixing and loading operations. If this product is packaged in a 30 gallon drum, you must use a mechanical transfer system which terminates in a drip-free hard coupling which may be used only with a spray or mix tank which has been fitted with a compatible coupling. If you do not presently own or have access to a mechanical transfer system with this type of coupling, contact your dealer for information on how to obtain such a system or to modify your present system. When using a mechanical transfer system, **DO NOT** remove or disconnect the pump or probe from the container until the container has been emptied and rinsed. The pump or probe system must be used to rinse the empty container and to transfer the rinsate directly to the mixing or spray tank.

Application from a tractor or aerial application with a completely enclosed cab is required whenever this product is applied to 360 or more acres in a day. To avoid contamination, coveralls and gloves worn when handling the concentrate must be removed prior to entering an enclosed cab or cockpit. When applying from a tractor with an enclosed cab, clean coveralls and clean nitrile gloves must be kept inside the cab and must be worn when exiting the cab to perform in-field maintenance or repair.

To reduce exposure to residues, wash the spray rig, tractor, and all other equipment used to handle or apply this product with water daily or before using the equipment for any other purpose.

**AERIAL APPLICATION:** Human flaggers are prohibited unless in enclosed vehicles. Aerial application is prohibited within 300 feet of residential areas (e.g., homes, schools, playgrounds, shopping areas, hospitals, etc.)

Handlers must use closed mixing loading systems during mixing/loading liquids for aerial applications to fallow land and high-acreage field crops.

**DO NOT** apply with backpack or hand-held application equipment.

### User Safety Recommendations

Users should:

- Wash hands thoroughly after handling and 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. If pesticide gets on skin, wash immediately with soap and water.
- 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 pesticide is toxic to wildlife and fish. This pesticide is toxic to aquatic invertebrates. **DO NOT** apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark.

**DO NOT** contaminate water when disposing of equipment rinse water.

**DO NOT** apply where/when conditions could favor runoff. Use with care when applying to areas frequented by wildlife or adjacent to any body of water. For terrestrial uses, **DO NOT** apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. **DO NOT** apply when weather conditions favor drift from target areas. **DO NOT** contaminate water when cleaning equipment or disposing of equipment washwaters.

### REPORTING ECOLOGICAL INCIDENTS

To report ecological incidents, including mortality, injury, or harm to plants and animals, call 1-800-247-8013.

### 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.

### GROUNDWATER ADVISORY

Tolpyralate has properties and characteristics associated with chemicals detected in groundwater. Tolpyralate may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

### SURFACE WATER ADVISORY

This product may impact surface water due to runoff of rainwater. This is especially true of poorly draining soils and soils with shallow groundwater. This product is classified as having 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 including ponds, streams, and springs will reduce the potential loading of tolpyralate 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.

### PHYSICAL OR CHEMICAL HAZARDS

**Combustible. DO NOT** use or store near heat or open flame. **DO NOT** mix or allow coming in 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.

Use of this product in certain portions of Oregon and Washington is subject to the January 22, 2004 Order for injunctive relief in Washington Toxics Coalition, et al, v. EPA C01-0143C (W.D. WA). For further information, please refer to [www.epa.gov/espp](http://www.epa.gov/espp).

### ENDANGERED AND THREATENED SPECIES PROTECTION REQUIREMENTS

Before using this product, you must obtain any applicable Endangered Species Protection Bulletins ("Bulletins") within six months prior to or on the day of application. To obtain Bulletins, go to Bulletins Live! Two (BLT) at <https://www.epa.gov/pesticides/bulletins>. When using this product, you must follow all directions and restrictions contained in any applicable Bulletin(s) for the area where you are applying the product, including any restrictions on application timing if applicable. It is a violation of federal

law to use this product in a manner inconsistent with its labeling, including this labeling instruction to follow all directions and restrictions contained in any applicable Bulletin(s). For general questions or technical help, call 1-844-447-3813, or email [ESPP@epa.gov](mailto:ESPP@epa.gov).

