

#### OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

October 25, 2023

Cristina Rodriguez Senior Registration Manager FMC Corporation 2929 Walnut Street Philadelphia, PA 19104

Subject: Label Amendment - Registration Review Mitigation for Sulfentrazone

Product Name: F9021-2 SE CAL HERBICIDE

EPA Registration Number: 279-3438 Application Date: November 20, 2018

Decision Number: 594540

#### Dear Cristina Rodriguez:

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 Sulfentrazone 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 Assurance.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling

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before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions about this letter, please contact Caleb Carr via email at <a href="mailto:carr.caleb@epa.gov">carr.caleb@epa.gov</a>.

Sincerely,

Linda Arrington, Branch Chief

Risk Management and Implementation Branch 4
Pesticide Re-Evaluation Division
Office of Pesticide Programs

**ENCLOSURE: Stamped label** 

## F9021-2 SE CAL Herbicide

## Intended For Use Only by Individuals/Firms Certified and/or Licensed as Pesticide Applicators

 EPA Reg. No. 279-3438
 EPA Est. 279 

 Active Ingredient: By Wt.
 22.0%

 Sulfentrazone
 22.0%

 Inert Ingredients:
 78.0%

 100.0%

Contains 2 pounds of active ingredient per gallon.

## ACCEPTED

10/25/2023

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under

EPA Reg. No. 279-3438

#### KEEP OUT OF REACH OF CHILDREN

### **CAUTION**

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

#### **FIRST AID**

#### If Swallowed

Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

#### If on Skin or Clothing

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

#### If Inhaled

Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

#### If in Eves

Hold eye open and rinse slowly and gently with water for 15- 20 minutes. Remove contact lenses, if present, after the first 5 minutes. Then continue rinsing eye. Call a poison control center or doctor for treatment advice.

#### **HOTLINE NUMBER**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-331-3148 for emergency medical treatment information.

See other sections for precautionary information.



#### PRECAUTIONARY STATEMENTS

## Hazards to Humans and Domestic Animals CAUTION

Harmful if swallowed, inhaled or absorbed through skin. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

#### Personal Protective Equipment (PPE)

Applicators, mixers, loaders, and other pesticide handlers must wear: long-sleeved shirt and long pants, chemical-resistant gloves made of any waterproof material, and shoes plus socks.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do not reuse them. Follow 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.

#### **User Safety Recommendations:**

Users should:

· Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

#### **Environmental Hazards**

This pesticide is toxic to marine/estuarine invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to terrestrial and aquatic plants in neighboring areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

<u>Groundwater advisory:</u> This chemical is known to leach through soil into groundwater under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

#### Do not use on coarse soils classified as sand, which have less than 1% organic matter.

<u>Surface water advisory</u>: Sulfentrazone can contaminate surface water through spray drift. Under some conditions, sulfentrazone may also have a high potential for runoff into surface water (primarily via dissolution in runoff water), for several to many months post-application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlying extremely shallow groundwater, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-lying tile drainage systems that drain to surface waters.

#### **Physical/Chemical Hazards**

Do not use or store near heat or open flame.

#### **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 Use Only in the State of California.

Do not apply more than the allowed amount of F9021-2 SE CAL Herbicide per acre per twelve-month period as stated in Table 3. The twelve-month period is considered to begin upon the initial F9021-2 SE CAL Herbicide application.

For any requirements specific to your State or Tribe, consult the 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. These requirements only apply to uses of this product that are covered by the Worker Protection Standard.

#### Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

Personal Protective Equipment (PPE) required for early entry to 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 is: Coveralls over long-sleeved shirt and long pants, chemical-resistant gloves made of any waterproof material, and shoes plus socks.

#### WEED RESISTANCE MANAGEMENT

F9021-2 SE CAL, which contains the active ingredient sulfentrazone is a group 14 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 sites 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 resistance.

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 for weeds for identification of species and sizes. Start with a clean field, using either a burndown herbicide application or tillage.
- · Control weeds early when they are relatively small (less than 4 inches).
- · Apply full rates of F9021-2 SE CAL for the most difficult to control weed in the field at the specified time (correct weed size) to minimize weed escapes.
- · Scout fields after application to detect any poor performance or likely resistance in weeds.
- · 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 retailer or county extension agent.
- · Contact your 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 sites of actions for each target weed.
- If resistance is suspected, treat weed escapes with an herbicide having a site of action other than Group 14 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 soil-applied herbicide with other sites of action as a foundation in a weed control program.
- · Utilize sequential applications of herbicides with alternative sites of action.
- · Rotate the use of this product with non-Group 14 herbicides.
- · Avoid making more than two applications of F9021-2 SE CAL and any other Group 14 herbicides within a single growing season unless mixed with an herbicide with a different site 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, during and after harvest to reduce weed seed production.

### PRODUCT INFORMATION

F9021-2 SE CAL Herbicide is a selective soil-applied herbicide for the control of susceptible broadleaf, grass and sedge weeds. F9021-2 SE CAL Herbicide is formulated as a 2 pounds per gallon suspo-emulsion containing the active ingredient, sulfentrazone. If adequate moisture (1/2" to 1") from rainfall or irrigation is not received within 7 to 10 days after the F9021-2 SE CAL Herbicide treatment, a shallow incorporation may be needed to obtain desired weed control. When activating moisture is received after dry conditions, F9021-2 SE CAL Herbicide will provide a reduced level of control of susceptible germinating weeds. Soil applications of F9021-2 SE CAL Herbicide must be made before crop seed germination to prevent injury to the emerging crop seedlings. When applications after planting are delayed, injury may occur if seeds are germinating or if they are located near the soil surface

Observe all instructions, crop restrictions, mixing directions, application precautions, replanting directions, rotational crop guidelines and other label information of each product when tank mixing with F9021-2 SE CAL Herbicide.

**Proper handling instructions**: F9021-2 SE CAL Herbicide may not be mixed or loaded within 50 feet of any wells (including abandoned wells and drainage wells), sinkholes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pads or properly diked mixing/loading areas.

Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or washwater, and rainwater that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above specific minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment.

Product must be used in a manner that will prevent back siphoning in wells, spills or improper disposal of excess pesticide, spray mixtures or rinsates

#### PRODUCT APPLICATION INSTRUCTIONS

F9021-2 SE CAL Herbicide may be applied to soil as a preplant incorporated treatment or as a pre-emergence (prior to weed and/or crop emergence) surface application. Additional application methods include post-plant treatments, over-the-top and layby, in various crops. Application methods are defined in the following Crop Use Directions sections.

Preplant incorporated treatments require a uniform surface application followed by incorporation. Do not incorporate to a depth greater than 2 inches which may result in poor weed control. Care must be taken not to create overlaps in treated zones due to soil movement, which will result in excessive F9021-2 SE CAL Herbicide rates that could result in adverse crop response.

All soil applications and the residual activity of post-plant applications of F9021-2 SE CAL Herbicide require adequate moisture for herbicidal activation. The ultimate amount of moisture, whether supplied by rainfall or irrigation, is dependent on several factors. These factors include but are not limited to existing soil moisture at application, soil type, organic matter and tilth. In crop situations dependent on rainfall, F9021-2 SE CAL Herbicide can await activating moisture for extended periods (10 to 14 days or longer) depending on the soil parameters described above. Once activated, F9021-2 SE CAL Herbicide will provide activity on existing weeds. The level of activity will depend on the weed species and their size at time of activation. Where irrigation is not available and rainfall has not provided activation, particularly for surface applications of F9021-2 SE CAL Herbicide, a shallow incorporation is recommended for destruction of any germinating weeds and to incorporate F9021-2 SE CAL Herbicide. Herbicide incorporation will initiate the process of activation with existing soil moisture. In circumstances where prolonged periods without rainfall and/or irrigation is not possible, alternative or additional weed management practices (cultivation or post-applied herbicides) may be required.

Extreme care must be exercised and the Crop Specific Use Directions followed exactly in crops allowing post plant applications of F9021-2 SE CAL Herbicide. Over-the-top and lay-by applications will provide contact and residual weed control, depending on species. The addition of surfactants may increase contact weed control performance but may also increase the risk of adverse crop response as well.

#### CALIFORNIA ONLY SPECIFIC RESTRICTIONS ON APPLICATIONS OF F9021-2 SE CAL HERBICIDE

Artificial Recharge Basins. Do not use below the high water line inside artificial recharge basins (a surface facility, such as an infiltration pond or basin, or spreading ground that is specifically designed and managed to increase the infiltration of introduced surface water supplies into a ground water basin), unless this product is applied six months or more before the basin is used to recharge ground water.

**Unlined Canals and Ditches.** Do not use below the high water line inside unlined canals and ditches unless either (a) the pesticide user can document that the percolation rate of the canal or ditch is equal to or less than 0.2 inches per hour (0.002 gallons per minute per square foot), or (b) the pesticide is applied six months before water is run in the canal or ditch.

Rights-of-Way. Do not use on engineered rights-of-way in areas established by the California Department of Pesticide Regulation as leaching or runoff ground water protection areas\* unless either (a) any runoff from the treated right-of-way shall pass through a noncrop fully vegetated area adjacent, and equal in area, to the treated area, or spread out onto an adjacent unenclosed fallow field that is at least 300 feet long and that will not be irrigated for six months following application with the exception of the addition of adequate moisture that is required for herbicidal activation following application as described under Product Application Instructions, with full consideration of any plantback restrictions, or (b) the property operator complies with any permit issued pursuant to the storm water provisions of the federal Clean Water Act eprtaining to the treated area.

**Runoff Ground Water Protection Areas.** Do not use in areas identified by the California Department of Pesticide Regulation as a runoff ground water protection areas\* unless one of the following management practices can be met:

- (a) Soil disturbance. Within seven days before this product is applied, the soil to be treated shall be disturbed by using a disc, harrow, rotary tiller, or other mechanical method. This subsection does not apply to the area to be treated that is immediately adjacent to the crop row and that does not exceed 33 percent of the distance between crop rows or, in citrus, to the band from the tree row to the dripline; or
- (b) Incorporation of the pesticide. Within 48 hours after the day this product is applied, the pesticide shall be incorporated on at least 90 percent of the area treated; using a disc, harrow, rotary tiller, or other mechanical method, or by sprinkler or low flow irrigation, including chemigation where allowed by the label, using a minimum of ½ inch of irrigation water and a maximum of one inch as described under Product Application Instructions, at application rates that do not cause surface water runoff from the treated property or to wells on the treated property; or
- (c) Band treatment. This product is applied as a band treatment immediately adjacent to the crop row so that not more than 33 percent of the distance between rows is treated or, in citrus, not more than the area from the tree row to the dripline is treated; or
- (d) Timing of application. This product is applied between April 1 and July 31; or
- (e) Retention of runoff on field. For six months following the application, the field shall be designed, by berms, levees, or nondraining circulation systems, to retain all irrigation runoff and all precipitation on, and drainage through, the field. The retention area on the field shall not have a percolation rate of more than 0.2 inches per hour (5 inches per 24 hours); or
- (f) Retention of runoff in a holding area off the field. For six months following the application, all runoff shall be channeled to a holding area off the application site, under the control of the property operator, that is designed to retain all irrigation runoff and all precipitation on, and drainage through, the treated field and all other areas draining into that holding area. The holding area shall not have a percolation rate of more than 0.2 inches per hour (5 inches per 24 hours); or
- (g) Runoff onto a fallow field. For six months following application, runoff shall be managed so that it runs off onto an adjacent unenclosed fallow field at least 300 feet long that is not irrigated for six months after application with the exception of the addition of adequate moisture that is required for herbicidal activation following application as described under Product Application Instructions, with full consideration of any plant back restrictions.

**Leaching Ground Water Protection Areas.** Do not use in areas designated by the California Department of Pesticide Regulation as leaching ground water protection areas\* unless either (a) the user does not apply any irrigation water for six months following application of this product or (b) the user applies this product to the planting bed or the berm above the level of irrigation water in the furrow or basin and the water level shall remain at or below that level for six months following application of the pesticide with the

exception of the addition of adequate moisture that is required for herbicidal activation following application as described under Product Application Instructions, or (c) irrigation is managed so that the ratio of the amount of irrigation water applied divided by the net irrigation requirement is 1.25 or less for six months following application of this product.

