| | | | |
|---|---|---|---|
| ORTHOSULFAMURON | GROUP | 2 | HERBICIDE |
| QUINCLORAC | GROUP | 4 | HERBICIDE |

# STRADA® XT2

HERBICIDE

**For use as a selective herbicide for rice weed control in the states of Arkansas, Louisiana, Mississippi, Missouri, Tennessee, and Texas.**

**ACTIVE INGREDIENTS:**

| | |
|---|---|
| **Orthosulfamuron**: Benzamide, 2-[[[[[(4,6-dimethoxy-2-pyrimidinyl) amino]carbonyl]amino]sulfonyl]amino]-N,N-dimethyl- | **10.0%** |
| **Quinclorac**: 8-Quinolinecarboxylic acid, 3,7-dichloro- | **60.0%** |
| **OTHER INGREDIENTS:** | **30.0%** |
| **TOTAL** | **100.0%** |

**EPA Reg. No. 71711-46** **EPA Est. No. 70815-GA-002 (CB) 39578-TX-1 (E)**
**superscript corresponds with lot number**

## KEEP OUT OF REACH OF CHILDREN

## CAUTION

***See inside booklet for First Aid, Precautionary Statements, and Directions for Use***

**NET CONTENTS: 4.69 pounds**

**175004**
**11/20**

NICHINO AMERICA®
Nichino America, Inc.
4550 Linden Hill Road, Suite 501
Wilmington, DE 19808

| FIRST AID | |
|---|---|
| **If in eyes** | • Hold eye open and rinse slowly and gently with water for 15-20 minutes.<br>• Remove contact lenses, if present, after the first 5 minutes; then continue rinsing.<br>• Call a poison control center or doctor for treatment advice. |
| **If swallowed** | • Call a poison control center or doctor immediately for treatment advice.<br>• Have person sip a glass of water if able to swallow.<br>• Do not induce vomiting unless told to by a poison control center or doctor.<br>• Do not give anything to an unconscious person. |
| **If on skin or clothing** | • Take off contaminated clothing.<br>• Rinse skin immediately with plenty of water for 15-20 minutes.<br>• Call a poison control center or doctor for treatment advice. |
| **If inhaled** | • Move person to fresh air.<br>• If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably mouth-to-mouth, if possible.<br>• Call a poison control center or doctor for further treatment advice. |

**HOTLINE NUMBER**

Have the product container or label with you when calling a poison control center or doctor or going for treatment. For additional information on this pesticide product, including human health concerns and medical emergencies, call 1-800-348-5832. In case of fire or spills, information may be obtained by calling 1-800-424-9300.

# PRECAUTIONARY STATEMENTS

## HAZARDS TO HUMANS AND DOMESTIC ANIMALS

# CAUTION/PRECAUCION

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

Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. Harmful if swallowed, absorbed through skin, or inhaled. Avoid breathing dust or spray mist. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

## PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear the following:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

## STATEMENTS FOR CONTAMINATED PPE

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

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 thoroughly with soap and water 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.
- 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

### Groundwater Advisory

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

Quinclorac has properties and characteristics associated with chemicals detected in groundwater. The use of quinclorac where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Keep out of lakes, ponds, and streams. Do not apply directly to water, areas where surface water is present, or to intertidal areas below the mean high water mark, except as specified on this label for use in rice. Do not contaminate arable land and/or water by cleaning of equipment or disposal of rinsate.

**Surface Water Advisory**
This product may impact surface water quality due to runoff of rainwater. This is especially true for 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 such as ponds, streams, and springs will reduce the potential loading of orthosulfamuron from runoff water and sediment. Runoff of this product will be greatly reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

# DIRECTIONS FOR USE

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the state or tribal agency responsible for pesticide regulation.

All applicable directions, restrictions, precautions, and conditions of sales and warranty are to be followed. This labeling must be in the user's possession during application.