### 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 the label about personal protective equipment (PPE), restricted-entry interval, and notification to workers (as applicable). 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 into 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, wear:

- Coveralls worn over short-sleeved shirt and short pants
- Socks and Chemical-resistant footwear
- Chemical-resistant gloves such as barrier laminate, butyl rubber, nitrile rubber or viton gloves for cleaning equipment and mixing/loading
- Chemical-resistant apron when cleaning equipment and mixing/loading
- 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.

**Entry Restrictions for Non-WPS Uses: DO NOT** allow entry into treated areas until sprays have dried.

### Storage and Disposal

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

**Pesticide Storage:** Store in original container. **DO NOT** store in direct sunlight. **DO NOT** store at temperatures above 120°F. In case of leak or spill, contain material and dispose as waste.

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

### Nonrefillable Rigid Plastic Containers (Capacity Equal to or less Than 5 Gallons):

**Container Handling:** Nonrefillable rigid plastic 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 by other procedures allowed by state and local authorities.

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. **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. 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.

### Refillable Rigid Containers (Capacity Greater than 5 Gallons):

**Container Handling:** Refillable rigid container. Refill this container with Tolvera 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 the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water.

## Storage and Disposal (Cont.)

Agitate vigorously or recirculate water with the pump for two 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.

### Nonrefillable Rigid Containers (Capacity Greater than 5 Gallons):

**Container Handling:** Nonrefillable rigid 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 by other procedures allowed by state and local authorities.

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. **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. 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.

## Product Information

Apply Tolvera as a postemergence herbicide to control annual broadleaf and grass weeds including common lambsquarters, redroot pigweed, kochia, green foxtail and yellow foxtail in wheat (including spring, winter and durum) and barley not underseeded with legumes.

Tolvera contains tolpyralate a Group 27 (HPPD inhibitor) herbicide and bromoxynil a Group 6 (photosynthesis II inhibitor) herbicide. Tolvera common symptoms include bleaching of new plant growth and yellowing of leaves (margins, tips or veins). Symptoms will appear soon after application (within 1-5 days), but full necrosis of target weeds may take longer depending upon growing conditions and weed susceptibility. Speed and overall control are dependent upon weed sensitivity, weed size, crop competition, growing conditions at and following treatment, and spray coverage.

## Weed Resistance Management

This product contains the active ingredients tolpyralate, a Group 27 herbicide, and bromoxynil, a Group 6 herbicide, based on the mode of action classification system of the Weed Science Society of America. The continued effectiveness of this product depends on the successful implementation of a weed resistance management program.

To aid in the prevention of developing weeds resistant to this product, users should:

- Scout fields before application to ensure herbicides and rates will be appropriate for the weed species and weed sizes present.
- Start with a clean field, using either a burndown herbicide application or tillage.
- If using post-emergence herbicides or tank mixes, control weeds early when they are relatively small.
- Apply full rates of this product for the most difficult to control weed in the field at the specified time to minimize weed escapes.
- Scout fields before and after application to detect weed escapes or shifts in control of weed species.
- Control weed escapes before they reproduce by seed or proliferate vegetatively.
- Report any incidence of non-performance of this product against a particular weed to your local company representative, local retailer, or county extension agent.
- Contact your local company representative, crop advisor, or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective modes of action for each target weed.
- If resistance is suspected, treat weed escapes with an herbicide having a mode of action other than Groups 27 and 6 and/or use nonchemical methods to remove escapes, as practical, with the goal of preventing further seed production.

- 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.

Additionally, users should follow as many of the following herbicide resistance management practices as is practical:

- Use a broad spectrum herbicide with other mode of action as a foundation in a weed control program, if appropriate.
- Utilize sequential applications of herbicides with alternative modes of action.
- Rotate the use of this product with non-Group 27 and 6 herbicides.
- Avoid making more than two sequential applications of this product and any other Group 27 or Group 6 herbicides within a single growing season unless mixed with an herbicide with a different mode of action with an overlapping spectrum for the difficult-to-control weeds.
- Incorporate non-chemical weed control practices, including mechanical cultivation, crop rotation, cover crops and weed-free crop seeds, as part of an integrated weed control program.
- Use good agronomic principles that enhance crop development and crop competitiveness.
- Thoroughly clean plant residues from equipment before leaving fields suspected to contain resistant weeds.
- Manage weeds in and around fields to reduce weed seed production.