\* Consult with your County Agricultural Commissioner to determine whether the application will be within an area designated by the California Department of Pesticide Regulation as either a Runoff Ground Water Protection Area or a Leaching Ground Water Protection Area. Details regarding the locations of these Areas are also available via the internet at <a href="https://www.cdpr.ca.gov/docs/emon/grndwtr/gwp">www.cdpr.ca.gov/docs/emon/grndwtr/gwp</a> regs.htm.

#### F9021-2 SE HERBICDE PRODUCT USE RATES

The following directions for the selection of F9021-2 SE CAL Herbicide application rates are critical to achieve maximum performance and to insure maximum crop safety. The user is required to read and follow the specific F9021-2 SE CAL Herbicide use directions and restrictions for each crop as defined in subsequent sections of this label. The user is cautioned that some crops respond differently to F9021-2 SE CAL Herbicide. This response is governed by the F9021-2 SE CAL Herbicide application rate, various soil factors and inherent crop sensitivity. The Crop Specific Use Directions have been designed to minimize the risk of adverse crop response while maintaining optimum weed control.

#### Mode of Action

Sulfentrazone, the active ingredient in F9021-2 SE CAL Herbicide, is a potent inhibitor of the enzyme Protoporpyrinogen Oxidase IX (PPO IX) required for the formation of chlorophyll. Inhibition of PPO IX enzyme results in the liberation of singlet oxygen (O) that, in turn, disrupts cellular membranes and causes cellular leakage. The ultimate manifestation of the process is cellular death leading to plant death. The selective herbicidal activity of sulfentrazone is based on its greater affinity for the PPO IX enzyme in weed species versus crop plants.

#### **Mechanism of Action**

Following the application of F9021-2 SE CAL Herbicide to soil, germinating seeds and seedlings take up sulfentrazone from the soil solution. The amount of sulfentrazone in soil solution, and available for weed uptake, is determined primarily by soil type, organic matter and soil pH. Sulfentrazone adsorbs to the clay and organic matter (OM) fractions of soils; effectively limiting the amount of active ingredient immediately available to control weeds. Soils typically increase in clay content through the series from coarse to fine as noted in the following Soil Classification Chart, Table 1.

#### **SOIL CLASSIFICATION CHART**

#### Table 1

COARSE	MEDIUM	<u>FINE</u>
Sand	Sandy clay loam	Silty clay loam
Loamy sand	Sandy clay	Silty clay
Sandy loam	Loam	Clay loam
	Silt loam	Clay
	Silt	

## Influence of Soil type, organic matter and pH on F9021-2 SE CAL Herbicide Use Rates and Crop Response

Soil organic matter content can vary widely and independently of soil type and requires an accurate analysis of representative soil samples to determine its content.

Soil pH also exerts a dramatic affect on sulfentrazone availability in the soil solution. As soil pH increases, sulfentrazone availability increases. Accurate soil pH information will require an accurate analysis of representative soil samples.

The total amount of sulfentrazone available in solution, in any given soil, is determined by the interaction of soil type (clay content), % organic matter and pH. The application timing (relative to the emergence of the crop and weeds) and amount of rainfall and/or irrigation received will ultimately determine, in conjunction with the soil parameters and pH, the amount of sulfentrazone in soil solution. It is important to note that F9021-2 SE CAL Herbicide can await activating moisture. However, diminished weed control may result due to the successive increase in weed growth versus timing of activation.

It is important to note that irrigation with highly alkaline water (high pH) following a F9021-2 SE CAL Herbicide soil application can also significantly increase the amount of sulfentrazone available in the soil solution. Irrigation with water having a pH greater than 7.5 could result in adverse crop response. This response will ultimately depend on initial F9021-2 SE CAL Herbicide application rate, timing, amount and pH of irrigation water and sensitivity of the crop and it's growth stage when irrigated. The risk of adverse crop response will lessen with the advance in growth stage among most crops.

The following Crop Specific Use Directions have been designed with specific F9021-2 SE CAL Herbicide instructions for each crop based on the soil type, soil organic matter, and soil pH interactions described above. The user is cautioned that crop tolerance and weed control performance are based on strict adherence to these instructions.

#### APPLICATION INFORMATION

#### **Ground Application**

Utilize a boom and nozzle sprayer equipped with the appropriate nozzles, spray tips and screens and adjusted to provide optimum spray distribution and coverage at the appropriate operating pressures. Utilize nozzles that produce minimal amounts of fine spray droplets to avoid spray drift or inadequate foliar and/or soil coverage. Apply a minimum of 10 gallons of finished spray per acre by

ground. When tank mixed with a contact burndown herbicide, ground applicators must use a minimum spray volume of 15 gallons per acre. Be aware that overlaps and slower ground speeds while starting, stopping or turning while spraying may result in excessive application and subsequent crop response. Select nozzles and application pressure that deliver medium to coarse or larger spray droplets as indicated in the nozzle manufacturer's recommendations and in accordance with ASABE Standard S-572. Select coarse to very coarse droplet size when used as a preemergent/preplant application. Select medium to very coarse droplet size when used postemergence with a contact burndown herbicide. Do not apply as spray droplets smaller than medium to coarse (defined by the ASABE standard).

Do not apply when wind speed favors drift beyond the area intended for treatment.

#### **Aerial Application**

#### **Use Restrictions**

Aerial application is allowed only when environmental conditions prohibit ground application. When this product is applied by air, applicator must use a minimum finished spray volume of 5 gallons per acre. The maximum release height must be 10 feet from the top of the canopy, unless a greater application height is required for pilot safety.

Do not apply when wind speed favors drift beyond the area intended for treatment.

These requirements must be followed to avoid off-target movement from aerial applications. These requirements do not apply to forestry applications, public health uses or to applications of dry materials.

- 1. The distance of the outermost nozzles on the boom must not exceed \(^3\)4 the length of the wingspan or rotor.
- 2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.
- 3. Observe the regulations of the State where applications are made.
- 4. Applicators must observe and abide by the requirements of the Aerial Drift Reduction Advisory.

#### SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMETAL CONDITONS.

#### Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage for pesticide performance. Applying larger droplets reduces drift potential but will not prevent drift if applications are made improperly or under unfavorable environmental conditions. (See information on Wind, Temperature and Humidity, and Temperature Inversions in subsequent sections).

#### **Controlling Spray Droplet Size**

**Volume** – Use high flow rate nozzles to apply the greatest practical spray volume. Nozzles with higher rated flow generally produce larger droplets.

Pressure - When higher flow rates are needed, use higher flow rate nozzles rather than increasing spray pressure.

Do not exceed the nozzle manufacturer's recommended pressures. Lower pressure produces larger droplets in many types of nozzles

Number of Nozzles – Use the minimum number of nozzles that provide uniform coverage.

**Nozzle Orientation** – For aerial application, the recommended practice is to orient nozzles so that the spray is released parallel to the airstream. This orientation usually produces larger droplets as compared to other nozzle orientations. Significant nozzle deflection from horizontal will reduce droplet size and increase drift potential.

**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 for both ground and aerial applications. Solid stream nozzles oriented straight back usually produce the largest droplets and the lowest drift potential in aerial applications

**Boom Length** – For some aerial use patterns, reducing the effective boom length to less than ¾ of the wingspan or rotor length may further reduce drift without reducing swath width.

**Application Height** - Aerial applications should not be made at a height greater than 10 feet above the top of the target plant canopy unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

**Swath Adjustment** – When aerial applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the upwind and downwind edges of the field, the applicator must compensate for this displacement by the path of the aircraft upwind. Swath adjustment or offset distance should increase when conditions favor increased drift potential (higher winds, smaller droplets, etc).

**Wind** – Drift potential is lowest between wind speeds of 3-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. Application should be avoided below 3 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they may potentially affect spray drift.

**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 should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small-suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the low speed and variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common during conditions of limited cloud cover and little to no wind. They often begin to form as the sun sets and may often continue into the morning. The presence of a temperature inversion may be indicated by ground fog. However if fog is not present, the movement of smoke from a ground source or an aircraft smoke generator can also identify inversions. Smoke that remains in layers and moves laterally in a concentrated cloud (under low speed wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas – The pesticide should only be applied when the wind is blowing away from sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops).

#### Off-Target Movement of F9021-2 SE CAL Herbicide

Drift of dilute spray mixtures containing F9021-2 SE CAL Herbicide must be prevented. Observation of the preceding environmental conditions, correct application equipment design, calibration and application practices will significantly diminish the risk of off-target spray drift. F9021-2 SE CAL Herbicide can cause significant symptomology by drift on to sensitive crops and other plants. This symptomology may manifest initially as discreet, localized spots where contacted by F9021-2 SE CAL Herbicide drift mixtures. Depending on concentration of the spray solution and droplets size (effectively determining the dosage of sulfentrazone) and also depending on the inherent sensitivity of the plants involved, these spots or lesions may or may not coalesce. These effects will usually not have lasting effects on plant growth, but will likely reduce the value of affected fruit or foliage where grade or quality is associated with appearance. In severe drift instances with particularly sensitive crops, defoliation of affected foliage could result. Failure to follow these guidelines and environmental prohibitions that then result in off-target movement or drift of F9021-2 SE CAL Herbicide on to unintended crops or plants, irrespective of severity, constitutes misapplication of this product. FMC accepts no responsibility or liability for potential crop effects that may result from such misapplication of F9021-2 SE CAL Herbicide.

#### **Chemigation Application**

F9021-2 SE CAL Herbicide may be applied through sprinkler irrigation systems including center pivot, lateral move, end tow, solid set, or hand move irrigation systems. Do not apply this product through any other type of irrigation system. Do not connect any irrigation system (including greenhouse systems) used for pesticide application to a public water system. Crop injury, lack of effectiveness or illegal residues on or in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

It is important to note that irrigation with highly alkaline water (high pH) following a F9021-2 SE CAL Herbicide soil application can also significantly increase the amount of sulfentrazone available in soil solution. Irrigation with water having a pH greater than 7.5 could result in adverse crop response. This response will ultimately depend on initial F9021-2 SE CAL Herbicide application rate, application timing, amount and pH of the irrigation water, and the sensitivity of the crop and the growth stage when irrigated. The risk of adverse crop response will lessen with advancing growth stages of most crops.

The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must also contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

F9021-2 SE CAL Herbicide should be metered into the irrigation system continuously for the duration of the water application. F9021-2 SE CAL Herbicide should be diluted in sufficient volume to insure accurate application over the area to be treated. Use the appropriate amount of water to carry the product to the soil surface. Continuous agitation is required to maintain product suspension in the solution tank. A jar test should be conducted to ensure that phase separation would not occur during dilution and application. Failure to achieve a uniform dilution throughout the time of application may result in undesirable residues or less than desirable weed control. Flush the lines at the completion of the application and then turn the water off promptly.

When using water from public water systems; DO NOT APPLY F9021-2 SE CAL HERBICIDE THROUGH ANY IRRIGATION SYSTEM **PHYSICALLY CONNECTED** TO A PUBLIC WATER SYSTEM. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days of the year. F9021-2 SE CAL Herbicide may be applied through irrigation systems, which may be **supplied** by a public water system **only if** water from the water system is discharged into a reservoir tank prior to

pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and to top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. Before beginning chemigation, always make sure that the air gap exists and that there is no blockage of the overflow of the reservoir tank.

#### **Application with Dry Fertilizers**

F9021-2 SE CAL Herbicide may be applied impregnated on dry fertilizers. When applied as directed with adequate soil coverage, F9021-2 SE CAL Herbicide dry bulk fertilizer mixtures will provide satisfactory weed control.

Follow all F9021-2 SE CAL Herbicide label directions regarding product use rates per acre, registered crops, incorporation, special instructions and precautions.

