



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

April 3, 2020

Gregeory Wuthnow  
Regulatory Affairs Manager  
Nichino America, Inc.  
4550 Linden Hill Road, Suite 501  
Wilmington, DE 19808

Subject: Registration Review Label Mitigation for Orthosulfamuron  
Product Name: IR5878 0.5 GR  
EPA Registration Number: 71711-45  
Application Dates: 12/19/2017  
Decision Numbers: 561125

Dear Mr. Wuthnow:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the 22 Sulfonylurea (SU) Herbicides Interim Decision and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A copy of your label stamped "Accepted" is enclosed. Products shipped after 12 months from the date of this amendment must bear the new revised label. Your release for shipment of the product bearing the amended label constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

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Decision No. 561125

If you have any questions about this letter, please contact Darius Stanton by phone at 703-347-0433, or via email at [Stanton.darius@epa.gov](mailto:Stanton.darius@epa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Linda Arrington".

Linda Arrington, Branch Chief  
Risk Management and Implementation Branch 4  
Pesticide Re-Evaluation Division  
Office of Pesticide Programs

Enclosure



ORTHOSULFAMURON | GROUP 2 | HERBICIDE

### STRADA® GR

**For use as a selective herbicide in permanently flooded or water-seeded rice only in the state of California.**

**ACTIVE INGREDIENT:**

**Orthosulfamuron:**

Benzamide, 2-[[[[[(4,6-dimethoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]amino]-N,N-dimethyl-.....**0.50%**

**OTHER INGREDIENTS** .....**99.50%**

**TOTAL** .....**100.0%**

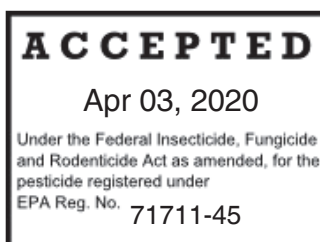
**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

<b>FIRST AID</b>	
<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to by the poison control center or doctor.</li> <li>• Do not give anything 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 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 further 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.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>HOTLINE NUMBER</b>	
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.	

{Note to reviewer, optional text are provided in brackets [ ].}

[See (back)(side) panel for precautionary statements]

EPA Reg. No.: 71711-45



EPA Est. No.: \_\_\_\_\_

MAS-378-4 110117

Net Contents: \_\_\_\_\_

[Manufactured in \_\_\_\_,] [formulated in \_\_\_\_,] [and] [packaged in \_\_] for:

**Nichino America, Inc.**  
4550 Linden Hill Road, Suite 501  
Wilmington, DE 19808  
888-740-7700

**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).**

Harmful if swallowed, absorbed through skin, or inhaled. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing spray.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**Applicators and other handlers must wear the following:**

- Long-sleeved shirt and long pants
- Shoes plus socks
- Waterproof gloves
- 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 after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash skin thoroughly and put on clean clothing.

**ENVIRONMENTAL HAZARDS**

With the exception of treating rice fields as specified in this label, do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate arable land and/or water when disposing of equipment wash water or rinsate.

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### **Groundwater Advisory**

This chemical 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.

### **Surface Water Advisory**

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. 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.

### **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 area. Protect the forage and habitat of non-target organisms by minimizing drift.

### **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 ingredient in STRADA GR.

### **DIRECTIONS FOR USE**

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

Read the entire label. Use strictly in accordance with Precautionary Statement and Directions, and with applicable State and Federal regulations.

Do not apply this product in a way that will contact workers or other people, 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.

## **AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval, and notifications to workers.

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

## **PRODUCT INFORMATION**

STRADA GR is a systemic herbicide formulated as a granule suitable for selective post emergence weed control. When applied according to label directions it is effective in the control of several annual and perennial broadleaf weeds and sedges.

To achieve the best control, it is recommended that STRADA GR be applied to young, actively growing weeds between 1-2 leaves. STRADA GR should be applied as a direct dry application using ground or air equipment to flooded rice.