## MANDATORY SPRAY DRIFT MANAGEMENT

### Aerial Applications:

- **DO NOT** release spray at a height greater than 10 feet above the ground or vegetative canopy unless a greater application height is necessary for pilot safety.
- Applicators must use one-half swath displacement upwind at the downwind edge of the field.
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- Select a nozzle and pressure that deliver fine or coarser droplets.
- The distance of the outer most nozzles on the boom must not exceed 75% of the length of the wingspan or 90% of the rotor diameter.
- **DO NOT** apply during temperature inversions.

### 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.
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

## 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.

### Controlling Droplet Size – Aircraft

- **Adjust Nozzles** - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

### BOOM HEIGHT – Ground Boom

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

### RELEASE HEIGHT - Aircraft

Higher release heights increase the potential for spray drift.

### 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. Avoid applications during temperature inversions.

## 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.

## Mixing Directions

### Tolvera – Alone

1. Fill spray tank with water equal to 1/2 to 3/4 of the required spray volume. Start agitation.
2. Add the required amount of Tolvera. Continue agitation.
3. Add adjuvant(s) if desired.
4. Finish filling the tank with water.
5. Provide sufficient agitation during mixing and application to maintain a uniform emulsion.
6. To ensure a uniform spray mixture, continuous agitation is required during application. If product is allowed to settle, thoroughly agitate to resuspend the mixture before spraying. Apply mixture immediately after it is prepared.

### Tolvera– Tank Mix

If a broader spectrum of weed control is needed, Tolvera 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.

### Tank Mixing Precautions:

- 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.
- For products packaged in water soluble packaging, **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 Mixing Restrictions:

- **DO NOT** exceed specified application rates. **DO NOT** tank mix with another pesticide product that contains the same active ingredient as this product unless the label of either tank mix partner specifies the maximum dosages that may be used.

**Tank Mix Compatibility Testing:** A jar test is advised prior to tank mixing to ensure compatibility of this product 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 1/2 hour. If the mixture balls-up, forms flakes, sludges, jels, oily films or layers, or other precipitates, it is not compatible, and the tank mix combination must 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.

### Mixing Order for Tank Mixes:

1. Fill the spray tank to 1/2 to 3/4 of the required spray volume.
2. Start agitation.
3. Add different formulation types in the following order, allowing time for complete mixing and dispersion after addition of each: (1) dry flowables; (2) wettable powders; (3) aqueous suspensions, flowables and liquids.
4. Maintain agitation and fill spray tank to 3/4 of total spray volume and then add Tolvera and other emulsifiable concentrates and any solutions and adjuvants. Allow time for complete mixing and dispersion after each addition.
5. Finish filling the spray tank. Maintain continuous agitation during mixing, final filling 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 resuspended before spraying is resumed. A sparger agitator is particularly useful for this purpose. Settled material may be more difficult to resuspend than when originally mixed.

## Crop Rotation Intervals

The following rotational crops may be planted at the indicated interval following application of this product. For best results conduct a field bioassay prior to planting any broadleaf crops not listed. **DO NOT** plant unlisted crops prior to 15 months following application.

Crop	Rotation Interval <sup>1</sup> (Months)
corn (field corn, sweet corn, and popcorn), wheat, and barley	0
grass for seed and forage, oats, triticale, rye	3
alfalfa, bean (dry), bean (green; including seed production), bean (snap), cabbage, camelina, chickpeas, canola, cotton, flax, lentils, millet, mustard crops (grown for seed), pea (field and edible), peanut, potato (not for seed) <sup>2</sup> , rice, safflower, sorghum, soybean, cucurbits, sugar beet <sup>2</sup> , sunflower, and tomato	9
other crops not listed	15

<sup>1</sup>Minimum number of months that must pass before planting other crops after application of Tolvera.

<sup>2</sup>For rotation to potatoes (not for seed) and sugar beets, precipitation (including irrigation) must be greater than 8.0 inches during the 9 months following application of Tolvera. Otherwise rotation to potatoes and sugar beets is advised 15 months following application.