## 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), restricted-entry interval, and notifications to workers. Agricultural use requirements subject to the Worker Protection Standards are hereby stated in accordance with the most protective of the two product labels:

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 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
- Shoes plus socks
- Waterproof gloves
- Protective eyewear

## IMPORTANT

Injury to or loss of desirable trees, vegetation, and/or adjacent sensitive crops may result from failure to observe the following: Avoid all direct or indirect contact with crops other than rice or land scheduled to be planted with crops other than rice due to the potential for sensitivity to the active ingredients in this product.

## USE INFORMATION

**STRADA® XT2** is for use in dry-seeded and water-seeded rice planting and production cultures for weed control in Arkansas, Louisiana, Mississippi, Missouri, Tennessee, and Texas. **STRADA XT2** is designed for dilution with water and spraying with common agricultural spray equipment. When applied according to label directions, **STRADA XT2** provides effective control of several annual and perennial broadleaf and grass weeds and sedges. To achieve the best weed control, it is recommended that **STRADA XT2** be applied to young, actively growing weeds.

The sulfonylurea herbicide component is primarily effective via foliar uptake. Once inside the target weed, it is translocated by xylem and phloem. Soon after **STRADA XT2** is applied, growth of susceptible weeds is inhibited, and the plants are no longer competitive with rice. Typically, weed leaves turn yellow, then reddish; and within 10 to 20 days, depending on weed size, species, and growing conditions, the stem and roots die. Treated target weeds, especially larger weeds, may stay green but are stunted and not competitive with the crop.

The quinolinecarboxylic acid herbicide component is translocated via xylem and phloem. This component possesses both preemergence and postemergence activity. Weedy plants treated with this component may show one or more of the following symptoms: epinasty of the stems and petioles, swelling of the stems and nodes with possible elongation along with leaf cupping. These symptoms are followed by inhibition of growth, chlorosis especially at the growing points, followed by wilting then necrosis.

Efficacy may depend on the following parameters:

- Weed size at application
- Growing and environmental conditions (e.g., soil moisture, relative humidity, and temperature) prior to and following treatment
- Soil pH, texture, and organic matter content
- Water management (refer to section below)

## CROP TOLERANCE

Rice is tolerant to **STRADA XT2** when used according to label use directions and under typical growing conditions. Adverse weather conditions or high use rate from spray overlap or other sources may contribute to leaf twisting, buggy whipping, or other abnormal growth characteristics. In broadcast or water-seeded rice, seed on the soil

surface in direct contact with **STRADA XT2** is the most sensitive. These symptoms are typically short-lived, and rice usually recovers without a significant stand loss or other injury.

Occasionally, in the presence of unusually cool or very high temperatures, transient symptoms of chlorosis and slight reduction in vigor may appear on rice, but the crop recovers within a few days without any adverse effect on yield.

## WATER MANAGEMENT

### Irrigation and Flood Water

Optimum weed control with **STRADA XT2** is highly dependent upon proper use of irrigation including effective flush irrigation to maintain moist soil conditions and timely establishment of permanent flood water. Soil applications and residual activity from foliar applications require moist soil conditions for weeds to uptake the herbicide and be controlled. Therefore, keep the soil moist to maintain weed control. If the soil is permitted to dry and weeds emerge, flush irrigate the field to reactivate the residual activity of the herbicide while weeds are small (1" or less). In postemergence water-seeded rice plantings and in pin-point flood culture, drain all water from the rice field and ensure seedling rice has at least two leaves before applying **STRADA XT2**. Rice seedlings without 2 leaves may be injured. Flood water levees should be formed prior to applying **STRADA XT2** for more consistent weed control. Residual weed control on the levee is dependent on moist soil conditions on the levee. If soil on the levee dries, erratic weed control may result. If a heavy rain occurs after applying **STRADA XT2**, drain the excess water from the rice field to avoid possible rice injury.

Before applying **STRADA XT2** to water-seeded rice, water levels in the rice field must be drained or lowered to allow exposure of the weed leaf surface for maximum uptake of the product by the leaves. It is recommended that the field be drained or the water level be lowered the day before the application. If the field cannot be drained before application, the water level must be reduced so that at least 70% of the weed leaf surface area is above the floodwater. Bring the field to normal flood level 24 – 48 hours after application.