#### Apply F9021-2 SE CAL Herbicide/dry fertilizer mixtures with ground equipment only.

All individual state regulations relating to dry bulk fertilizer blending, registration, labeling, and application are the responsibility of the individual and/or company preparing, storing, transporting, selling or applying the F9021-2 SE CAL Herbicide/dry fertilizer mixture.

#### **Impregnation Directions**

To impregnate F9021-2 SE CAL Herbicide on dry bulk fertilizer, use a closed rotary-drum mixer or other commonly used dry bulk fertilizer blender equipped with suitable spray equipment.

Prepare a slurry of F9021-2 SE CAL Herbicide in a clean container using clear water. Slowly add the F9021-2 SE CAL Herbicide/water slurry to the impregnation spray tank and finish filling as needed with clear water. Spray nozzles must be placed to provide uniform coverage of F9021-2 SE CAL Herbicide onto the fertilizer during mixing.

Refer to the SPRAYER EQUIPMENT CLEAN-OUT section for directions for cleaning impregnation equipment, transport equipment, loading equipment and application equipment.

Apply the F9021-2 SE CAL Herbicide dry bulk fertilizer with an accurately calibrated dry fertilizer spreader. The F9021-2 SE CAL Herbicide dry bulk fertilizer mixture must be spread uniformly on the soil surface. Uneven spreading leaving untreated areas can cause poor weed control or overlapping areas with potential increased F9021-2 SE CAL Herbicide use rates could result in possible crop response.

A minimum of 200 pounds of dry bulk fertilizer impregnated with the specified amount of F9021-2 SE CAL Herbicide must be applied per acre to achieve adequate soil coverage for satisfactory weed control.

DO NOT impregnate F9021-2 SE CAL Herbicide onto coated ammonium nitrate or limestone because these materials will not absorb the herbicide.

Refer to the appropriate crop section of the F9021-2 SE CAL Herbicide label to determine the rate of F9021-2 SE CAL Herbicide to be applied per acre. Use the following table to determine the amount of F9021-2 SE CAL Herbicide to be impregnated on a ton (2000 pounds) of dry bulk fertilizer based on the rate of fertilizer that will be applied per acre.

For those rates not listed in the following table, calculate the amount of F9021-2 SE CAL Herbicide to be impregnated on a ton of dry bulk fertilizer using the following formula:

2000		F9021-2 SE CAL H	lerbicide	e use rate	fluid ounces of F9021-2 SE CAL Herbicide	е
	Χ	in fluid ounces	=	to b	be applied per	
Pounds dry fertilizer		per acre		ton	of fertilizer	
per acre						

## RATE CHART FOR IMPREGNATION OF DRY BULK FERTILIZERS WITH F9021-2 SE CAL HERBICIDE Table 2

	Fluid ounces F9	021-2 SE CAL Herl	Dicide per ton of	
	fertilizer			
	F9021-2 SE	CAL Herbicide Use	Rate Per Acre	
Dry Fertilizer	16.0 fl oz/A	20.2 fl oz/A	24.0 fl oz/A	
Rate				
(lb/A)				
200	160	202	240	
250	128	161.6	192	
300	106.6	134.6	160	
350	91.4	115.4	137.2	
400	80	101	120	
450	71.2	89.8	106.6	

#### **Application with Liquid Fertilizer**

F9021-2 SE CAL Herbicide may be applied using liquid fertilizer solutions as the carrier. The fertilizer solutions may either be concentrate formulations as blended or diluted with water. When applied as directed with adequate soil coverage, F9021-2 SE CAL Herbicide applied with liquid fertilizer mixtures will provide satisfactory weed control. However, adequate soil coverage is essential to achieve acceptable levels of weed control.

Herbicide mixing, solution stability and/or compatibility problems can occur when liquid fertilizers are used as a carrier. Compatibility tests must be conducted prior to mixing to insure tank mixture compatibility and stability. The use of compatibility agents may be beneficial to achieve and maintain a homogenous solution.

#### Mixing Instructions for Liquid Fertilizer Applications

Fill the clean spray tank to one half of the total volume with the fertilizer solution. Start the spray tank agitation system. Prepare a slurry of F9021-2 SE CAL Herbicide in a clean container with clean water using equal volumes of F9021-2 SE CAL Herbicide and clean water. Slowly add the F9021-2 SE CAL Herbicide/water slurry to the spray tank. Carefully rinse the slurry container, adding the rinsate to the spray tank. Better mixing of the F9021-2 SE CAL Herbicide/water slurry may be achieved if the slurry is added using induction systems on the sprayer fill plumbing system.

Complete filling the spray tank to the desired level. Sufficient and continuous spray tank agitation is required at all times to maintain a homogenous spray solution. The spray system must be designed such that there is sufficient flow capacity to uniformly apply the spray mixture and maintain adequate tank agitation. Some systems may require separate pumps to simultaneously supply the spray system and the spray tank agitation system. Insure the F9021-2 SE CAL Herbicide slurry is thoroughly mixed before application.

For tank mixtures with other herbicide(s), a compatibility test must be conducted to insure product compatibility before mixing. Read and follow all the directions, precautions and restrictions of the tank mixture products prior to mixing.

Apply the F9021-2 SE CAL Herbicide spray mixture immediately after mixing. Do not store the sprayer overnight or for any extended period of time with the F9021-2 SE CAL Herbicide spray mixture remaining in the tank.

Do not premix F9021-2 SE CAL Herbicide spray solutions in nurse tanks.

Follow all F9021-2 SE CAL Herbicide label directions regarding product use rates per acre, registered crops, application instructions, incorporation directions, special instructions and all precautions.

All individual state regulations relating to liquid fertilizer blending, storage, transportation, registration, labeling, and application are the responsibility of the individual and/or company preparing, selling or applying the F9021-2 SE CAL Herbicide and fertilizer mixture.

# MAXIMUM ALLOWABLE F9021-2 SE CAL HERBICIDE USE PER ACRE PER 12 MONTH PERIOD\*

Refer to the crop section of this label for specific product use directions. Table 3

	fl oz/A	lb ai/A
Crop	F9021-2 SE CAL	Sulfentrazone
0.0p	Herbicide	Ganoniazono
Row Crops	Tierbicide	
Corn	24.0	0.375
Fallow	16.0	0.25
Peanuts	19.2	0.30
Potatoes	16.0	0.25
Soybeans	24.0	0.375
Sugarcane	24.0	0.375
Sunflowers	16.0	0.25
Tobacco	24.0	0.375
Vegetable Crops		0.0.0
Asparagus	24.0	0.375
Brassica, Head and Stem:Broccoli, Chinese broccoli, brussels	24.0	0.375
sprouts, Chinese (napa) cabbage, Chinese mustard, cauliflower,		
cavalo, broccoli, kohlrabi		
Brassica, Leafy greens: Broccoli raab, Chinese (boc choy) cabbage,	13.0	0.20
collards, kale, mizuna, mustard greens, mustard spinach, rape		
greens		
Cabbage (Transplanted only)	24.0	0.375
Dry Shelled Beans & Peas	16.0	0.25
Fruiting Vegetables (except cucurbits) and Okra	24.0	0.375
Melons	16.0	0.25
Horseradish	16.0	0.25
Strawberry	24	0.375
Succulent Peas	12.0	0.1875
Oil Crops		
Flax	24.0	0.375
Mint	24.0	0.375
Turf		
Sod	24.0	0.375

<sup>\*</sup>The total allowed usage per twelve-month period includes all applications made to the field per twelve-month interval. This includes fallow treatments, burndown treatments, planting time and all in-season treatments. The twelve-month period is considered to begin upon the initial F9021-2 SE CAL Herbicide application.

#### **CROP ROTATIONAL RESTRICTIONS**

The following Table shows the minimum interval in months from the time of the last F9021-2 SE CAL Herbicide application until F9021-2 SE CAL Herbicide treated soil can be replanted to the crops listed. When F9021-2 SE CAL Herbicide is tank mixed with another herbicide, refer to the partner label for recropping instructions, following the directions that are most restrictive.

For all other crops not listed below, the rotational interval is a minimum of 12 months. Some crops have rotational intervals greater than 12 months after a F9021-2 SE CAL Herbicide application due to potential crop injury. A representative bioassay of the field shall be completed with the rotational crop to accurately determine the planned crop's sensitivity to sulfentrazone.

#### **CROP ROTATIONAL RESTRICTIONS\*\***

#### Table 4

Cron	Interval (Mantha)
Crop	Interval (Months)
Alfalfa	12
Barley	4
Cabbage	Anytime
Canola	24
Cereal Grains (Buckwheat, Oats, Pearl Millet,	12
Proso Millet, Teosinte, Wild Rice)	
Corn, Field	10
Corn, Pop	18
Corn, Sweet	18
Cotton	18
Dry Shell Peas and Beans	Anytime
Horseradish	Anytime
Mint	Anytime
Peanuts	Anytime
Potatoes	Anytime
Rice	10
Rye	4
Sorghum	10 *
Soybeans	Anytime
Sugar Beets	36
Sugarcane	Anytime
Sunflowers	Anytime
Sweet Potatoes	12
Triticale	4
Tobacco	Anytime
Turf	Anytime
Wheat	4

<sup>\*</sup>Sorghum - 18-month rotation for rates above 8.0 oz/A (0.125 lb ai/A)

#### BAND TREATMENT APPLICATIONS

For band treatments, apply the broadcast equivalent rate and volume per acre. To determine these:

Band Width Inches	X	Broadcast	_	Band Rate
Row Width Inches	×	Rate Per Acre		Dana Nate
Band Width Inches		Broadcast	_	Band Volume
Row Width Inches	Х	Volume Per Acre	_	band volume

#### MIXING AND LOADING INSTRUCTIONS

F9021-2 SE CAL Herbicide may be applied alone, or in tank mixtures with other herbicides for the control of additional weed species. Mixtures with some other pesticides have not been tested. Conduct appropriate compatibility tests prior to tank mixing with other pesticides. Follow all precautions and restrictions on the tank mix partner label.

It is important that spray equipment is clean and free of existing pesticide residues before preparing F9021-2 SE CAL Herbicide spray mixtures. Follow the spray tank clean out procedures specified on the label of the product or products previously applied.

For best results fill spray tank with one half of the volume of clean water needed for the field to be treated. Start agitation system. Prepare a slurry of F9021-2 SE CAL Herbicide in a clean container using clean water. Slowly add the F9021-2 SE CAL Herbicide/water slurry to the spray tank. Carefully rinse the slurry container, adding the rinsate to the spray tank. Complete filling the spray tank to the desired level. Continuous spray tank agitation is required at all times to maintain a uniform spray solution. Make sure F9021-2 SE CAL Herbicide is thoroughly mixed before application or before adding another product to the spray tank.

<sup>\*\*</sup>For all other crops not listed, the rotation interval is a minimum of 12 months.

Use the F9021-2 SE CAL Herbicide spray mixture immediately after mixing. Do not store the sprayer overnight or for any extended period of time with the F9021-2 SE CAL Herbicide spray mixture remaining in the tank.

Do not premix F9021-2 SE CAL Herbicide spray solutions in nurse tanks.

If F9021-2 SE CAL Herbicide is tank mixed with other herbicides, all additional directions, restrictions and precautions for the tank mixture herbicides must be followed.

#### SPRAYER EQUIPMENT CLEAN-OUT

As soon as possible after spraying F9021-2 SE CAL Herbicide and before using sprayer equipment for any other applications, the sprayer must be thoroughly cleaned to avoid potential crop affects using the following procedure. Residues left in mixing equipment, spray tanks, hoses, spray booms and nozzles can cause crop effects if they are not properly cleaned. In addition, users must take appropriate steps to ensure proper equipment clean-out for any other products mixed with F9021-2 SE CAL Herbicide as required on the other product labels. More complete cleaning can be achieved if the spray system is cleaned immediately following the application.