## Specific Crop Use

### Wheat (Including spring, winter and Durum) and Barley

Apply 11 fl oz (0.013 lb ai tolpyralate – 0.134 lb ae bromoxynil) or 14.7 fl oz (0.0178 lb ai tolpyralate – 0.178 lb ae bromoxynil) of Tolvera per acre to actively growing wheat (including spring, winter and durum), and barley from the 1-leaf crop growth stage up to the jointing stage (first node, Zadoks scale 31). Winter wheat applications can be made in the fall or spring. Use the 14.7 fl oz/A (0.0178 lb ai tolpyralate – 0.178 lb ae bromoxynil) rate of Tolvera for more robust control when weed populations are high, weed staging is more advanced, or when weeds are stressed due to environmental conditions including drought or cold weather. Consult the weed list for specific recommendations. For best results apply when susceptible broadleaf weed seedlings are actively growing and less than 4 inches tall. Only weeds emerged at the time of treatment will be controlled.

Warm, moist growing conditions promote active weed growth and enhance the activity of Tolvera by allowing maximum foliar uptake and contact activity. Weeds hardened off by cold weather or drought stress may not be adequately controlled or suppressed and re-growth may occur. For best results, ensure thorough spray coverage of target weeds.

### Tank Mixes for Wheat (Including spring, winter and Durum) and Barley:

Tolvera may be applied in tank mix combination with labeled rates of other products registered for postemergence application in wheat and barley. See Tank Mixing Precautions under Mixing Directions. 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.

## Application Instructions

**Ground Application:** To minimize spray drift, apply this product in a total spray volume of 8 gallons or more per acre using spray equipment designed to produce large droplet, low pressure sprays. Refer to the spray equipment manufacturer's specifications for detailed information on nozzle types, arrangement, spacing and operating height and pressure. To prevent over application when making spot treatments apply with a calibrated boom only. 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.

### Ground Application Restrictions

- **DO NOT** apply with hollow cone-type nozzles or other nozzles that produce a fine droplet spray.
- Apply this product with a nozzle class that ensures medium or very coarse spray (according to ASABE S572.1).

**Aerial Application:** To minimize spray drift, apply this product in a total spray volume of 5 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. Spray drift from aerial application can be minimized by applying a coarse spray at spray boom pressure no greater than 30 psi and by using straight-stream nozzles directed straight back. Spray pattern and droplet size distribution can be evaluated by applying sprays containing a water-soluble dye marker or appropriate drift control agents over a paper tape (adding machine tape). Mechanical flagging devices may also be used.

#### Aerial Application Restrictions

- Apply Tolvera with a nozzle class that ensures medium or very coarse spray (according to ASABE S572.1).
- **DO NOT** apply below 2 mph due to variable wind direction and high potential for temperature inversion.

#### Avoid Injurious Spray Drift

This product can affect broadleaf plants directly through foliage and indirectly by root uptake from treated soil. **DO NOT** apply this product directly to, or allow spray drift to come into contact with, broadleaf crops including alfalfa, canola, beans, cotton, flowers, grapes, lettuce, lentils, mustard, peas, potatoes, radishes, soybeans, sugar beets, sunflowers, tobacco, tomatoes, vegetables, or other desirable broadleaf crops or ornamental plants or soil where sensitive crops will be planted the same season. (See Crop Rotation Intervals section.)

Make applications only when there is little or no hazard from spray drift. Very small quantities of spray, which may not be visible, may seriously injure crops, whether dormant or actively growing. When applying this product, use low pressure equipment capable of producing sprays of uniform droplet size with a minimum of fine spray droplets. Under adverse weather conditions, fine spray droplets that do not settle rapidly onto target vegetation may be carried a considerable distance from the treatment area. A drift control or spray thickening agent may be used with this product to improve spray deposition and minimize the potential for spray drift. If used, follow all use directions and precautions on the product label.

#### Application Timing

Apply Tolvera early postemergence to actively growing weeds. Extreme growing conditions including drought or near freezing temperatures prior to, at, or following time of application may reduce weed control and increase the risk of crop injury at all stages of growth. **Only weeds that have emerged at the time of application will be controlled.** Tolvera is rainfast within 1 hour after application.