If the soil is allowed to dry after application, a reduction in efficacy and weed regrowth may occur. Additional weed emergence may occur if the field is not flooded soon after application.

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

## SPRAY DRIFT MANAGEMENT

**AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR**. The interaction of weather related factors and equipment determine the potential for spray drift. Application should only be made when there is little or no hazard of spray drift. The applicator, crop consultant, and/or grower are responsible for considering all factors when determining whether or not to apply this product.

**Avoid all direct or indirect contact with nontarget plants.** Do not apply directly to or near desirable vegetation. Allow an adequate distance between target application area and desirable plants to minimize any potential exposure.

**Sensitive Areas**

Pesticides must only be applied when the potential for spray drift to adjacent sensitive nontarget areas (e.g., residential areas, known habitat for threatened or endangered plant species, bodies of water, nontarget crops, etc.) is minimal (e.g., when wind is blowing away from the sensitive areas). Avoid disturbing (e.g., cultivating) treated areas for at least 7 days following application.

**Sensitive Crops**

Sensitive crops are defined as all nontarget crops.

**Buffer Zones**

Buffer zone is defined as the distance between the application site and the nontarget sensitive crop.

Aerial applications shall not be made closer than 200 feet from sensitive crops.

Ground applications shall not be closer than 25 feet from sensitive crops when wind direction during the ground application is away from sensitive crops.

Ground applications shall not be closer than 200 feet from sensitive crops when wind direction is towards sensitive crops.

States that have more stringent spray drift regulations must be followed.

The applicator should be familiar with and take into account the information covered in the **Aerial Applications, Spray Drift** box.

**Aerial Applications – Spray Drift**

- Do not release spray at a height greater than 10 feet above the vegetative canopy unless a greater application height is necessary for pilot safety.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- 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.).
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

**Ground Boom Applications – Spray Drift**

- Apply with the nozzle height recommended by the manufacturer but no more than 3 feet above the ground or crop canopy unless making a turf, pasture, or rangeland application in which case applicators may apply with a nozzle height no more than 4 feet above the ground.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

**Boomless Applications – Spray Drift**

- Applicators are required to use a Medium or coarser droplet size (ASABE S572.1) for all applications.
- 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 NONTARGET SITES AND ENVIRONMENTAL CONDITIONS.

**Importance of Droplet Size**
For ASABE S-572.1 Standard compliance, see nozzle manufacturer catalogs, NAAA booklet, USDA literature, or website http://apmru.usda.gov/ for nozzle and application conditions. 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 – Aircraft**
- Adjust Nozzles - Follow nozzle manufacturer's recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.
- 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 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 orientated straight back produce the largest droplets and the lowest drift.

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

**Boom Height – Ground Boom**
Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

**Boomless Ground Applications**
Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

**Release Height – Aircraft**
Higher release heights increase the potential for spray drift. When applying aerially to crops, do not release spray at a height greater than 10 feet above the crop canopy unless a greater application height is necessary for pilot safety.

**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 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 must not occur during a temperature inversion because drift potential is high. 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. Drift potential is lowest between wind speeds of 2 to 8 mph. However, many factors including droplet size and equipment type determine drift potential at any given speed. Application must be avoided below 2 mph due to variable wind direction and high inversion potential. Application is not allowed when wind speeds exceed 8 mph due to risk of direct drift to nontarget sensitive crops or locations. **Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift. **Note:** Follow state and local regulations with regard to minimum and maximum wind speeds during aerial application as they may be more restrictive. Applicators must be familiar with state and local regulations.

**Nontarget Organism Advisory Statement**
This product is toxic to plants and may adversely impact the forage and habitat of nontarget organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of nontarget organisms by minimizing spray drift. For further guidance and instructions on how to minimize spray drift, refer to the **Spray Drift Management** section of this label.

