GENERAL INFORMATION

IMPORTANT CROP SAFETY INFORMATION

READ BEFORE USING the product

SURMISE may be applied as a burndown treatment prior to planting or prior to emergence of any conventional or transgenic variety of canola, sweet corn, corn, cotton, olive, rice, soybean or sugar beet.

SURMISE may be applied to conventional or other transgenic cotton not tolerant to the active ingredient in SURMISE using a hooded sprayer.

Applications to trees, vines and berries should avoid contact of SURMISE solution, spray, drift or mist with green bark, stems, or foliage, as injury may occur to trees, berries and vines. Only trunks with callused, mature brown bark should be sprayed unless protected from spray contact by nonporous wraps, grow tubes, or waxed containers. Contact of SURMISE with parts of trees, berries or vines other than mature brown bark can result in serious damage.

PRODUCT INFORMATION

SURMISE is a water-soluble herbicide for application as a foliar spray for the control of a broad spectrum of emerged annual and perennial grass and broadleaf weeds in trees, vines and berries. SURMISE may be applied for potato vine desiccation. SURMISE may also be applied as a broadcast burndown application before planting or prior to emergence of any conventional or transgenic variety of canola, sweet corn, corn, cotton, olive, rice, soybean or sugar beet.
SURMISE is only foliar-active with little or no activity in soil. Weeds that emerge after application will not be controlled. Apply SURMISE to actively growing weeds as described in the Weed Control Recommendations for Row Crops section to get maximum weed control. Uniform, thorough spray coverage is necessary to achieve consistent weed control. Necrosis of leaves and young shoots occur within 2 to 4 days after application under good growing conditions.

SURMISE is rainfast four (4) hours after application to most weed species; therefore, rainfall within four (4) hours may necessitate retreatment or may result in reduced weed control.

- Applications should be made between dawn and two hours before sunset to avoid the possibility of reduced lambsquarters and velvetleaf control.

- Consult your local Cooperative Extension Service or Albaugh, Inc. Representative for guidelines on the optimum application timing for SURMISE in your region.

- Weed control may be reduced if application is made when heavy dew, fog and mist/rain are present; or when weeds are under stress due to environmental conditions such as drought, cool temperatures or extended periods of cloudiness.

- To maximize weed control do not cultivate from 5 days before an application to 7 days after an application.

Integrated Weed Management

The active ingredient in SURMISE is glufosinate-ammonium, which is a glutamine synthetase inhibitor (Group 10). Integrated weed management guidelines promote an economically viable, environmentally sustainable and socially acceptable weed control program regardless of the herbicide(s) used.

The highlights of a successful integrated weed management include:

1. Correctly identify weeds and look for trouble areas within field to identify resistance indicators.

2. Rotate crops.

3. Start the growing season with clean fields.
4. Rotate herbicide modes of action by using multiple modes of action during the growing season and apply no more than two applications of a single herbicide mode of action to the same field in a two-year period. One method to accomplish this is to rotate herbicide tolerant trait systems.

5. Apply listed rates of herbicides to actively growing weeds at the correct time with the right application.

6. Control any weeds that may have escaped the herbicide application.

7. Thoroughly clean field equipment between fields.

Contact your local agronomic advisor for more specific information on integrated weed management for your area.

APPLICATION AND MIXING PROCEDURES

Do not use flood jet nozzles, controlled droplet application equipment, or air assisted spray equipment. Uniform, thorough spray coverage is important to achieve consistent weed control.

Ground Application

Refer to the Rate Tables for proper application rates. DO NOT apply when winds are gusty or when conditions will favor movement of spray particles off the desired spray target. To avoid drift and ensure consistent weed control, apply SURMISE with the spray boom as low as possible while maintaining a uniform spray pattern. SURMISE should be applied broadcast in a minimum of 10 gallons of water per acre using a minimum spray pressure of 40 psi and a maximum ground speed of 10 mph. The use of 80 degree or 110 degree flat fan nozzles is highly recommended for optimum spray coverage and canopy penetration. Application of the spray at a 45 degree angle forward will result in better spray coverage. Under dense weed/crop canopies, a broadcast rate of 15-20 gallons of water per acre should be used so that thorough spray coverage will be obtained. DO NOT use raindrop nozzles. Boom height should be based on nozzle manufacturer recommendations. See the Spray Drift Management section of the label for additional information on proper application of SURMISE.
Aerial Application

Poor coverage will result in reduced weed control. For optimal weed control apply SURMISE in a minimum of 10 gallons per acre. Apply SURMISE using nozzles and pressures that generate MEDIUM (about 300 to 400 microns) spray droplets category as reported by the nozzle manufacturer and in accordance to ASABE S 572 based upon the selected air speed. Do not use nozzles and pressures that result in COARSE sprays. FINE sprays should also be avoided to minimize spray drift risk. See the Spray Drift Management section of the label for additional information on proper application of SURMISE.