#### Spray Coverage

Use sufficient spray volume to provide thorough coverage and a uniform spray pattern. **DO NOT** broadcast apply in less than 5 gallons of total spray volume per acre by air or 8 gallons of total spray volume per acre by ground. For best results and to minimize spray drift, apply in a spray volume of 5 gallons or more per acre by air or 10 gallons or more per acre by ground. As vegetative canopy and weed density increase, spray volume must be increased to obtain equivalent weed control. Use only nozzle types and spray equipment designed for herbicide application. To reduce spray drift, follow precautions under Avoid Injurious Spray Drift.

#### Adjuvants

For more consistent weed control, especially when weeds are stressed by drought, high temperatures or cold weather, or when weed populations are high, or when weeds are at an advanced growth stage, the use of an adjuvant is advised. Apply a methylated seed oil (MSO), crop oil concentrate (COC) or high surfactant oil concentrate (HSOC) at 0.5 to 1 % v/v or 0.5 to 1 gal of adjuvant per 100 gal of spray mixture. When an adjuvant is to be used with this product, Corteva advises the use of a Council of Producers and Distributors of Agrotechnology certified adjuvant.

#### Application with Fluid Fertilizer

Tolvera may be applied in spray solutions containing liquid fertilizer. Test tank mix compatibility in a jar before mixing Tolvera in liquid fertilizer or when a new batch of liquid fertilizer is used.

#### Precautions For Use When Mixed with Fertilizer:

- Temporary crop injury may result when liquid fertilizer is used as the spray carrier.
- Foliar-applied liquid fertilizer may cause foliar leaf burn, yellowing or reduced growth due to the activity of the liquid fertilizer on the crop.

#### Restrictions For Use When Mixed with Fertilizer:

- **DO NOT** foliar apply liquid fertilizer to spring cereal crops except for ammonium sulfate or UAN at N rates less than 5 lb actual nitrogen per acre.
- **DO NOT** use more than 50% liquid fertilizer in the spray solution.
- **DO NOT** apply more than 30 lb of actual nitrogen per acre with the spray solution.