**Windblown Soil Particles**
**STRADA XT2** has the potential to move off-site due to wind erosion. Soils that are subject to wind erosion usually have a high silt and/or fine to very fine sand fractions and low organic matter content. Other factors which can affect the movement of windblown soil include the intensity and direction of prevailing winds, vegetative cover, site slope, rainfall, and drainage patterns. Avoid applying **STRADA XT2** if prevailing local conditions may be expected to result in off-site movement.

**Endangered Species**
If endangered plant species occur in the proximity of the application site, the following mitigation measure is required to avoid adverse nontarget effects:
- Leave untreated downwind buffer zones of 25 feet for ground applications or 200 feet for aerial applications

To determine whether your county has an endangered terrestrial plant species, consult http:/www.epa.gov/espp/usa-map.htm. Endangered Species Bulletins may also be obtained from state or county extension offices or state pesticide agencies. If the bulletin is not available for your specific area, check with the appropriate local state agency to determine if known populations or terrestrial endangered plants occur in the area to be treated.

**WEED RESISTANCE MANAGEMENT**
For resistance management, please note that **STRADA XT2** contains both a Group 2 (orthosulfamuron) and a Group 4 (quinclorac) herbicide. Any weed population may contain plants naturally resistant to Group 2 and/or Group 4 herbicides. The resistant individuals may dominate the weed population if these herbicides are used repeatedly in the same fields. Appropriate resistance management strategies should be followed.

Some weeds are known to develop resistance to herbicides that have been used repeatedly. While the development of herbicide resistance is well understood, it is not easily predicted. Therefore, herbicides should be used in conjunction with the resistance management strategies in the area. Consult the local or state agricultural advisors for details. If herbicide resistance should develop in this area, this product used alone may not continue to provide sufficient levels of weed control. If the reduced levels of control cannot

be attributed to improper application techniques, improper use rates, improper application timing, unfavorable weather conditions or abnormally high weed pressure, a resistant strain or weed may have developed. To reduce the potential for weed resistance, use this product in a rotation program with other classes of chemistry and modes of action. Always apply this product at the listed rates and in accordance with the use directions. Do not use reduced rates of the tankmix partner. For optimum performance, scout fields carefully and begin applications when weeds are smaller rather than larger. If resistance is suspected, contact the local or state agricultural advisors.

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

- Rotate the use of **STRADA XT2** or other Group 2 and Group 4 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation and that considers tillage (or other mechanical control methods); cultural (e.g., higher crop seeding rates, precision fertilizer application method and timing to favor the crop and not the weeds); biological (weed-competitive crops or varieties); and other management practices.
- Users should scout before and after application.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product and switch to another management strategy or herbicide with a different mode of action, if available.
- Users should report lack of performance to registrant or their representative.

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 noncontrolled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species

Contact your local sales representative, crop advisor, or extension agent to find out if suspected resistant weeds to these MOAs have been found in your region. Do not assume that each listed weed is being controlled by multiple mechanisms of action.

Co-formulated active ingredients are intended to broaden the spectrum of weeds that are controlled. Some weeds may be controlled by only one of the active ingredients in this product.

## APPLICATION INSTRUCTIONS - RICE

**STRADA XT2** may be applied to rice fields to control barnyardgrass, propanil-resistant barnyardgrass, other annual grasses, and certain sedge and broadleaf weeds listed on this label. The entire contents of this container must be emptied into the spray tank and applied to the intended site.

### Application Equipment

Whenever possible, spray mixtures should be applied using ground spray equipment.

Ensure ground and aircraft spray equipment is properly calibrated and spray coverage is uniform. Always use spray nozzles and other equipment designed to reduce accidental spray drift. Always use drift control products and limit spray applications to periods when wind and other weather conditions do not favor spray drift beyond the border of the rice field.

### Soil Applications

**STRADA XT2** can be applied to the soil surface before, during, or after planting of dry-seeded rice. When applied to the soil surface and activated by rainfall or irrigation, roots of susceptible grasses and broadleaf weeds uptake the herbicide resulting in commercially acceptable control before weed competition reduces rice productivity. Soil texture and clay content determines the proper use rate for optimum weed control, with heavier soil textures and higher clay content requiring higher use rates as specified in **Table 1**.