- 1. Drain sprayer tank, hoses, spray boom and spray nozzles. Use a high-pressure detergent wash to remove physical sediment and residues from the inside of the sprayer tank and thoroughly rinse. Then, thoroughly flush sprayer hoses, spray boom and spray nozzles with a clean water rinse. Remove and clean spray tips and all filters and screens (tank, spray hose and spray tips) separately in the ammonia solution of Step 2.
- 2. Next, prepare a sprayer cleaning solution by adding three gallons of ammonia (containing at least 3% active) per 100 gallons of clean water. Prepare sufficient cleaning solution to allow the operation of the spray system for a minimum of 15 minutes to thoroughly flush hoses, spray boom and spray nozzles.
- 3. Convenient and thorough cleaning of the sprayer can be achieved if the ammonia solution or fresh water is left in the spray tank, hoses, spray booms and spray nozzles overnight or during storage.
- 4. Before using the sprayer, completely drain the sprayer system. Rinse the tank with clean water and flush through the hoses, spray boom, and spray nozzles with clean water. Remove and clean spray tips and all filters and screens (tank, spray hose and spray tip) separately in an ammonia solution.
- 5. Properly dispose of all cleaning solution and rinsate in accordance with Federal, State, and local regulations and guidelines.

Do not apply sprayer cleaning solutions or rinsate to sensitive crops.

Do not store the sprayer overnight or for any extended period of time with F9021-2 SE CAL Herbicide spray solution remaining in the tank, spray lines, spray boom plumbing, spray nozzles or strainers.

If the sprayer has been stored or idle, purge the spray boom and nozzles with clean water before beginning any application.

Should small quantities of F9021-2 SE CAL Herbicide remain in inadequately cleaned mixing, loading and/or spray equipment, they may be released during subsequent applications potentially causing effects to certain crops and other vegetation. FMC accepts no liability for any effects due to inadequately cleaned equipment.

Do not drain of flush equipment on or near desirable trees or plants.

Do not contaminate any body of water including irrigation water that may be used on other crops.

#### **WEEDS LIST**

Use Restrictions:

This product, F9021-2 SE CAL Herbicide may only be used in accordance with the Product Application information and the specific crop use directions, F9021-2 SE CAL Herbicide applied alone or in recommended tank mixtures will provide control of the following weeds. Refer to the specific crop section.

Table :	5
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Common Name	Scientific Name
Amaranth, livid	Amaranthus lividus
Amaranth, Palmer	Amaranthus palmeri
Amaranth, Powell	Amaranthus Powell II
Amaranth, spiny	Amaranthus spinosus
Amaranth, spleen	Amaranthus dubius
Anoda, spurred	Anoda cristata
Bedstraw, catchweed	Galium aparine
Carpetweed	Mollugo verticillata
Chickweed, common	Stellaria media
Copperleaf, hophornbeam	Acalypha ostryeafolia
Copperleaf, Virginia	Acalypha virginica
Crabgrass, large	Digitaria sanguinalis
Crabgrass, smooth	Digitaria ischaemum
Crabgrass, Southern	Digitaria ciliaris
Croton, tropic	Croton glandulosus
Crownbeard, golden	Verbesina encelioides
Cupgrass, wooly	Erichloa villosa
Cyperus, hedgehog	Cyperus compressus
Daisy, American	Eclipta alba
Devilsclaw	Proboscidea Iouisiana

Dock, curly	Rumex crispus
Eclipta	Eclipta prostrata
Filaree, redstem	Erodium cicutarium
Flixweed	Descurainia sophia
	Galinsoga ciliata
Galinsoga, hairy	Eleusine indica
Goosegrass	
Groundcherry, clammy (seedling)	Physalis heterophylla
Groundcherry, cutleaf	Physalis angulata
Jimsonweed	Datura stramonium
Kochia (ALS and Triazine Resistant)	Kochia scoparia
Ladysthumb	Polygonum persicaria
Lambsquarters, common	Chenopodium album
Lettuce, miners	Montia perfoliata
Mallow, common	Malva neglecta wall r.
Mayweed, Chamomile	Anthemis cotula I.
Milkweed, honeyvine	Ampelamus albidus
Morningglory, entireleaf	Ipomoea hederacea integriuscula
Morningglory, ivyleaf	Ipomoea hederacea hederacea
Morningglory, palmleaf	Ipomoea wrightii
Morningglory, purple	Ipomoea turbinata
Morningglory, red	Ipomoea, coccinea L.
Morningglory, scarlet	Ipomoea coccinea
Morningglory, smallflower	Jacquemontia tamnifolia
Morningglory, tall	Ipomoea, purpurea
Mustard, tumble	Sisybrium altissimum
Nightshade, black	Solanum nigrum
Nightshade, Eastern black	Solanum ptycanthum
Nutsedge, purple	Cyperus rotundus
Nutsedge, yellow	Cyperus esculentus
Orchardgrass	Dactylis glomerata
Panicum, fall	Panicum dichotomiflorum
Pigweed, redroot	Amaranthus retroflexus
Pigweed, smooth	Amaranthus hybridus
Plantain, blackseed	Plantago rugelii decne
Plantain, narrow-leaved	Plantago lanceolata
Poorjoe	Diodia teres
Porophyllum	Porophyllum rederale
Poinsettia, wild	Euphorbia heterophylla
Purslane, common	Portulaca oleracea
Redmaids	Calandrinia ciliata
Redweed	Melochia corchorifolia
Sedge, annual	Carex spp.
Senna, coffee	Cassia occidentalis
Sheperdspurse	Capsella bursa-pastoris
Sida, prickly	Sida spinosa
Sida, Southern	Sida acuta
Signalgrass, broadleaf	Brachiaria platyphylla
Smartweed, PA (seedling)	Polygonum pensylvanicum
Smellmellon	Cucumis melo
Starbur, bristly	Acanthospermum hispidum
Stinkgrass	Eragrostis cilianensis
Toadflax, yellow	Linaria vulgaris
Tassleflower, red	Emilio sonchifolia
Thistle, Russian	Salsola kali
Waterhemp, common	Amaranthus rudis
Waterhemp, tall	Amaranthus tuberculatos
Waterprimrose, winged	Ludwigia decurrens
Witchgrass	Panicum capillare
vvitorigrass	т аттоитт сартате

## REPLANTING INSTRUCTIONS

If initial planting of labeled crops fails to produce a stand, only labeled crops for F9021-2 SE CAL Herbicide or the tank mix partner; whichever is most restrictive, may be planted. Do not retreat field with F9021-2 SE CAL Herbicide or other herbicide containing sulfentrazone. Do not plant treated fields with any crop at intervals that are inconsistent with the Rotational Crop Guidelines on this label. When replanting use minimum soil tillage to preserve the herbicide barrier and achieve maximum weed control.

## **ROW CROPS**

CORN (Field Corn, Seed Corn) (For Use Only with GMO Varieties Tolerant to PPO Herbicides)

#### F9021-2 SE CAL Herbicide Use Rate Table (Corn)

Fall, Spring Early Preplant, Preemergence, and Preplant Incorporated Applications

Broadcast Rate	fl oz/A F9021-2 SE CAL Herbicide			
	Soil Texture			
% Organic Matter	<u>Coarse</u> <u>Medium</u> <u>Fine</u>			
<1.5	6.0 - 9.0	6.0 - 9.0	7.5 – 10.5	
1.5-3.0	6.0 - 9.0	7.5 – 12.0	9.0 – 13.5	
>3	7.5 – 12.0	9.0 - 13.5	12.0 – 16.0	

Refer to the previous information on soil types under the COARSE,

MEDIUM, and FINE categories

Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

#### Preplant (Fall Applications)

F9021-2 SE CAL Herbicide may be applied in the fall as a preplant treatment prior to corn planting the following spring.

F9021-2 SE CAL Herbicide can be used alone or in a tank mixture with other herbicides to control susceptible broadleaves, sedges and grasses in corn. Apply F9021-2 SE CAL Herbicide in conventional tillage or conservation tillage (reduced tillage or no-tillage) cropping systems using rates specified in the Table above. F9021-2 SE CAL Herbicide should be applied to the stubble or soil surface and allow moisture from rainfall or snow to move the product into the soil. Do not mechanically incorporate in the fall or spring as this operation can destroy the herbicide barrier allowing weed escapes to occur. Do not apply to frozen soils or existing snow cover to prevent F9021-2 SE CAL Herbicide runoff from rain or snowmelt that may occur following application. F9021-2 SE CAL Herbicide may be tankmixed with other burndown herbicides to control emerged weeds in the fall or residual soil herbicides that are labeled for fall use on corn. Select the correct F9021-2 SE CAL Herbicide use rate for corn from the Table above for your soil type and organic matter. Due to the extended period of time between the fall application and corn planting, the use rate of F9021-2 SE CAL Herbicide should be the mid to high rate within the rate range for the appropriate soil type and organic matter.

#### **Early Preplant and Preemergence (Spring Applications)**

F9021-2 SE CAL Herbicide may be applied preplant on the soil surface in the spring to control weeds in conventional and conservation tillage systems. F9021-2 SE CAL Herbicide can be applied from 45 days prior to planting until 3 days after planting as a preemergence broadcast or banded soil application if corn seedlings have not broken the soil surface and if the seed furrow is completely closed. For preemergence applications 14 to 45 days prior to planting, use the mid to high rate in the appropriate rate range for the soil and organic matter type listed in Table above. F9021-2 SE CAL Herbicide can be tank mixed with other herbicides labeled for use in corn. To control insect pests such as cutworm or armyworm that may be present, F9021-2 SE CAL Herbicide may be tankmixed with insecticides including Mustang Maxx® or Capture® 2EC. If dry conditions persist following preemergence application of F9021-2 SE CAL Herbicide, a shallow incorporation may be needed to activate the herbicide. If weeds are emerged at the time of F9021-2 SE CAL Herbicide application, use a burndown herbicide in conjunction with F9021-2 SE CAL Herbicide as needed. When planting into soil treated preplant with F9021-2 SE CAL Herbicide, minimize soil disturbance to maintain the herbicide barrier on the soil surface to achieve maximum weed control. Observe all precautions, instructions, and rotational cropping guidelines of each product's label when tank mixing, including all references to potential carryover and crop injury warnings or restrictions.

#### **Preplant Incorporated**

F9021-2 SE CAL Herbicide may be applied as a Preplant Incorporated treatment in the spring prior to planting in reduced and conventional tillage corn. F9021-2 SE CAL Herbicide should be shallowly incorporated or mixed thoroughly into the soil to a maximum depth of 2 inches using a correctly adjusted implement such as a field cultivator, field finisher or disk harrow. Incorporating F9021-2 SE CAL Herbicide deeper than 2 inches may result in inconsistent weed control. Use the appropriate rate from Table above for the soil texture, organic matter, and pH level of the soil. F9021-2 SE CAL Herbicide can be tankmixed with other soil-applied herbicides and insecticides labeled for preplant incorporation in corn. Observe all precautions, instructions, and rotational cropping guidelines of each product's label when tank mixing, including all references to potential carryover and crop injury warnings or restrictions.

F9021-2 SE CAL Herbicide may be applied more than once to the same crop in split or sequential applications to provide season-long control of difficult-to- control existing or late emerging weeds.

#### **Precautions**

These Crop Specific Use directions are based upon the interactive effects of F9021-2 SE CAL Herbicide (sulfentrazone) and the primary soil and environmental factors, which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Product Application Instructions, F9021-2 SE CAL Herbicide Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with F9021-2 SE CAL Herbicide. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F9021-2 SE CAL Herbicide under specific local conditions.

#### Restrictions

Do not apply more than 24.0 fl oz/A (0.375 lb ai/A) per twelve-month period.

Do not apply more than 16.0 fl oz/A (0.25 lb ai/A) in a single application.

Do not apply more than two applications per year when using reduced application rates equal to or less than 12 fl oz/A of this product per application.

The twelve-month period is considered to begin upon the initial F9021-2 SE CAL Herbicide application.

Do not use on soils classified as sand, which have less than 1% organic matter.