## Weeds Controlled or Suppressed

### Broadleaf Weeds Controlled or Suppressed

Common Name	Scientific Name	11.0 fl oz per acre	14.7 fl oz per acre
Amaranth, Palmer	<i>Amaranthus palmeri</i>	C	C
Amaranth, Powell	<i>Amaranthus powellii</i>	C	C
Bedstraw, catchweed / cleaver (up to the 4-whorl stage)	<i>Galium aparine</i>	C	C
Bedstraw, catchweed / cleaver (at the 4- to 6- whorl stage)	<i>Galium aparine</i>	S	C
Buckwheat, wild (up to the 4-leaf stage)	<i>Polygonum convolvulus</i>	C	C
Buckwheat, wild (at the 4- to 6- leaf stage)	<i>Polygonum convolvulus</i>	S	C
Canola, volunteer	<i>Brassica napus</i>	C	C
Chickweed, common	<i>Stellaria media</i>	S	C
Dock, curly	<i>Rumex crispus</i>	C	C
Field pennycress	<i>Thlaspi arvense</i>	C	C
Hawksbeard, narrowleaf	<i>Crepis tectorum</i>	C	C
Hempnettle, common	<i>Galeopsis tetrahit</i>	C	C
Henbit	<i>Lamium amplexicaule</i>	C	C
Horseweed/Marestail	<i>Conyza canadensis</i>	S	S
Kochia (up to 4 inches in height)	<i>Bassia scoparia</i>	C	C
Kochia (between 4 and 6 inches in height)	<i>Bassia scoparia</i>	S	C
Lambsquarters, common	<i>Chenopodium album</i>	C	C
London rocket	<i>Sisymbrium irio</i>	C	C
Mallow, common	<i>Malva neglecta</i>	C	C
Mallow, low	<i>Malva pusilla</i>	C	C
Mallow, Venice	<i>Hibiscus trionum</i>	C	C
Mayweed chamomile/ dogfennel	<i>Anthemis cotula</i>	S	S
Mustard, birdsrape/wild turnip	<i>Brassica rapa</i>	C	C
Mustard, black	<i>Brassica nigra</i>	C	C
Mustard, blue	<i>Chorispora tenella</i>	C	C
Mustard, tumble/Jim Hill mustard	<i>Sisymbrium altissimum</i>	C	C
Mustard, white	<i>Sinapis alba</i>	C	C
Mustard, wild	<i>Sinapis arvensis</i>	C	C
Pepperweed, Virginia	<i>Lepidium virginicum</i>	S	S
Pigweed, prostrate	<i>Amaranthus blitoides</i>	C	C
Pigweed, redroot	<i>Amaranthus retroflexus</i>	C	C
Pigweed, Russian	<i>Axyris amaranthoides</i>	C	C
Pigweed, smooth	<i>Amaranthus hybridus</i>	C	C
Prickly lettuce/China Lettuce	<i>Lactuca serriola</i>	S	S
Radish, wild	<i>Raphanus raphanistrum</i>	C	C
Ragweed, common	<i>Ambrosia elatior</i>	C	C
Ragweed, giant	<i>Ambrosia trifida</i>	C	C
Russian thistle	<i>Salsola kali</i>	C	C
Shepherd's-purse	<i>Capsella bursa-pastoris</i>	C	C
Smartweed, pale	<i>Polygonum lapathifolium</i>	C	C
Smartweed, Pennsylvania	<i>Polygonum pensylvanicum</i>	C	C
Sowthistle, annual	<i>Sonchus oleraceus</i>	C	C
Sowthistle, perennial	<i>Sonchus arvensis</i>	S	S
Sowthistle, spiny	<i>Sonchus asper</i>	C	C
Soybean, volunteer	<i>Glycine max</i>	C	C
Sunflower, Common	<i>Helianthus annuus</i>	C	C
Sunflower, Volunteer	<i>Helianthus annuus</i>	C	C
Tansy mustard	<i>Descurainia pinnata</i>	C	C
Thistle, Canada	<i>Cirsium arvense</i>	S	S
Waterhemp, tall	<i>Amaranthus tuberculatos</i>	C	C

## Grass Weeds Controlled or Suppressed

Common Name	Scientific Name	11.0 fl oz per acre	14.7 fl oz per acre
Barnyardgrass	<i>Echinochloa crus-galli</i>	C	C
Crabgrass, large	<i>Digitaria sanguinalis</i>	C	C
Foxtail, green (up to the 4-leaf stage (pre-tillering))	<i>Setaria viridis</i>	C	C
Foxtail, green (at the 4- to 6-leaf (1 tiller) stage)	<i>Setaria viridis</i>	S	C
Foxtail, yellow	<i>Setaria pumila</i>	C	C

## Specific Use Restrictions

CROPS	Maximum fl Oz of Product/ Acre/ Single Application	Maximum Lb AI or AE/ Acre/Single Application	Maximum Number of Applications Per Year	Maximum fl Oz of Product/ Acre/Year	Maximum Lb AE/A per Year	Last Treatment Preharvest Interval
Wheat (including durum) and Barley	14.7	0.0178 lb ai tolpyralate + 0.178 lb ae bromoxynil	1	14.7	0.0178 lb ai tolpyralate + 0.178 lb ae bromoxynil	50 days

- **Chemigation:** **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** apply Tolvera directly to, or otherwise permit it to come into direct contact with, susceptible crops or desirable plants including alfalfa, edible beans, canola, flowers and ornamentals, lentils, lettuce, peas, potatoes, radishes, soybeans, sugar beets, sunflowers, tomatoes, or tobacco. **DO NOT** permit spray mists containing this product to drift onto such plants.
- **DO NOT** apply to crops underseeded with legumes.
- **DO NOT** feed straw from treated wheat or barley to livestock for a minimum of 50 days following application.
- **DO NOT** graze livestock or harvest forage for hay from treated wheat or barley for a minimum of 21 days following application.
- **DO NOT** apply when crops are under moisture stress.
- **DO NOT** apply when crop canopy covers the weeds as poor weed control will result.
- **DO NOT** apply more than 0.178 lb bromoxynil ae per acre per year or more than 0.0178 lb tolpyralate ai per acre per year (14.7 fl oz of Tolvera) as Tolvera herbicide.
- **DO NOT** apply tolpyralate to more than two growing seasons per year.
- **DO NOT** contaminate irrigation ditches or water used for domestic purposes.
- **DO NOT** apply by air to fallow land within 300 feet of residential areas (e.g., homes, schools, playgrounds, shopping areas, hospitals, etc.)
- Handlers must use closed mixing loading systems during mixing/ loading liquids for aerial applications to fallow land and high-acreage field crops.
- **DO NOT** tank mix with atrazine when applying to wheat or barley.
- **Preharvest Interval:** **DO NOT** apply within 50 days of crop harvest.
- **DO NOT** feed treated wheat or barley straw to livestock for a minimum of 50 days following application.
- **DO NOT** graze livestock or harvest forage for hay from treated wheat or barley for a minimum of 21 days following application.