### Foliar Applications

**STRADA XT2** can be applied to the foliage of susceptible grasses and broadleaf weeds in dry-seeded and water-seeded rice. When applied to weed foliage, leaves and stems partially uptake the herbicide. It is essential that rice be flushed after a foliar application to maximize root absorption resulting in commercially acceptable weed control. Additionally, the herbicide reaching the soil surface moves into the soil with rainfall or irrigation providing residual weed control. In general, smaller weeds are more effectively controlled with lower use rates with larger weeds requiring higher use rates for more complete control. The use rates in **Table 2** are for foliar applications to provide commercially acceptable control of susceptible weeds based on weed size or growth stage.

### Ground Application

Whenever possible, spray mixtures containing **STRADA XT2** should be applied using ground spray equipment. Do not make spray applications when wind speed is greater than 10 mph, when air temperatures exceed 90°F, or when environmental conditions exist for temperature inversions.

**Application Information**

**Preplant/Preemergence and Delayed Preemergence**
Water Volume: Apply 10-40 gallons of water per broadcast acre
Spray Pressure: Use 25-40 psi

**Postemergence**
Water Volume: Apply 10-20 gallons of water per broadcast acre
Spray Pressure: Use 25-40 psi

**Aerial Application**
If application with ground spray equipment is not possible, application by aircraft is acceptable provided the aerial applicator understands the risks and assumes the liability associated with accidental spray drift from aerial application. Do not make spray applications when wind speed is greater than 8 mph, when air temperatures exceed 90°F, or when environmental conditions exist for temperature inversions.

**Application Information**

Water Volume: Apply a minimum of 5 gallons of water per acre
Spray Pressure: Use a maximum of 40 psi

## RATE INFORMATION

The maximum rate is 10.5 oz per acre per year (equivalent to 0.066 lb ai orthosulfamuron and 0.393 lb ai quinclorac per acre) or 1 bottle product of 4.69 lbs per 7.15 acres).

### Timing and Application Rate Tables

**Table 1. Preemergence application rate by soil type – dry-seeded rice culture only**

| Soil Texture | STRADA XT2 Use Rate (oz product per acre) | Broadcast Treated Acres Per Bottle |
|---|---|---|
| Sand or loamy sand | DO NOT USE | |
| Sandy loam | 6.5 – 8 | 11.2 – 9.4 |
| Loam, silt loam, silt, sandy clay, or sandy clay loam | 7.5 – 10 | 10 – 7.5 |
| Silty clay loam, silty clay, clay loam, or clay | 7.5 – 10 | 10 – 7.5 |
| Do not use **STRADA XT2** preemergence in water-seeded rice culture. | | |

| Table 2. Postemergence application* rates per acre for grass and broadleaf weed control and expected soil residual lengths | | |
|---|---|---|
| | **Small weeds controlled and short-term soil residual** | **Larger weeds controlled and longer-term soil residual** |
| Annual Grass Weed Species Listed Below | 6.5 – 8 oz up to 2 inches | 7.5 – 10.5 oz up to 3 inches |
| Broadleaf Weed Species Listed Below | 6.5 – 8 oz up to 3 - 4 leaves | 7.5 – 10.5 oz up to 6 leaves |
| Weeds Suppressed | 10.5 oz | 10.5 oz |
| *Rice must be in at least the 2-leaf stage. For best control, establish permanent flood within 2 days after **STRADA XT2** application. | | |

| Table 3. List of Weeds Controlled by STRADA XT2 | |
|---|---|
| **Common Name** | **Scientific Name** |
| Arrowhead spp.* | *Sagittaria* spp.* |
| Barnyardgrass | *Echinochloa crus-galli* |
| Broadleaf signalgrass | *Urochloa platyphylla* |
| Ducksalad* | *Heteranthera limosa** |
| Eclipta | *Eclipta prostrata* |
| Falsepimpernel spp. | *Lindernia* spp. |
| Gooseweed | *Sphenoclea zeylanica* |
| Hemp sesbania | *Sesbania herbacea* |
| Jointvetch spp. (Indian and Northern) | *Aeschynomene* spp. |
| Junglerice | *Echinochloa colonum* |
| Large crabgrass | *Digitaria sanguinalis* |
| Monochoria | *Monochoria vaginalis* |