Do not apply to frozen soils or existing snow cover to prevent F9021-2 SE CAL Herbicide runoff from rain or snowmelt that may occur following application.

#### **FALLOW OR POST HARVEST BURNDOWN**

F9021-2 SE CAL Herbicide may be applied in the fall following crop harvest or in existing fallow fields of asparagus, cabbage, corn, dry shell peas and beans, horseradish, mint, peanuts, potatoes, soybeans, sugarcane, sunflowers and tobacco.

F9021-2 SE CAL Herbicide Use Rate Table (Fallow or Post Harvest Burndown) Fall and Spring Fallow Applications				
Broadcast Rate	fl oz/A F9021-2 SE CAL Herbicide			
	Soil Texture			
% Organic Matter	<u>Coarse</u> <u>Medium</u> <u>Fine</u>			
<1.5	6.0 - 9.0	6.0 - 9.0	7.5 – 10.5	
1.5-3.0	6.0 - 9.0	7.5 – 12.0	9.0 – 13.5	
>3	7.5 – 12.0	9.0 – 13.5	12.0 - 16.0	

Refer to the previous information on soil types under the COARSE, MEDIUM, and FINE categories

Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

#### Fall Application (MN, ND, SD, MT, CO, NE, WY, ID, WA, OR, WI, MI)

F9021-2 SE CAL Herbicide may be applied in the fall following crop harvest or in existing fallow fields to control or suppress weeds the following season. The F9021-2 SE CAL Herbicide Rotational Crop Guidelines in Table 4 must be followed if crops are planted the next season. F9021-2 SE CAL Herbicide should be applied to the harvested crop stubble or soil surface without incorporation. Moisture in the form of rain or snow will move and activate the product. Do not mechanically incorporate in the fall or spring after application because this activity may destroy the herbicide barrier and weed escapes can occur. Do not apply to frozen soils to prevent F9021-2 SE CAL Herbicide runoff from rain or snow that may occur following application. F9021-2 SE CAL Herbicide may be tankmixed with herbicides to control emerged weeds. Sequential applications may be needed depending on weed size. In situations where weed size may interfere with F9021-2 SE CAL Herbicide reaching the soil surface, a separate burndown application prior to the application of F9021-2 SE CAL Herbicide will be required. Use full, specified rates of burndown herbicides in combination with F9021-2 SE CAL Herbicide, or sequential applications as needed. Higher aerial spray volumes are required when there is a dense weed population or canopy.

F9021-2 SE CAL Herbicide can be tankmixed with other herbicides. Observe all precautions, instructions, and rotational cropping guidelines of each product's label when tank mixing, including all references to potential carryover and crop injury warnings or restrictions.

#### **Spring Preemerge Application**

F9021-2 SE CAL Herbicide may be applied as a fallow treatment early in the spring provided the application is made prior to weed emergence, and adequate moisture is available to activate the F9021-2 SE CAL Herbicide. Follow the same use rate instructions and application guidelines listed under the Fall Application section above.

#### **Weeds Controlled**

#### When applied according to directions, F9021-2 SE CAL Herbicide will provide control of:

Filaree, redstem	Pigweed, redroot
Kochia (ALS and Triazine Resistant)	Pigweed, smooth
Lambsquarters, common	Thistle, Russian
Morningglory, ivyleaf	Waterhemp, common
Morningglory, tall	Waterhemp, tall
Nightshade, Eastern Black	

For information on other weeds not listed above, refer to Weeds Controlled section of this label.

#### **Precautions**

These Crop Specific Use directions are based upon the interactive effects of F9021-2 SE CAL Herbicide (sulfentrazone) and the primary soil and environmental factors, which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Product Application Instructions, F9021-2 SE CAL Herbicide Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with F9021-2 SE CAL Herbicide. Consult university or extension weed management specialists for

additional information on specific local varieties or cultivars and any other pertinent information on F9021-2 SE CAL Herbicide under specific local conditions.

#### **Use Restrictions**

Do not apply more than 16.0 fl oz/A (0.25 lb ai/A) per twelve-month period.

Do not apply more than 16.0 fl oz/A (0.25 lb ai/A) in a single application.

Do not apply more than two applications per year when using reduced application rates equal to or less than 8 fl oz/A of this product per application

The twelve-month period is considered to begin upon the initial F9021-2 SE CAL Herbicide application.

Do not use on soils classified as sand, which have less than 1% organic matter.

Do not apply to frozen soils or existing snow cover to prevent F9021-2 SE CAL Herbicide runoff from rain or snowmelt that may occur following application.

#### **PEANUTS**

#### Southeastern United States Only (AL, GA, MS, NC, SC, VA)

Apply F9021-2 SE CAL Herbicide alone or in combination with other registered herbicides for the control of key grass and broadleaf weeds in peanut production. Refer to the information below for specific use directions. F9021-2 SE CAL Herbicide is registered for use on peanuts only in the following states: AL, GA, MS, NC, SC and VA.

#### **Application Instructions**

F9021-2 SE CAL Herbicide may be preplant incorporated (to a depth no greater than 2 inches) up to 14 days prior to planting. Alternatively, F9021-2 SE CAL Herbicide may be applied to the soil surface at planting, or within 12 hours after planting. Incorporation of F9021-2 SE CAL Herbicide deeper than 2 inches can result in adverse crop response and/or inconsistent weed control. Do not use F9021-2 SE CAL Herbicide for "at-crack" type applications or apply to exposed peanut tissue. Such use can result in significant adverse crop response. For optimum performance, a combination of F9021-2 SE CAL Herbicide plus a grass herbicide labeled for peanuts is recommended. Under conditions of exceptionally high weed populations or when weeds not controlled by F9021-2 SE CAL Herbicide are anticipated, the use of suitable post-emergent peanut herbicides is recommended. Broadcast apply the correct F9021-2 SE CAL Herbicide use rate from the tables below, in a minimum of 10 gallons of water per acre of finished spray. Banded F9021-2 SE CAL Herbicide application rates must be adjusted in proportion to the broadcast rate.

#### F9021-2 SE CAL Herbicide Use Rates and Weeds Controlled in Coarse Soils<sup>1</sup>

#### When applied, as directed, at 9.6 fl oz/A (0.15 lb ai/A) F9021-2 SE CAL Herbicide will provide control of:

Amaranth, spleen	Jimsonweed
Copperleaf, hophornbeam	Lambsquarters, common
Croton, tropic	Morningglory, entireleaf
Crownbeard, golden	Morningglory, red
Devilsclaw	

#### When applied, as directed, at 12.8 fl oz/A (0.2 lb ai/A) F9021-2 SE CAL Herbicide will provide control of:

All the weeds controlled at 9.6 fl oz/A plus:		
Amaranthus, Palmer	Morningglory, smallflower	
Crabgrass, large	Poinsettia, wild <sup>2</sup>	
Crabgrass, Southern	Redweed	
Eclipta	Senna, coffee	
Goosegrass	Signalgrass, broadleaf	
Morningglory, pitted	Smartweed, PA (seedling)	

#### When applied, as directed, at 16.0 fl oz/A (0.25 lb ai/A) F9021-2 SE CAL Herbicide will provide control of:

All the weeds controlled at 12.8 fl oz/A plus:	
Anoda, spurred	Purslane, common
Cocklebur, common	Sida, prickly
Nutsedge, yellow	Starbur, prickly
Nutsedge, purple 3	

<sup>&</sup>lt;sup>1</sup>Use rates are F9021-2 SE CAL Herbicide fl oz/A. Specified weeds are controlled in coarse (sand and loamy sand) soils. Medium and fine soils (sandy loam, clay loam, clay) or soils with organic matter greater than 1.0% should use the next

In soils with pH greater than 7, use the next lower F9021-2 SE CAL Herbicide application rate. Irrigation with alkaline (pH 8 to 9) water can result in adverse crop response. The extent of crop response is dependent on F9021-2 SE CAL Herbicide application rate, soil type (including %OM and pH), timing (after F9021-2 SE CAL Herbicide application relative to crop emergence), amount and pH of irrigation water. Do not irrigate with water greater than pH 9.

After peanuts are established (4" to 6" across in size), the alkalinity of irrigation water has minimal impact on crop growth.

higher rate in the tables above. The next higher rate for 16.0 fl oz/A (0.25 lb ai/A) should not exceed 19.2 fl oz/A (0.3 lb ai/A)

<sup>&</sup>lt;sup>2</sup> Controls initial and several continuing flushes (germinations) of wild poinsettia.

<sup>&</sup>lt;sup>3</sup> Purple nutsedge activity is based on preplant incorporated applications of F9021-2 SE CAL Herbicide. Pre-emergence surface applications may provide control (>85%) under certain circumstances. Otherwise, purple nutsedge will be partially controlled (71 to 84%).

For information on other weeds not listed above, refer to Weeds Controlled section (Table 5) in this label.

#### **Precautions**

These Crop Specific Use directions are based upon the interactive effects of F9021-2 SE CAL Herbicide (sulfentrazone) and the primary soil and environmental factors, which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Product Application Instructions, F9021-2 SE CAL Herbicide Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with F9021-2 SE CAL Herbicide. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F9021-2 SE CAL Herbicide under specific local conditions.

#### Restrictions

Do not apply more than 19.2 fl oz/A (0.3 lb ai/A) of F9021-2 SE CAL Herbicide per twelve-month period.

Do not apply more than 16.0 fl oz/A (0.25 lb ai/A) in a single application.

Do not apply more than two applications per year when using reduced application rates equal to or less than 9.6 fl oz/A of this product per application.

The twelve-month period is considered to begin upon the initial F9021-2 SE CAL Herbicide application.

Do not feed treated peanut forage or peanut hay to livestock.

Do not use on soils classified as sand, which have less than 1% organic matter.

Do not irrigate with water having a pH higher than 9.

Do not apply at cracking time.

#### **POTATOES**

F9	F9021-2 SE CAL Herbicide Use Rate Table (Potatoes)			
	Preemergence Application			
Broadcast Rate	Broadcast Rate fl oz/A F9021-2 SE CAL Herbicide			
	Soil Texture			
% Organic Matter	Coarse	<u>Medium</u>	<u>Fine</u>	
<1.5	6.0 - 9.0	6.0 - 9.0	7.5 – 10.5	
1.5-3.0	6.0 - 9.0	7.5 – 12.0	9.0 – 13.5	
>3	7.5 – 12.0	9.0 – 13.5	12.0 – 16.0	
*B C + U : C U : U OOABGE MEDUNA LEDIE + :				

<sup>\*</sup>Refer to the previous information on soil types under the COARSE, MEDIUM, and FINE categories Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

#### **Ground and Aerial Applications**

Apply F9021-2 SE CAL Herbicide by aerial application as a preemergence treatment following planting and after dragoff, but prior to potato emergence. Optimum performance can be achieved if F9021-2 SE CAL Herbicide is applied to the soil surface and either rainfall or overhead irrigation is used to activate the product. If no moisture is received within 7 days following application in areas without irrigation, a shallow incorporation (less than 2 inches) may be needed prior to weed and potato emergence to activate the product. Select the appropriate use rate based on soil texture and organic matter as shown in Table above. For control of emerged weeds at the time of the F9021-2 SE CAL Herbicide application, an appropriate burndown herbicide and adjuvants labeled for potatoes may be tankmixed with F9021-2 SE CAL Herbicide to control these weeds. Do not apply F9021-2 SE CAL Herbicide if the potatoes have emerged from the soil as undesirable crop response may occur. F9021-2 SE CAL Herbicide may be tankmixed with other soil-applied herbicides labeled for use in potatoes to improve weed management and increase weed control spectrum.

Apply F9021-2 SE CAL Herbicide in a minimum of 10 gallons of spray by ground application and 5 gallons of spray by air.

#### **Chemigation Applications**

F9021-2 SE CAL Herbicide may be applied to potatoes through sprinkler irrigation systems including center pivot, lateral move, end tow, solid set or hand move irrigation systems. Apply F9021-2 SE CAL Herbicide prior to potato emergence using sufficient water (0.25 to 0.5 inch per acre) to provide thorough soil surface coverage, but to avoid runoff of irrigation water. F9021-2 SE CAL Herbicide may be applied with other products labeled for chemigation use in potatoes.

