

# **FOR AERIAL APPLICATION OF TANK MIXES - ARKANSAS - RESIDUAL CONTROL WEEDS**

## General Information

### Information

Grasp SC herbicide is a pre-emergence and post-emergence herbicide for selective control of susceptible grass, broadleaf, and annual sedge weeds in rice. Susceptible weeds emerged at the time of application or which germinate soon after application will be controlled. A spray volume of 8 to 10 gallons per acre (gpa) or more and uniform coverage are required for optimum performance. Grasp SC is rainfast within 1 hour after application and has soil residual herbicidal activity dependent on weed species, soil type, soil moisture (rainfall or irrigation after application) and the rate of application. Grasp SC can be applied to rice fields used for crayfish production.

Rice crops grown under adverse environmental conditions, such as extreme cold or heat, may express temporary crop injury when Grasp SC is applied including slight height reduction or root stunting. Any crop stress or environmental factors which decrease plant metabolism and growth may reduce weed control efficacy and crop safety. Such effects are transient and do not affect yield. Grasp SC may be used on all rice varieties.

### Use Precautions

- Apply Grasp SC in a minimum of 5 gallons per acre (GPA) spray solution. Use of low spray volumes (5 to 10 GPA) may provide poor coverage and may not provide adequate weed control. Regrowth and poor control of susceptible weeds may occur with low spray volumes.
- Poor weed control may result from application of Grasp SC made to plants under stress from abnormally hot or cold weather; environmental conditions such as drought, hail damage, hydrogen sulfide, or high pH soils; or prior herbicide applications.
- Application of Grasp SC to fields which have been leveled (except water leveling) within 12 months prior to application may result in serious rice injury in areas that

have been cut or filled.

- Application of Grasp SC as a pre-flood treatment to rice grown in soils with pH >7.8 or high salt content may result in serious rice injury. This soil pH restriction does not apply to post-flood applications.

#### Use Restrictions

- Preharvest Interval: Do not apply within 60 days of rice harvest.
- Do not rotate treated land to crops other than rice for 3 months following application.
- Do not make more than 2 applications or apply more than 5.6 fl oz of Grasp SC per acre (0.088 lb ai penoxsulam) during the year in both the first and ratoon crops combined. Do not apply more than 2.8 fl oz/ac Grasp SC (0.044 lb penoxsulam per acre) in a single application. Apply 2 fl oz Grasp SC per acre (0.031 lb penoxsulam per acre) in rice as a pre-emergence application provided the total amount of Grasp SC applied during one year does not exceed 5.6 fl oz per acre (0.088 lb penoxsulam per acre) in the first and ratoon crop.
- Sequential applications of Grasp SC must be made at least 14 days apart.
- Use of an agriculturally approved crop oil concentrate or methylated seed oil adjuvant at a minimum of 1 quart per acre is necessary with post-emergence applications of Grasp SC.
- Do not use organosilicone surfactants in spray mixtures of this product.
- Do not apply where runoff or irrigation water may flow directly onto agricultural land other than rice fields.
- Do not tank mix Grasp SC with malathion or methyl parathion. Do not make an application of malathion or methyl parathion within 7 days of an application of Grasp SC.
- Do not apply Grasp SC directly to, or otherwise permit Grasp SC to come into contact with, cotton, soybeans, grapes, tobacco, vegetable crops, flowers, ornamental shrubs or trees, or other desirable broadleaf plants, as serious injury may occur. Do not permit spray mists containing Grasp SC to drift onto desirable

broadleaf plants.

- Except for crayfish, do not fish or commercially grow fish, shellfish or crustaceans on treated acres during the year of treatment.
- Do not allow tank mixes of Grasp SC to sit overnight.
- Do not overlap or double spray ends of fields.
- Chemigation: Do not apply this product through any type of irrigation system.
- Do not use on wild rice (*Zizania* species).

### Application Instructions

#### Environmental Conditions and Herbicidal Activity of Grasp SC

Factors for effective post-emergence weed control with Grasp SC include proper application rate, weed size, daytime and nighttime temperatures, soil moisture prior to and following application, and use of adjuvants. Best weed control results are obtained when Grasp SC is applied to small, actively growing weeds, when daytime and nighttime temperatures are warm (60°F or more), and soil moisture is adequate to support active weed growth prior to and following application. If weeds are under drought stress, consider delaying application until more favorable conditions resume. Application when weeds are moisture stressed or larger than the recommended size for control may result in only partial control.