*(continued)*

| **Table 3. List of Weeds Controlled by STRADA XT2** *(continued)* | |
|---|---|
| **Common Name** | **Scientific Name** |
| Morningglory spp. | *Ipomoea* spp. |
| Prickly sida | *Sida spinosa* |
| Purple ammannia* | *Ammannia coccinea** |
| Redstem* | *Ammannia auriculata** |
| Rice flatsedge* | *Cyperus iria** |
| Smartweed spp. | *Polygonum* spp. |
| Spreading dayflower | *Commelina diffusa* |
| Waterhyssop spp. | *Bacopa* spp. |
| Waterplantain spp. (seedling)* | *Alisma* spp.* |
| **Weeds Suppressed **** | |
| **Common Name** | **Scientific Name** |
| Alligatorweed | *Alternanthera philoxeroides* |
| Mexicanweed | *Caperonia castaniifolia* |
| Smallflower umbrella sedge* | *Cyperus difformis** |
| Texasweed | *Caperonia palustris* |
| Yellow nutsedge* | *Cyperus esculentus** |

* **STRADA XT2** does not control ALS resistant biotypes of this weed which might be present in the field.

** Control of suppressed weeds may be significantly improved using tank mixtures.

Notes: Weeds with gradual and late emergence (like purple ammannia) may escape an early herbicide application. As previously mentioned, optimum weed control is generally obtained when applications are made to young (less than 4-leaf) weeds that are actively growing.

## CLEANING SPRAY EQUIPMENT

All mixing equipment and air spray equipment should be thoroughly cleaned before and after mixing and applying **STRADA XT2**.

## SPRAYER TANK CLEANOUT

**Do Not Use Chlorine Bleach With Ammonia.** To avoid injury to desirable crops, clean all mixing and spray equipment before and immediately following applications of **STRADA XT2** as follows:

- Drain remaining spray solution from spray tank. Thoroughly rinse spray tank, boom, and hoses with clean water. Remove the nozzles, screens, and any components contacting the spray solution; and clean separately in a bucket containing ammonia and water. Loosen and physically remove any visible deposits.
- Fill the tank with clean water and 1 gallon of household ammonia (minimum 3% ammonia) for every 100 gallons of water. Flush the hoses, boom, and nozzles with the cleaning solution.*
- Refill the spray tank back to full. Circulate the cleaning solution through the tank and hoses for at least 15 minutes. Again flush the hoses, boom, and nozzles with the cleaning solution; and then drain the tank.
- Remove the nozzles, screens, and components as before and clean separately in a bucket containing ammonia and water.
- Repeat Step 2.
- Rinse the tank, boom, and hoses with clean water.
- The rinsate may be disposed of on-site or at an approved disposal facility.

* If using an ammonia product that is not 3% ammonia, an equivalent amount of an alternate strength ammonia solution can be used in the clean out procedure. Carefully read and follow the individual cleaner instructions.

## ADDITIVES

For postemergence applications only, adding 2 pints of crop oil concentrate per acre is required.

## DRIFT CONTROL PRODUCTS

Drift control products should always be added to the spray solution to affect spray droplet size and other characteristics, reducing the potential of off-target accidental spray drift.

## MIXING ORDER

1. Fill the tank at least one-half full of water and begin agitation. **Maintain agitation during the filling process and until the application is complete.**
2. Products in PVA bags: Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
3. Add materials in the following order: **STRADA XT2**, dry flowables (DF), wettable powders (WP), aqueous suspensions (AS), flowables (F), and liquids (L). Note that the quantity of spray solution prepared should allow for the use of the entire contents of this bottle. No product should be left in the bottle. (See **Tables 1** and **2** in the Application Instructions Section above.)
4. Allow each material to completely disperse before adding the next material.
5. While continuing agitation, fill the tank to three-fourths full.
6. Add any solution (S) formulations and surfactants.
7. Bring the tank to final volume.
8. Maintain agitation during the filling process and until the application is complete. If agitation and application are stopped, suspended materials may settle out to the bottom of the tank. It is very important to re-suspend all materials in the tank before applications are resumed. Sparger-type agitators are useful for these circumstances. Tank mixtures should not be allowed to remain in the spray tank overnight.