It is important to note that irrigation with highly alkaline water (high pH) following a F9021-2 SE CAL Herbicide soil application may significantly increase the amount of sulfentrazone available in soil solution. Irrigation with water having a pH greater than 7.5 could result in adverse crop response. This response will ultimately depend on initial F9021-2 SE CAL Herbicide application rate, application timing, amount and pH of irrigation water; the sensitivity of the crop and the crop growth stage when irrigated. The risk of adverse crop response will lessen with advances in the crop growth stage.

#### Weeds Controlled

When applied according to directions, F9021-2 SE CAL Herbicide will provide control of:

Amaranth, Palmer	Nightshade, Eastern black
Filaree, redstem	Pigweed, redroot
Kochia (ALS and Triazine Resistant)	Pigweed, smooth
Lambsquarters, common	Thistle, Russian
Morningglory, ivyleaf	Waterhemp, common

Morningglory, tall	Waterhemp, tall

For information on other weeds not listed above, refer to Weed Controlled section (Table 5) in this label.

#### **Precautions**

Potato varieties may vary in their response to herbicide applications. When using F9021-2 SE CAL Herbicide on an untested variety, always determine the crop tolerance before planting. Some potato varieties, including Sangre, Shepody and Snowden, have shown sensitivity to F9021-2 SE CAL Herbicide. Caution should be used when planting these varieties on marginal coarse soils.

These Crop Specific Use directions are based upon the interactive effects of F9021-2 SE CAL Herbicide (sulfentrazone) and the primary soil and environmental factors, which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Product Application Instructions, F9021-2 SE CAL Herbicide Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with F9021-2 SE CAL Herbicide. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F9021-2 SE CAL Herbicide under specific local conditions.

#### Restrictions

Do not use on soils classified as sand, which have less than 1% organic matter.

Do not apply F9021-2 SE CAL Herbicide after potato emergence from the soil as undesirable crop response may occur.

Do not apply more than 16.0 fl oz/A (0.25 lb ai/A) per twelve-month period.

Do not apply more than 16.0 fl oz/A (0.25 lb ai/A) in a single application.

Do not apply more than two applications per year when using reduced application rates equal to or less than 8 fl oz/A of this product per application.

The twelve-month period is considered to begin upon the initial F9021-2 SE CAL Herbicide application.

#### **SOYBEANS**

F9021-2 SE CAL Herbicide Use Rate Table (Soybeans)				
Fall, Sprir	Fall, Spring Early Preplant, Preemergence, and Preplant Incorporated Applications			
Broadcast Rate	fl oz/A F9021-2 SE CAL Herbicide			
	Soil Texture			
% Organic Matter	Coarse	Medium	Fine	
<1.5	9.0 – 12.0	12.0 – 16.0	16.0	
1.5-3	12.0 – 16.0	16.0 – 20.2	20.2	
>3	16.0 – 20.2	20.2 – 24.0	24.0	
Refer to the previous information on soil types under the COARSE, MEDIUM, and FINE categories				

Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

#### **Ground and Aerial Applications**

Apply F9021-2 SE CAL Herbicide in conventional tillage, conservation tillage, reduced tillage or no-tillage cropping systems using rates specified in the F9021-2 SE CAL Herbicide Use Rate Table above. F9021-2 SE CAL Herbicide may be applied with ground or aerial sprayers calibrated to deliver a minimum of 10 gallons of finished spray by ground application and 5 gallons of finished spray by air. Use nozzle types and arrangements that will provide optimum coverage while producing a minimal amount of fine droplets. Apply sufficient spray volume to achieve adequate coverage.

#### **Preplant Incorporated and Preemergence Applications**

F9021-2 SE CAL Herbicide can be applied prior to planting or up to 3 days after planting. When applications after planting are delayed greater than 3 days after planting, injury may occur if seeds are germinating. F9021-2 SE CAL Herbicide may be applied preemergence or preplant incorporated. For preplant incorporated applications, incorporation must be uniform and no deeper than 2 inches. Improper soil incorporation may result in erratic weed control and/or crop injury. F9021-2 SE CAL Herbicide applied near or after crop emergence may cause severe injury to the crop. F9021-2 SE CAL Herbicide can be applied alone or in combination with other labeled soybean herbicides. F9021-2 SE CAL Herbicide may be followed by labeled postemergence soybean herbicides for increased control of grass and broadleaf weeds. Always follow the most restrictive label when tank mixing. When using F9021-2 SE CAL Herbicide in no-till or minimum till cropping systems, tank mix with an appropriate burndown herbicide for improved control of existing weeds.

#### **Fall Applications**

F9021-2 SE CAL Herbicide may be applied as a fall treatment to the stubble of harvested crops for the burndown of existing vegetation and preemergence control of labeled weeds the following spring in no-till and conservation tillage production systems. Fall applications of F9021-2 SE CAL Herbicide must be made in weed control programs that include, as needed, spring applications of preplant, preemergence or postemergence herbicides for the following crop season. F9021-2 SE CAL Herbicide can be applied to the stubble of a harvested crop in no-till or to the soil surface of conservation tillage fields after harvest when the sustained soil temperature is 55 degrees F and falling at a soil depth of 4 inches. Apply after September 30 in those areas North of Interstate 90 and after October 15 in those areas North of Interstate 70. Do not apply F9021-2 SE CAL Herbicide as a fall treatment South of Interstate 70. Applications to ridge till production systems must be made after the formation of ridges or bedded. If weeds are emerged at the time of application, utilize a tank mixture with a suitable burndown herbicide at labeled rates. Fall applied burndown treatments should be made with a minimum of 20 gallons per acre to achieve adequate coverage of the weeds being treated. When

making burndown applications to emerged weeds, the addition of adjuvants such as COC or MSO to the spray mixture can be used to enhance the burndown activity of the application.

#### Weeds Controlled

When Applied according to directions, F9021-2 SE CAL Herbicide will provide control of:

Amaranth, Palmer	Nightshade
Copperleaf, hophornbeam	Pigweed, spp.
Kochia (ALS and Triazine Resistant)	Sida, prickly
Lambsquarters, common	Thistle, Russian
Morningglory, spp.	Waterhemp, spp.

For information on other weeds not listed above, refer to Weed Controlled section (Table 5) in this label.

#### Precautions

When applying F9021-2 SE CAL Herbicide with other registered herbicides, refer to specific label information on precautions, instructions, limitations, application methods and timings, and weeds controlled.

F9021-2 SE CAL Herbicide is especially effective against a wide range of economic broadleaf and grass weeds. The same processes that sulfentrazone affects in these weeds can, under certain conditions, be affected in soybeans. These conditions include high pH (7.5 and above), cool weather, prolonged and excessive moisture, seedling diseases, and any other condition, including poor agronomic practices, that are unfavorable to vigorous crop growth. Such effects in soybeans are often observed as stunting and discoloration. The duration of these effects are somewhat dependent on the duration of the adverse growing conditions. These effects lessen and generally diminish with the return to normal growing conditions.

These Crop Specific Use directions are based upon the interactive effects of F9021-2 SE CAL Herbicide (sulfentrazone) and the primary soil and environmental factors, which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Product Application Instructions, F9021-2 SE CAL Herbicide Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with F9021-2 SE CAL Herbicide. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F9021-2 SE CAL Herbicide under specific local conditions.

#### Restrictions

Do not apply more than 24.0 fl oz/A (0.375 lbs active) of F9021-2 SE CAL Herbicide per twelve-month period.

Do not apply more than 24.0 fl oz/A (0.375 lb ai/A) in a single application.

Do not apply more than two applications per year when using reduced application rates equal to or less than 12 fl oz/A of this product per application.

The twelve-month period is considered to begin upon the initial F9021-2 SE CAL Herbicide application.

Do not use on soils classified as sand, which have less than 1% organic matter.

Do not apply to frozen soils or existing snow cover to prevent F9021-2 SE CAL Herbicide runoff from rain or snowmelt that may occur following application.

Do not apply after crop seed germination.

#### **SUGARCANE**

F90	F9021-2 SE CAL Herbicide Use Rate Table (Sugarcane)		
	Planting Time and Lay-by Applications		
Broadcast Rate	fl oz/A F9021-2 SE CAL Herbicide		
	Soil Texture		
% Organic Matter	Coarse Medium Fine		
<1.5	9.0 – 12.0	12.0 – 16.0	16.0
1.5-3	12.0 – 16.0 16.0 – 20.2 20.2		
>3	16.0 – 20.2	20.2 – 24.0	24.0

Refer to the previous information on soil types under the COARSE, MEDIUM, and FINE categories Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

Apply F9021-2 SE CAL Herbicide as a broadcast or banded preemerge soil applied treatment for the control of broadleaf weeds, grasses and sedges in sugarcane. Refer to the F9021-2 SE CAL Herbicide Product Use Rate Section and Table above for specific use information.

#### **Planting Time Applications**

Apply F9021-2 SE CAL Herbicide preemerge to newly planted or ration sugarcane. Use the higher rate on clay soils and/or soils with organic matter content higher than 2 percent. Apply either by air in a minimum of 5 gallons of spray per acre or by ground equipment in a minimum of 15 gallons of spray per acre. F9021-2 SE CAL Herbicide may be applied with other herbicides registered for use in sugarcane.

#### **Aerial Applications**

F9021-2 SE CAL Herbicide may be applied by air in a minimum of 5 gallons of finished spray per acre. F9021-2 SE CAL Herbicide may be applied with other herbicides or insecticides registered for aerial application in sugarcane.

#### Lay-by Applications

Apply F9021-2 SE CAL Herbicide as a directed spray to sugarcane at lay-by timing. Use the higher rate on clay soils and/or soils with organic matter content higher than 2 percent. Apply as a directed spray with ground equipment in a minimum of 15 gallons of spray per acre. F9021-2 SE CAL Herbicide may be applied with other herbicides registered for use in sugarcane.

#### **Weeds Controlled**

When applied according to directions, F9021-2 SE CAL Herbicide will provide control of:

Morningglory, entireleaf	Morningglory, tall
Morningglory, ivyleaf	Pigweed, red root
Morningglory, red	Nutsedge, yellow

For information on other weeds not listed above, refer to Weeds Controlled section (Table 5) in this label.

#### **Precautions**

These Crop Specific Use directions are based upon the interactive effects of F9021-2 SE CAL Herbicide (sulfentrazone) and the primary soil and environmental factors, which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Product Application Instructions, F9021-2 SE CAL Herbicide Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with F9021-2 SE CAL Herbicide. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F9021-2 SE CAL Herbicide under specific local conditions.

#### Restrictions

Do not apply within 120 days of harvest.

Do not use on soils classified as sand, which have less than 1% organic matter.

Do not allow spray to contact crop leaves.

Do not apply more than 24.0 fl oz/A (0.375 lb ai/A) of F9021-2 SE CAL Herbicide per twelve-month period.

Do not apply more than 24.0 fl oz/A (0.375 lb ai/A) in a single application.

Do not apply more than two applications per year when using reduced application rates equal to or less than 12 fl oz/A of this product per application.

The twelve-month period is considered to begin upon the initial F9021-2 SE CAL Herbicide application.