- Grasp SC is rainfast in 1 hour.
- Applications made immediately prior to, during, or immediately following periods of large day/night temperature fluctuations or where daytime and nighttime temperatures do not exceed 60°F may decrease weed control.
- Poor weed control may result from application of Grasp SC made to plants under stress from abnormally hot or cold weather; environmental conditions such as drought, hail damage, hydrogen sulfide, or high pH soils; or prior herbicide applications.

#### Aerial Application

Apply in a spray volume of 5 to 10 gpa or more when applying by air.

Apply with coarse droplet category per S-572 ASABE standard; see NAAA, USDA or nozzle manufacturer guidelines. Follow guidelines in the Spray Drift Management and Aerial Drift Reduction Advisory to minimize potential drift to off-target vegetation. Aircraft should be patterned per Operation Safe/PAASS program for calibration and uniformity to provide sufficient coverage and control.

#### Ground Application

Apply in a spray volume of 10 gpa or more when applying by ground. Use coarse or coarser nozzle spray quality per S-572 ASABE standard; see USDA literature or nozzle manufacturer guidelines. Follow nozzle manufacturer's recommendations for nozzle pressure, spacing and boom height to provide a uniform spray pattern. Follow appropriate Spray Drift Management information where drift potential is a concern.

#### Application Timing

Grasp SC herbicide may be applied to rice as a pre-emergence or post-emergence application (in drill seeded rice) or rice pegging at 1 leaf stage with no exposed roots (in water seeded rice) up to 60 days before harvest. Within this application window, application timing is dependent on cultural practices and optimum timing for weed species present. (See Application Rates and Weeds Controlled table.) Do not apply if crop or weeds are under drought stress.

#### Resistance Management

Grasp SC, which contains the active ingredient penoxsulam is a Group 2 herbicide based on the mode of action classification system of the Weed Science Society of America.

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is a best practice. A diversified weed management program may include the use of multiple herbicides with different modes of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistant.

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 (less than 4 inches).
- Apply full rates of Grasp SC for the most difficult to control weed in the field at the specified time to minimize weed escapes (consult weed control table).
- Scout fields 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 Group 2 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 2 herbicides.
- Avoid making more than two sequential applications of Grasp SC and any other Group 2 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, such as 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.

Limitations, Restrictions, and Exceptions

Directions for Use

For aerial application requirements, the user must refer to Arkansas Pesticide Use and Application Act, ACT 389 of 1975 as amended, and the regulations written pursuant thereto. Tank mixes including Facet or Quinstar must comply with the buffer zones required by the state for application of these products.

Aerially apply tank mixes of Grasp SC plus Command 3ME or Grasp SC plus Command 3ME and other herbicides for weed management in rice. The following herbicides may be tank mixed with Grasp SC plus Command 3ME for additional weed spectrum: Grandstand® R herbicide; Facet; Quinstar; Permit; SuperWham; Facet + Permit; Quinstar + Permit.

The addition of a crop oil concentrate or methylated seed oil at 1 quart per acre must be included.

Uniformly apply Grasp SC or tank mixes of Grasp SC by aircraft in no less than 10 gallons of water per acre total spray volume. Apply postemergence to the rice at the 1 to 2 leaf stage of growth and when weeds and grasses are small. Weeds and grasses should be actively growing at the time of application. If not, flush field in sufficient time so that rice and weeds are actively growing at time of treatment. Any factor, such as reduced spray volume, which adversely affects coverage and canopy penetration will have a negative effect on the performance of Grasp SC. Use nozzle types and arrangements that provide maximum coverage and minimize the potential for off target movement of spray particles.

#### Use Rates

Grasp SC - 2 to 2.3 fl oz per acre

Command 3ME - Refer to the 24(c) Special Local Need registration for Command 3ME for rates, aerial use directions, and precautions.

Permit, Grandstand R, Facet, Quinstar, and SuperWham - Refer to the product label for rate, use directions, and precautions.

#### Specific Use Precautions

Precautions must be taken to minimize off-target drift of pesticide applications. Off-target movement of Command 3ME can cause foliar whitening or yellowing of some plants. Do not make applications containing Command 3ME when spray particles may be carried by air currents to areas where sensitive crops and plants are

growing or if temperature inversions exist. Prior to application, adjacent properties must be checked and applications within 300 feet of desirable plants must be avoided.

All applicable directions, restrictions and precautions on the EPA registered label are to be followed. This labeling must be in the possession of the user at the time of pesticide application.

Method

[Spray](#)

Restricted Entry Interval

12 hours

Timings

[Postemergence \(Crop\)](#)