Refer to the companion herbicide label(s) for all applicable use directions, restrictions (including any water-holding requirements), and precautions. Read and follow the entire label of each product to be used in the tank mixture with this product.

Tank mixtures should not be applied if the crop is under severe stress due to drought, water saturated soils, poor fertility (especially low nitrogen levels), hail, frost, insects, or when the maximum daytime temperature is above 90°F. Tankmix applications under these conditions may cause temporary crop injury.

## TANK MIXING INFORMATION

### Tank Mixture Compatibility Testing

Before tank mixing **STRADA XT2** with other pesticides or materials, it is recommended that a compatibility or jar test be performed. In order to perform the compatibility test, the relative proportions of the materials being considered for tank mixture should be added to a clear quart jar. After addition to the jar, invert or shake the jar numerous times to ensure complete mixing; then observe the jar for at least one-half hour. If precipitates (sludges, layers, flakes, balls, etc.) form, the tank mixture combination is not compatible and should not be used.

While **STRADA XT2** herbicide is effective in controlling a broad spectrum of annual grasses and broadleaf weeds, more effective weed control may be obtained or additional weeds may be controlled by tank mixing with other herbicides labeled for weed control in rice. The table below describes some weed situations where tank mixing is appropriate. Read and follow all use directions, precautions, and restrictions for each herbicide in the spray mixture. The most restrictive labeling applies to tank mixtures.

**Table 4. Tank Mixtures**[1]

| Weed | Tankmix Information |
|---|---|
| Clearfield® rice | To improve grass and broadleaf spectrum and weed control efficacy, tank mix 6.5 to 10.5 oz per acre **STRADA XT2** with:<br>4 to 6 oz per acre Newpath® |
| Yellow nutsedge | Tank mix 5 to 10.5 oz per acre **STRADA XT2** with:<br>0.25 – 0.5 oz per acre halosulfuron (Permit®, Halomax™) |
| Hemp sesbania > 6-leaf or 6 inches<br>Morningglory spp. | For faster activity and improved stem dessication, tank mix 5 to 10.5 oz per acre **STRADA XT2** with:<br>0.5 – 1 oz per acre Aim® 2EC OR<br>2 – 4 lb ai per acre propanil |

[1] Apply tankmix after rice has reached the 2 to 3-leaf stage.

## USE RESTRICTIONS AND LIMITATIONS – RICE

- Do not apply after ½ inch internode elongation or within 40 days of harvest, whichever is more restrictive. Do not apply to rice that is heading.
- Aerial applications shall not be made closer than 200 feet from sensitive crops.
- Ground applications shall not be closer than 25 feet from sensitive crops when wind direction during the ground application is away from sensitive crops.
- Ground applications shall not be closer than 200 feet from sensitive crops when wind direction is towards sensitive crops.
- Do not enter treated fields until 12 hours after application (REI = 12 hours).
- When applying **STRADA XT2** for postemergence weed control, the use of an approved crop oil concentrate at 2 pints per acre is required.
- Do not apply where runoff or irrigation water may flow directly onto agricultural land other than rice fields.
- Do not apply **STRADA XT2** directly or indirectly to crops other than rice.