#### SUNFLOWERS

F9021-2 SE CAL Herbicide Use Rate Table (Sunflowers)			
Fall, Early	Spring Preplant, Preemergeno	ce, and Preplant Incorporated Ap	pplications
Broadcast Rate	fl oz/A F9021-2 SE CAL Herbicide		
	Soil Texture		
% Organic Matter	Coarse	Medium	Fine
<1.5	6.0 - 9.0	6.0 - 9.0	7.5 – 10.5
1.5-3.0	6.0 - 9.0	7.5 – 12.0	9.0 – 13.5
>3 7.5 – 12.0 9.0 – 13.5 12.0 – 16.0			

Refer to the previous information on soil types under the COARSE, MEDIUM, and FINE categories

Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

#### Fall Applications (For use only in ND, SD, MT, MN, WY, CO, NE, KS)

F9021-2 SE CAL Herbicide may be applied in the fall as a preplant treatment to control or suppress weeds prior to planting sunflowers the following spring. F9021-2 SE CAL Herbicide should be applied to the stubble or soil surface and allow moisture from rainfall or snow to move the product into the soil. Do not mechanically incorporate in the fall or spring as this can destroy the herbicide barrier and allowing weed escapes to occur. Do not apply to frozen soils or to existing snow cover to prevent F9021-2 SE CAL Herbicide runoff from rain or snow melt that may occur following application. F9021-2 SE CAL Herbicide may be tank mixed with other residual soil herbicides that are labeled for fall use on sunflowers. If weeds are emerged at the time of F9021-2 SE CAL Herbicide application, use a burndown herbicide such as glyphosate or paraquat at the full-labeled rate in combination with F9021-2 SE CAL Herbicide or split application as needed. Select the appropriate rate from Table above within the correct soil type and organic matter range. When applying F9021-2 SE CAL Herbicide in the fall, use a mid to high rate within the rate range for the appropriate soil type and organic matter.

#### Early Preplant and Preemergence (Spring Applications)

F9021-2 SE CAL Herbicide may be applied preplant on the soil surface in the spring to control weeds in sunflowers. F9021-2 SE CAL Herbicide can be applied early preplant prior to planting up to 3 days after planting as a preemerge soil application if seedlings have not broken the soil surface and if the seed furrow is completely closed. For preemerge applications greater than 3 weeks prior to planting, use the high rate within the appropriate rate range for the soil and organic matter type listed in the use rate chart above . F9021-2 SE CAL Herbicide can be tank mixed with other preemerge herbicides labeled for sunflower use. If dry conditions persist following preemerge application of F9021-2 SE CAL Herbicide, a shallow incorporation may be needed to incorporate and activate the herbicide. If weeds are emerged at the time of F9021-2 SE CAL Herbicide application, use a burndown herbicide at the full-labeled rate in combination with F9021-2 SE CAL Herbicide or split application as needed.

#### Preplant Incorporated (PPI)

F9021-2 SE CAL Herbicide may be applied as a Preplant Incorporated treatment in the spring prior to planting in reduced and conventional tillage sunflowers. F9021-2 SE CAL Herbicide should be shallowly incorporated in the soil no deeper than 2 inches. Incorporating F9021-2 SE CAL Herbicide deeper than 2 inches can result in inconsistent weed control. Use the appropriate rate from Table above for the soil texture, organic matter, and pH level. F9021-2 SE CAL Herbicide can be tankmixed with other soil-applied herbicides labeled for preplant incorporation in sunflowers.

#### **Weeds Controlled**

When applied according to directions, F9021-2 SE CAL Herbicide will provide control of:

Amaranth, Palmer	Pigweed, red root
Filaree, redstem	Pigweed, smooth
Kochia (ALS and Triazine Resistant)	Sida, prickly
Lambsquarters, common	Thistle, Russian
Morningglory, ivyleaf	Waterhemp, common
Morningglory, tall	Waterhemp, tall
Nightshade, Eastern black	

For information on other weeds not listed above, refer to Weeds Controlled section (Table 5) in this label.

#### **Precautions**

If applying F9021-2 SE to coarse textured soils with less than 1.5% oganic matter, wait a minimum of 7 days after application before planting.

Some adverse crop response may occur on coarse textured soils with low organic matter (less than 1.5%) and pH of 7.8 or higher, or on highly eroded soils, or in areas of calcareous outcroppings. F9021-2 SE CAL Herbicide use rates should be reduced in those areas. Inadequate seed furrow closure or shallow planting (less than 1.0 inch) may result in undesirable crop response. As expected, poor growing conditions such as excessive moisture, low temperatures, soil compaction and diseases may also cause undesirable crop response.

These Crop Specific Use directions are based upon the interactive effects of F9021-2 SE CAL Herbicide (sulfentrazone) and the primary soil and environmental factors, which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Product Application Instructions, F9021-2 SE CAL Herbicide Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with F9021-2 SE CAL Herbicide. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F9021-2 SE CAL Herbicide under specific local conditions.

#### Restrictions

Do not apply more than 16.0 fl oz/A (0.25 lb ai/A) of F9021-2 SE CAL Herbicide per twelve-month period to sunflowers.

Do not apply more than 16.0 fl oz/A (0.25 lb ai/A) in a single application.

Do not apply more than two applications per year when using reduced application rates equal to or less than 8 fl oz/A of this product per application.

The twelve-month period is considered to begin upon the initial F9021-2 SE CAL Herbicide application.

Do not apply to frozen soils or existing snow cover to prevent F9021-2 SE CAL Herbicide runoff from rain or snowmelt that may occur following application.

Do not use on soils classified as sand, which have less than 1% organic matter.

Do not incorporate greater than 2 inches deep.

#### **TOBACCO** (Burley, Flue-Cured and Dark)

F9021-2 SE CAL Herbicide Use Rate Table (Tobacco)					
	Preemergence and Preplant Incorporated Applications				
Broadcast Rate	Broadcast Rate fl oz/A F9021-2 SE CAL Herbicide				
	Soil Texture				
% Organic Matter	Coarse	Medium	Fine		
<1.5	9.0 – 12.0	12.0 – 16.0	16.0		
1.5-3	12.0 – 16.0	16.0 – 20.2	20.2		
>3	16.0 – 20.2	20.2 – 24.0	24.0		
Refer to the previous information on soil types under the COARSE MEDIUM, and FINE categories					

Refer to the previous information on soil types under the COARSE, MEDIUM, and FINE categories

Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

F9021-2 SE CAL Herbicide may be surface applied or preplant incorporated (to a depth no greater than 2 inches) from 14 days to 12 hours days prior to transplanting tobacco. Incorporating F9021-2 SE CAL Herbicide deeper than 2 inches can result in inconsistent weed control.

Broadcast apply the appropriate F9021-2 SE CAL Herbicide rate from Table above, in a minimum of 10 gallons per acre of water, to the soil prior to transplanting.

#### Non-Bedded (Fields where raised beds are NOT formed prior to transplanting)

Perform all accepted cultural practices for land preparation, fertilizer/fungicide incorporation, etc. prior to the application of F9021-2 SE CAL Herbicide. Once the field has been prepared for planting, F9021-2 SE CAL Herbicide may be surface applied or lightly preplant incorporated from 14 days to 12 hours prior to transplanting.

If F9021-2 SE CAL Herbicide is surface applied and it is necessary to remove equipment tracks from the field after application but prior to transplanting, any light finishing equipment may be used providing the soil is not disturbed to a depth greater than 2 inches. If timely cultivations are not performed following a pre-transplant surface application, reduced/unacceptable weed control may occur in the drill.

#### Bedded (Fields where raised beds ARE formed PRIOR to transplanting)

Apply F9021-2 SE CAL Herbicide to formed beds as a surface application from 14 days to 12 hours prior to transplanting. If it is customary to drag/knock down beds prior to transplanting, this procedure must be performed prior to the F9021-2 SE CAL Herbicide application.

When incorporating prior to bedding, F9021-2 SE CAL Herbicide must be thoroughly and uniformly incorporated to a depth no greater than 2 inches to avoid concentrating F9021-2 SE CAL Herbicide in the bed.

If initial transplanting fails to produce a uniform stand, tobacco may be replanted. DO NOT re-treat field with a second application of F9021-2 SE CAL Herbicide, or any other herbicide containing sulfentrazone. DO NOT re-bed. Re-transplant into previously formed, treated beds.

For broad spectrum and optimum grass weed control a grass herbicide application will be required.

#### **Weeds Controlled**

#### When Applied according to directions, F9021-2 SE CAL Herbicide will provide control of:

Amaranthus, livid	Pigweed, redroot
Filaree, redstem	Pigweed, smooth
Galinsoga, hairy	Sida, prickly
Lambsquarters, common	Signalgrass, broadleaf
Morningglory, ivyleaf	Smartweed, Pennsylvania
Morningglory, tall	

For information on other weeds not listed above, refer to Weeds Controlled section (Table 5) in this label.

#### **Precautions**

Poor agronomic practices, unfavorable pH soils, diseases, cold weather, excessive moisture, drought or other conditions unfavorable to normal plant growth may adversely affect the growth of tobacco transplants. Weakened transplants may be more susceptible to herbicide response and diseases, particularly under poor drainage or compacted soil conditions or when the soil has been saturated for long periods of time. Contact your State Agricultural Extension Service Specialist for consultation as to the agronomic instructions suited for your tobacco varieties and local conditions. Temporary stunting of tobacco may occur if transplants are set too shallowly, or if heavy rainfall occurs immediately following transplanting. Splashing of treated soil onto tobacco leaves may cause some localized and inconsequential necrosis. Use sound transplanting practices that insure treated soil will not wash or crust over tobacco plants.

These Crop Specific Use directions are based upon the interactive effects of F9021-2 SE CAL Herbicide (sulfentrazone) and the primary soil and environmental factors, which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Product Application Instructions, F9021-2 SE CAL Herbicide Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with F9021-2 SE CAL Herbicide. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F9021-2 SE CAL Herbicide under specific local conditions.

#### Restrictions

#### Do not use on Shade Grown Tobacco

Do not apply F9021-2 SE CAL Herbicide to soils classified as sands containing less than 1% organic matter.

Do not use F9021-2 SE CAL Herbicide in tobacco seeding beds or greenhouses.

Do not apply F9021-2 SE CAL Herbicide post-transplant as unacceptable injury may occur.

Do not perform tillage practices that concentrate F9021-2 SE CAL Herbicide into the bed or crop injury may occur.

Do not apply more than 24.0 fl oz/A (0.375 lb ai/A) of F9021-2 SE CAL Herbicide per twelve-month period.

Do not apply more than 24.0 fl oz/A (0.375 lb ai/A) in a single application.

Do not apply more than two applications per year when using reduced application rates equal to or less than 12 fl oz/A of this product per application.

The twelve-month period is considered to begin upon the initial F9021-2 SE CAL Herbicide application.

Do not incorporate greater than 2 inches deep.

## **VEGETABLE CROPS**

Before applying F9021-2 SE CAL Herbicide to vegetable crops, users, producers, and/or applicators must read and follow the information presented in the Conditions of Sale and Limitation of Warranty and Liability section on this label.

#### **ASPARAGUS**

F9021-2 SE CAL Herbicide Use Rate Table (Asparagus)			
Spring Preemergence Applications			
Broadcast Rate	fl oz/A F9021-2 SE CAL Herbicide		
	Soil Texture		
% Organic Matter	Coarse Medium Fine		

<1.5	9.0 – 12.0	12.0 – 16.0	16.0
1.5-3	12.0 – 16.0	16.0 – 20.2	20.2
>3.0	16.0 – 20.2	20.2 – 24.0	24.0

Refer to the use rate information on soil types under the COARSE, MEDIUM, and FINE categories.

Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range

Apply F9021-2 SE CAL Herbicide as a broadcast treatment to crowns established for one or more years.

Apply in the spring before the crop and weeds emerge. F9021-2 SE CAL Herbicide should be applied at 9.0 to 24 fl oz/A (0.141 to 0.375 lb ai/A) in 10 to 40 gallons of finished spray per acre. F9021-2 SE CAL Herbicide may be applied with other pesticides registered for use with asparagus.

#### **Weeds Controlled**

#### When Applied according to directions, F9021-2 SE CAL Herbicide will provide control of:

Amaranth, Palmer	Nightshade, Eastern black
Galinsoga, hairy	Nutsedge, yellow
Lambsquarters, common	Pigweed, redroot
Morningglory, ivyleaf	Pigweed, smooth

For information on other weeds not listed above, refer to Weeds Controlled section (Table 5) in this label.