Efficacy may depend on the following parameters:

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

STRADA GR contains the active ingredient orthosulfamuron, a sulfonyleurea herbicide. The mode of action (MOA) for STRADA GR inhibits the plant enzyme acetolactate synthase (ALS), which is also known as acetoxy acid synthase (AHAS). Inhibition of this enzyme blocks branched-chain amino acid biosynthesis of valine, leucine and isoleucine which leads to plant death.

STRADA GR is particularly efficient by foliar uptake. Once in the target weed, it is translocated by xylem and phloem. Soon after STRADA GR 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 may stay green, but are stunted and not competitive with the crop.

**USE RESTRICTIONS**

- Do not apply after ½ inch internode elongation
- Do not enter treated fields until 12 hours after application (REI = 12 hours)
- For detailed instructions regarding water management before and after application, refer to the water management section of this label
- Do not apply where runoff or irrigation water may flow directly onto agricultural lands other than rice fields
- Do not apply STRADA GR directly or indirectly to crops other than rice
- Do not make more than 1 application or apply more than 13.3 pounds of STRADA GR per acre per year (equivalent to 0.067 lb ai/a)
- Do not apply STRADA CA to the same field in the same use or year that an application of STRADA GR has been applied.
- Do not apply this product through any type of irrigation system.

**Rotational Crop Information**

Use the time intervals listed below to determine the minimum required time interval between last STRADA GR application and new crop planting.

<b>Rotational Crop Guideline</b>	
<b>Crop</b>	<b>Time Interval in Months Before Planting</b>
Sugarcane	1
Corn (all)	3
Small Grains	3
Cotton	6
Soybean	6
All Other Crops	12

**Use Precautions**

- Poor weed control may result from application of STRADA GR made to plants under stress from abnormally hot or cold weather; environmental conditions such as drought, hail damage, hydrogen sulphide or prior herbicide applications
- Application of STRADA GR 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

## STRADA GR Spectrum

Weeds Controlled		Rate of Application
Common name	Scientific name	STRADA GR 13.3 Pounds/Acre
Ammannia, Purple *	<i>Ammannia coccinea</i> *	
Arrowhead, California *	<i>Sagittaria montevidensis</i> *	
Bulrush, Ricefield *	<i>Schoenoplectus mucronatus</i> *	
Ducksalad *	<i>Heteranthera limosa</i> *	
Eclipta	<i>Eclipta prostrata</i>	
Monochoria	<i>Monochoria vaginalis</i>	
Redstem *	<i>Ammannia auriculata</i> *	
Smartweed spp.	<i>Polygonum spp.</i>	
Waterplantain spp. (seedling) *	<i>Alisma spp.</i> *	
Waterhyssop spp.	<i>Bacopa spp.</i>	
Weeds Suppressed **		
Alligatorweed	<i>Alternanthera philoxeroides</i>	
Smallflower umbrella sedge *	<i>Cyperus difformis</i> *	
Watergrass, Early *	<i>Echinochloa oryzoides</i> *	
Watergrass, Late *	<i>Echinochloa phyllopogon</i> *	
Yellow nutsedge *	<i>Cyperus esculentus</i> *	

\* STRADA 0.5 GR 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 that incorporate other herbicides with activity against the target weeds listed as suppressed.

Note: Weeds with gradual and late emergence (like Redstem and bulrush) may escape an early herbicide application.

### APPLICATION INFORMATION

#### Use rate

STRADA GR: 13.3 pounds per acre per year

#### STRADA GR Dry Application

STRADA GR is applied as a dry application (without dilution in water)

Precautions for this kind of application:

- Loading, application and equipment calibration instructions provided by the equipment manufacturer have to be followed
- Do not apply STRADA GR to dry (non-flooded) rice fields
- Do not mix STRADA GR with any liquid carrier (like water or oil), nor any surfactant or crop oil
- Some crops are sensitive to STRADA GR. Therefore avoid all direct and indirect contact with nontarget crops (or fields intended to be planted with sensitive crops)



## **STRADA GR Sequential Application**

STRADA GR fits well in typical weed management programs. Sequential applications with commonly used herbicides registered for rice are suggested to complete the weed spectrum, especially for grass weeds.