- Do not apply more than 10.5 oz **STRADA XT2** per acre per year (equivalent to 0.066 lb ai orthosulfamuron and 0.393 lb ai quinclorac per acre, or 1 bottle product per 7.15 acres).
- If a separate application of quinclorac active ingredient is sequentially made, do not exceed a total of 0.5 lbs active ingredient per acre per season.
- Only one application per year is permitted.
- Do not allow tank mixtures containing **STRADA XT2** to sit overnight.
- Chemigation or applications through any type of irrigation system is not allowed.
- For use only in the states of Arkansas, Louisiana, Mississippi, Missouri, Tennessee, and Texas.
- **Soil Restrictions**
  - Do not use **STRADA XT2** on precision-cut fields until the second rice crop as injury can occur.
  - Do not use **STRADA XT2** on sand and loamy sand soils.
  - Do not apply to rice fields with a history of poor water-holding capacity (porous subsoil), as erratic weed control may result.
  - Do not apply **STRADA XT2** on any rice soil that does not have an impermeable hard pan to provide good water-holding capacity.
- **Drift Concerns** - Do not allow **STRADA XT2** to drift outside of the intended target areas.
- **Ground Application** - Do not apply when wind speed is greater than 10 mph.
- **Aerial Application** - Do not apply when wind speed is greater than 8 mph.
- **Temperature Inversions** - Do not apply **STRADA XT2** when air temperatures exceed 90°F.
- Do not use rice straw or processing by-products (such as chaff, hulls, etc.) as soil amendments or mulch for high-value crops such as bedding stock, vegetable transplants, or ornamental and fruit trees.
- Do not use treated rice fields for the aquaculture of edible fish and crustacea (crayfish).
- Do not use water from rice cultivation after a **STRADA XT2** application to irrigate any crop other than rice.
- Do not apply this product through any type of irrigation system.

## STATE SPECIFIC RESTRICTIONS

Because there are additional state restrictions in Arkansas, contact the Arkansas Plant Board or a representative for specific instructions about applying product containing quinclorac in Arkansas.

In Arkansas, **STRADA XT2** must not be applied in an area from one mile west of Highway #1 to one mile east of Highway #163 from the Craighead-Poinsett County line to the Cross-Poinsett County line. Furthermore, no aerial application is allowed in the area of Poinsett County one mile west of Highway #1 to two miles west of Highway #1 and one mile east of Highway #163 to Ditch #10, from the Craighead-Poinsett County line to the Cross-Poinsett county line.

## ROTATIONAL CROP INFORMATION

- **Crop Rotation Restrictions** - Do not plant any crop other than rice for a period of 309 days following application after which time cotton, soybeans, sugarcane, corn, and small grains may be planted.
- Eggplants and tobacco should not be planted within 12 months in fields treated with **STRADA XT2**.
- Tomatoes and carrots should not be planted within 24 months in fields treated with **STRADA XT2**. In case of crop failure, only rice may be immediately replanted.
- All other crops not mentioned may be planted after 12 months following application.

## USE PRECAUTIONS

- Rainfast within 6 hours.
- Application of **STRADA XT2** to fields which have been levelled (except water levelling) within 12 months prior to application may result in rice injury in areas that have been cut or filled.
- Poor weed control may result from application of **STRADA XT2** made to plants under stress from abnormally hot or cold weather; environmental conditions such as drought, hail damage, hydrogen sulphide; or prior herbicide applications.

# STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store under well-vented, cool and dry storage conditions. Do not store under moist conditions.

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

**CONTAINER HANDLING:** Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. 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 reconditioning if appropriate, or puncture and dispose of in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke. Do not burn unless allowed by state and local ordinances. In most states, burning is not allowed.

# IMPORTANT: READ BEFORE USE

By using this product, user or buyer accepts the following conditions, warranty, disclaimer of warranties, and limitations of liability.

**CONDITIONS:** The directions for use of this product are believed to be accurate and must be followed carefully. However, because of extreme weather and soil conditions, use methods and other factors beyond the control of Nichino America, Inc. (NAI), it is impossible for NAI to eliminate all risks associated with the use of this product. As a result, crop injury or ineffectiveness is always possible. To the extent consistent with applicable law, all such risks are assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, WHICH EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. No agent of NAI is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, NAI disclaims any liability whatsoever for incidental or consequential damages, including, but not limited to, liability arising out of breach of contract, express or implied warranty (including warranties of merchantability and fitness for a particular purpose), tort, negligence, strict liability or otherwise.

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