### Spray Tank and Equipment Cleaning Specifications:

1. After making a Tolvera herbicide application, the entire spray system, including its tank, must be completely and immediately drained. A complete cleaning using a triple-rinse procedure is required before using the sprayer for other crops.

### General Procedure For Triple-Rinse Includes:

1. Rinse down inside of the tank and fill the tank with at least 10% clean water, agitate for 10 minutes, and then flush water through the booms and hoses. Drain the whole system.
2. Fill half of the spray tank with clean water, add a surfactant-based tank cleaning agent at a label instructed use rate (if available) and start the circulation of cleaning solution while filling the tank to the full level. Circulate/agitate the cleaning solution throughout the application system for at least 10-20 minutes. Drain the entire system after circulation/agitation. Remove filters and nozzles and clean separately.

3. If spray equipment will be used for pesticide application to crops listed on label as sensitive to Tolvera, repeat steps 1 and 2 above.
4. Fill the tank with at least 10% clean water, agitate for 10 minutes, and then flush water through the booms and hoses. Drain the whole system.

Note: Lack of a complete cleaning of sprayer may cause crop injury in applications following Tolvera herbicide where active ingredients are trapped in equipment due to insufficient cleaning.

## Terms and Conditions of Use

If terms of the following Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. To the extent consistent with applicable law, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitations of Remedies.

## Warranty Disclaimer

Corteva Agriscience warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions for use, subject to the inherent risks set forth below. To the extent consistent with applicable law, Corteva Agriscience MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

## Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application or other factors, all of which are beyond the control of Corteva Agriscience or the seller. Corteva Agriscience will not be responsible for losses or damages resulting from the use of this product in any manner not specifically directed by Corteva Agriscience. To the extent consistent with applicable law, all such risks associated with non-directed use shall be assumed by buyer and/or user.

## Limitation of Remedies

To the extent consistent with applicable law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, tort, strict liability, or other legal theories), shall be limited to, at Corteva Agriscience's election, one of the following:

1. Refund of purchase price paid by buyer or user for product bought, or
2. Replacement of product used.

To the extent consistent with applicable law, Corteva Agriscience shall not be liable for losses or damages resulting from handling or use of this product unless Corteva Agriscience is promptly notified of such loss or damage in writing. To the extent consistent with applicable law, in no case shall Corteva Agriscience be liable for consequential, incidental or special damages or losses.

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## Revisions:

1. Remove redundant First Aid box from "(Box/Booklet cover/small container base label)" section of label – First Aid box remains on Base Label and Booklet page 1 to end sections.
2. Revised Referral Statement on "(Box/Booklet cover/small container base label)" section.
3. Crop Rotational Interval Chart:
  - a. Added grass for seed and forage to 3 month rotational section of CRI chart.
  - b. Relocated sugar beets to 9 month rotational section of CRI Chart and updated corresponding footnote.
4. Weed Chart (Broadleaf Weeds):
  - a. Removed footnotes and placed qualifier language with weed listing for Bedstraw, catchweed/cleaver, Buckwheat, wild and Kochia.
  - b. Added second row for higher application rates for Bedstraw, catchweed/cleaver, Buckwheat, wild and Kochia.
  - c. Dock, curly: changed designation from "S" to "C" for both application rates.
  - d. Henbit: changed designation from "S" to "C" for both application rates.