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 sequentially with this product.

## **Application Timing**

STRADA GR application timing should be based on the appropriate rice growth stage and is also dependent on the species of weeds present and their growth stage. The recommended application timing for continuous flooded rice production is the 1 to 2 leaf stage of rice. This typically corresponds to the 1 to 2 leaf stage of weeds. To achieve the best weed control, it is recommended that STRADA GR be applied to young, actively growing weeds. It is important to scout fields regularly to ensure weeds do not become too large before the herbicide application is made.

STRADA GR can only be applied to flooded rice.

Due to the selectivity for use on rice, STRADA GR can be applied at very early stages of the crop. Occasionally, in the presence of very high temperatures, transient symptoms of chlorosis and slight vigor reduction may appear on rice, but the crop recovers within a few days without any adverse effect on yield.

## **Water Management**

24 - 48 Hours Prior to Application:

- Prior to application, a 3-inch minimum water depth should be established covering the shallowest partes) of the field. Average water depth for the remainder of the field should be 4- to 5-inches. Weeds should be completely submerged and no exposed soil should be found within the field.
- If rainfall occurs prior to application, do not apply STRADA GR until water depth meets the requirements listed above.

0-7 Days Following Application:

- For optimum weed control, maintain a static flood for 7 days immediately following application.
- During the static flood period, maintain a minimum water depth of 3 inches. If required, water can be slowly added to maintain correct water depth.
- If water is lost from the field or any part of the field, immediately reflood.
- Failure to maintain an adequate flood may result in reduced weed control.

#### 8 - 14 Days Following Application:

- After the 7-day static flood period, it is recommended that water not be released for an additional 7 days.
- During this time, water depth should be maintained or increased as rice grows. Shallow water conditions can result in reduced weed control as it may promote emergence of additional weeds.
- If water is lost from the field or any part of the field, immediately reflood.
- Failure to maintain a flood may result in reduced weed control.

At the conclusion of the 14 day period, it is important to manage water flood depth to prevent secondary weed emergence which can occur if an adequate flood depth is not maintained.

#### **Aerial Applications**

Application equipment used to deliver STRADA GR should be calibrated to accurately and uniformly distribute STRADA GR to the target area. Do not release Strada GR at a height greater than 10 ft above the vegetative canopy, unless a greater application height is necessary for pilot safety. Equipment should be monitored during application to ensure that appropriate rate and coverage are maintained. Overlaps that result in a higher than labeled rate should be avoided. Do not apply Strada GR when wind speeds exceed 10 miles per hour at the application site.

#### **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 drift.

#### **Windblown Soil Particles**

STRADA GR 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 GR if prevailing local conditions may be expected to result in off-site movement.

#### **WEED RESISTANCE MANAGEMENT**

For resistance management, STRADA GR is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to STRADA GR and other Group 2 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance-management strategies should be followed.

STRADA GR and other pesticides should be incorporated into an Integrated Pest Management (IPM) program that can include the use of cultural, biological, and other chemical practices to prevent economical pest damage. Effective IPM practices include the use of weed free seed, proper scouting and identification of weeds within each field or paddy, optimum water management (adequate soil moisture at the time of application and maintaining the permanent flood), pesticide treatment at the appropriate target stage, crop rotation, and mechanical weed

control when appropriate. This list is not inclusive and should be used in conjunction with other practices to further prevent resistance development.

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

- Always apply STRADA GR at 13.3 pounds formulated product per acre
- Avoid following an ALS-inhibiting herbicide application with another herbicide application of the same mode of action
- The use of ALS herbicides in consecutive years should be done in conjunction with herbicides containing other modes of action
- Monitor escaped weeds and control them before they can produce seed
- Do not apply STRADA CA to the same field in the same use or growing season that an application of STRADA GR has been applied
- Rotate the use of STRADA GR or other Group 2 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- 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 non-controlled 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 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 mechanisms of actions for each target weed.

## 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. Completely empty bag into application equipment, then offer for recycling if available or dispose of empty bag 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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