Limitations, Restrictions, and Exceptions

FOR USE IN RICE SEED PROPAGATION

- SURMISE is to be applied as a foliar spray to selectively remove susceptible segregates, i.e., undesirable rice plants which are not tolerant to glufosinate ammonium, and to control of a broad spectrum of emerged grass and broadleaf weeds in rice seed production fields. Inbred lines or breeding material not possessing the glufosinate ammonium tolerance gene will be severely injured or killed if treated with this herbicide. Apply SURMISE exclusively to rice seed propagation fields in which the desired plants are glufosinate ammonium tolerant.

THOROUGH SPRAY COVERAGE IS VERY IMPORTANT

- SURMISE works best when weeds are small and the crops and weeds are actively growing. Visual effects and control of rice susceptible segregates from SURMISE applications occur within 2 to 4 days after application under good growing conditions. The ability of SURMISE to eliminate rice plants not tolerant to SURMISE may be reduced when heavy dew, fog, or mist/rain is present on the crop or when the crop is under stress due to drought, cool temperatures, or extended periods of cloudiness.
- Rice fields should be as level as possible and free of large clods to obtain uniform germination of rice and grassy weeds and to ensure uniform flood levels. If necessary, fields may be flushed prior to treatment. If fields are flushed prior to treatment, flush in sufficient time so that the rice and grass/broadleaf weeds are actively growing at time of treatment.

- Do not allow spray to contact foliage or green tissue of desirable vegetation other than rice lines in which the desired plants are glufosinate ammonium tolerant. the product will injure any other green vegetation contacted by the spray.

INSTRUCTIONS FOR SEED HANDLING STORAGE AND USE

- Seed from treated plants must be held in secured storage until used for breeding of glufosinate ammonium tolerant rice seed or destroyed. Seed from treated plants must be labeled as follows. Do Not Use for Feed or Food Purposes. Store Away from Feed and Foodstuffs. In addition, label the seed with the Seed Disposal statements found in the Storage and Disposal section of the label.

RESTRICTIONS TO THE DIRECTIONS FOR USE

1. DO NOT use nee any rice processed commodities or rice straw treated with SURMISE for food or feed consumption.

2. DO NOT exceed 80 fl. oz./A of SURMISE per growing season on rice being treated for segregate control in transgenic seed production fields.

3. DO NOT plant rotation crops in a field treated with SURMISE for 120 days after the last application of the product with the exception of wheat, barley, buckwheat, millet, oats, rye, sorghum and triticale which may be planted 70 days after the last application of the product.

4. DO NOT apply the product through any type of irrigation system.

Rate Instructions and Timing for Seed Production
For the selection of susceptible rice segregates, SURMISE must be applied at 40 fl. oz./A when rice is in the 1- to 3-leaf stage of growth. A second treatment of 40 fl. oz./A must be applied 10 days later or up until the rice is in the mid-tillering state of growth.

- Two applications can be made at 40 fl. oz. (0.73 lbs. ai/A) with a minimum 10-day re-treatment interval.

- Do not exceed 80 fl. oz. (1.46 lbs. ai/A) per year.

- Minimum paddy depth of 4 inches.

- If one application of 80 fl. oz. is made, the application must be made to a dry field. A minimum 7-day holding period after flooding of the field is required.

- If two applications are made, the first application must be made to a dry field.

- The second application may be made to a flooded field with a required 55 day holding period for a 4-inch paddy depth or a 30-day holding period for an 8-inch paddy depth.

**WATER MANAGEMENT**

A sufficient portion of the target grassy weed plant must be exposed to SURMISE for satisfactory control to be achieved. Therefore, if necessary, lower or allow water to recede so that at least 75% of the weed foliage is exposed above the water level. Do not increase the water level for at least 48 hours following the application of SURMISE. The water level may be brought back to normal level following this period.

**Method**

- Broadcast/Foliar Air
- Broadcast/Foliar Ground
- Broadcast/Foliar Air
- Broadcast/Foliar Ground

**Rates**

- field_rates 0

- Restricted Entry Interval
12 hours

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours with the exception of sweet corn irrigation activities which has a 4 day REI.

Timings
When weeds are small and the crops and weeds are actively growing.
When rice is in the 1- to 3-leaf stage of growth.