#### **Precautions**

These Crop Specific Use directions are based upon the interactive effects of F9021-2 SE CAL Herbicide (sulfentrazone) and the primary soil and environmental factors, which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Product Application Instructions, F9021-2 SE CAL Herbicide Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with F9021-2 SE CAL Herbicide. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F9021-2 SE CAL Herbicide under specific local conditions.

#### Restrictions

#### Do not apply within 14 days prior to harvest.

Do not apply more than 24.0 fl oz/A (0.375 lb ai/A) per 12-month period.

Do not apply more than 24.0 fl oz/A (0.375 lb ai/A) in a single application.

Do not apply more than two applications per year when using reduced application rates equal to or less than 12 fl oz/A of this product per application.

The twelve-month period is considered to begin upon the initial F9021-2 SE CAL Herbicide application.

Do not use on soils classified as sand, which have less than 1% organic matter.

#### **BRASSICA, HEAD AND STEM**

Broccoli, Chinese broccoli, brussels sprouts, Chinese (napa) cabbage, Chinese mustard, cauliflower, cavalo broccoli, kohlrabi)

F9021-2 SE CAL Herbicide Use Rate Table (Head and Stem Brassica)				
Fall or Sprii	Fall or Spring Early Preplant, Preemergence, and Preplant Incorporated Applications			
Broadcast Rate	Broadcast Rate fl oz/A F9021-2 SE CAL Herbicide			
	Soil Texture			
% Organic Matter	<u>Coarse</u>	<u>Medium</u>	<u>Fine</u>	
<1.5%	4.5 - 6.0	6.0 - 9.0	6.0 - 12.0	
1.5 – 3.0 %	6.0 – 12.0	12.0 – 18.0	12.0 – 18.0	
>3.0 %	12.0 – 18.0	12.0 – 24.0	12.0 – 24.0	

Refer to the previous information on soil types under the COARSE, MEDIUM, and FINE categories. Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

#### Early Preplant and Preemergence (Fall Application or Spring Application)

F9021-2 SE CAL Herbicide may be applied in the fall or spring preceding the growing season up to 72 hours prior to transplanting head and stem brassica. F9021-2 SE CAL Herbicide should be applied to the harvested crop stubble or soil surface without incorporation. Moisture in the form of rain or snow will move and activate the product into the soil. Do not mechanically incorporate in the fall or spring after application as this may destroy the herbicide barrier and weed escapes can occur. Do not apply to frozen soils to prevent F9021-2 SE CAL Herbicide runoff from rain or snow that may occur following application. F9021-2 SE CAL Herbicide may be tank mixed with other burndown herbicides to control emerged weeds in the fall or spring or with residual soil herbicides that are labeled for use on head and stem brassica. Use the full, specified rates of burndown herbicides in combination with F9021-2 SE CAL Herbicide, or split applications as needed. Observe all precautions, instructions, and rotational cropping guidelines of each product's label when tank mixing, including all references to potential carryover and crop injury warnings or restrictions.

#### **Preplant Incorporated (PPI)**

F9021-2 SE CAL Herbicide may be applied as a preplant incorporated treatment in the spring prior to transplanting head and stem brassica. Do not incorporate to depths greater than 2 inches. F9021-2 SE CAL Herbicide can be tank mixed with other burndown or soil-applied herbicides labeled for use in head and stem brassica. Use the full, specified rates of burndown herbicides or split applications as needed. Observe all precautions, instructions and rotational cropping guidelines of each product's label when tank mixing including all references to potential carryover and crop injury warnings or restrictions.

#### **Weeds Controlled**

#### When Applied according to directions, F9021-2 SE CAL Herbicide will provide control of:

Galinsoga, hairy	Waterhemp, common
Lambsquarters, common	Waterhemp, tall
Pigweed, redroot	

#### **Precautions**

These Crop Specific Use directions are based upon the interactive effects of F9021-2 SE CAL Herbicide (sulfentrazone) and the primary soil and environmental factors, which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Product Application Instructions, F9021-2 SE CAL Herbicide Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with F9021-2 SE CAL Herbicide. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F9021-2 SE CAL Herbicide under specific local conditions.

#### Restrictions

Do not apply more than 24.0 fl oz/A (0.375 lb ai/A)of F9021-2 SE CAL Herbicide per application or per twelve-month period.

Do not apply more than 24.0 fl oz/A (0.375 lb ai/A) in a single application.

Do not apply more than two applications per year when using reduced application rates equal to or less than 12 fl oz/A of this product per application.

The twelve-month period is considered to begin upon the initial F9021-2 SE CAL Herbicide application.

Do not use on soils classified as sand, which have less than 1% organic matter.

Do not incorporate to depths greater than 2 inches.

#### **BRASSICA. LEAFY GREENS**

Broccoli raab, Chinese (bok choy) cabbage, collards, kale, mizuna, mustard greens, mustard spinach, rape greens

F9021-2 SE CAL Herbicide Use Rate Table (Leafy Brassica)				
Fall or Spring Early Preplant, Preemergence, and Preplant Incorporated Applications				
Broadcast Rate	fl oz/A F9021-2 SE CAL Herbicide			
	Soil Texture			
% Organic Matter	Coarse	<u>Medium</u>	<u>Fine</u>	
<1.5%	4.5 - 6.0	6.0 - 9.0	6.0 - 12.0	
1.5 – 3.0 %	6.0 - 12.0	12.0 – 13.0	12.0 - 13.0	
>3.0 %	12.0 – 13.0	12.0 – 13.0	12.0 - 13.0	
D C - U C C C C C C C C C C C C C C C C C				

Refer to the previous information on soil types under the COARSE, MEDIUM, and FINE categories. Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

#### Early Preplant and Preemergence (Fall Application or Spring Application)

F9021-2 SE CAL Herbicide may be applied in the fall or spring preceding the growing season up to 72 hours prior to planting leafy brassica. F9021-2 SE CAL Herbicide should be applied to the harvested crop stubble or soil surface without incorporation. Moisture in the form of rain or snow will move and activate the product into the soil. Do not mechanically incorporate in the fall or spring after application as this may destroy the herbicide barrier and weed escapes can occur. Do not apply to frozen soils to prevent F9021-2 SE CAL Herbicide runoff from rain or snow that may occur following application. F9021-2 SE CAL Herbicide may be tank mixed with other burndown herbicides to control emerged weeds in the fall or spring or with residual soil herbicides that are labeled for use on cabbage. Use the full, specified rates of burndown herbicides in combination with F9021-2 SE CAL Herbicide, or split applications as needed. Observe all precautions, instructions, and rotational cropping guidelines of each product's label when tank mixing, including all references to potential carryover and crop injury warnings or restrictions.

#### Preplant Incorporated (PPI)

F9021-2 SE CAL Herbicide may be applied as a preplant incorporated treatment in the spring prior to planting leafy brassica. Do not incorporate to depths greater than 2 inches. F9021-2 SE CAL Herbicide can be tank mixed with other burndown or soil-applied herbicides labeled for use in leafy brassica. Use the full, specified rates of burndown herbicides or split applications as needed. Observe all precautions, instructions and rotational cropping guidelines of each product's label when tank mixing including all references to potential carryover and crop injury warnings or restrictions.

#### **Weeds Controlled**

When Applied according to directions, F9021-2 SE CAL Herbicide will provide control of:

Galinsoga, hairy	Waterhemp, common
Lambsquarters, common	Waterhemp, tall
Pigweed, redroot	

#### **Precautions**

These Crop Specific Use directions are based upon the interactive effects of F9021-2 SE CAL Herbicide (sulfentrazone) and the primary soil and environmental factors, which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Product Application Instructions, F9021-2 SE CAL Herbicide Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with F9021-2 SE CAL Herbicide. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F9021-2 SE CAL Herbicide under specific local conditions.

#### Restrictions

Do not apply more than 13.0 fl oz/A (0.20 lb ai/A) of F9021-2 SE CAL Herbicide per twelve-month period.

Do not apply more than 13.0 fl oz/A (0.20 lb ai/A) in a single application.

Do not apply more than two applications per year when using reduced application rates equal to or less than 6.5 fl oz/A of this product per application.

The twelve-month period is considered to begin upon the initial F9021-2 SE CAL Herbicide application.

Do not use on soils classified as sand, which have less than 1% organic matter.

Do not incorporate to depths greater than 2 inches.

#### **CABBAGE** (Transplanted Only)

#### F9021-2 SE CAL Herbicide Use Rate Table (Cabbage) Fall or Spring Early Preplant, Preemergence, and Preplant Incorporated Applications **Broadcast Rate** fl oz/A F9021-2 SE CAL Herbicide Soil Texture Medium Fine % Organic Matter Coarse <1.5% 4.5 - 6.06.0 - 9.06.0 - 12.01.5-3.0 % 6.0 - 12.012.0 - 18.012.0 - 18.0>3.0 % 12.0 - 18.0 12.0 - 24.012.0 - 24.0

Refer to the previous information on soil types under the COARSE, MEDIUM, and FINE categories.

Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

#### Early Preplant (Fall Application or Spring Application)

F9021-2 SE CAL Herbicide may be applied in the fall or spring preceding the growing season to control weeds prior to or up to the planting or transplanting of cabbage. F9021-2 SE CAL Herbicide may be applied in the spring from 60 days prior to planting up to planting time. F9021-2 SE CAL Herbicide should be applied to the harvested crop stubble or soil surface without incorporation. Moisture in the form of rain or snow will move and activate the product into the soil. Do not mechanically incorporate in the fall or spring after application as this may destroy the herbicide barrier and weed escapes can occur. Do not apply to frozen soils to prevent F9021-2 SE CAL Herbicide runoff from rain or snow that may occur following application. F9021-2 SE CAL Herbicide may be tankmixed with other burndown herbicides to control emerged weeds in the fall or spring or with residual soil herbicides that are labeled for fall use on cabbage. Use the full, specified rates of burndown herbicides in combination with F9021-2 SE CAL Herbicide, or split applications as needed. Observe all precautions, instructions, and rotational cropping guidelines of each product's label when tank mixing, including all references to potential carryover and crop injury warnings or restrictions.

#### Preplant Incorporated (PPI)

F9021-2 SE CAL Herbicide may be applied as a preplant incorporated treatment in the spring prior to transplanting of cabbage. Do not incorporate to depths greater than 2 inches. F9021-2 SE CAL Herbicide can be tankmixed with other burndown or soil-applied herbicides labeled for use in cabbage. Use the full, specified rates of burndown herbicides or split applications as needed. Observe all precautions, instructions and rotational cropping guidelines of each product's label when tank mixing including all references to potential carryover and crop injury warnings or restrictions.

#### **Transplant Cabbage**

F9021-2 SE CAL Herbicide may be applied pre-emergence as a broadcast or banded treatment to transplanted cabbage only. Applications should be made broadcast or banded treatment prior to transplanting. F9021-2 SE CAL Herbicide may be applied as a banded treatment into the row middles within 72 hours after transplanting.

#### **Weeds Controlled**

#### When Applied according to directions, F9021-2 SE CAL Herbicide will provide control of:

Galinsoga, hairy	Waterhemp, common
Lambsquarters, common	Waterhemp, tall
Pigweed, redroot	

For information on other weeds not listed above, refer to Weeds Controlled section (Table 5) in this label.

#### **Precautions**

These Crop Specific Use directions are based upon the interactive effects of F9021-2 SE CAL Herbicide (sulfentrazone) and the primary soil and environmental factors, which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Product Application Instructions, F9021-2 SE CAL Herbicide Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with F9021-2 SE CAL Herbicide. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F9021-2 SE CAL Herbicide under specific local conditions.

#### Restrictions

Do not apply more than 24.0 fl oz/A (0.375 lb ai/A)of F9021-2 SE CAL Herbicide per twelve-month period.

Do not apply more than 24.0 fl oz/A (0.375 lb ai/A) in a single application.

Do not apply more than two applications per year when using reduced application rates equal to or less than 12 fl oz/A of this product per application.

The twelve-month period is considered to begin upon the initial F9021-2 SE CAL Herbicide application.

Do not use on soils classified as sand, which have less than 1% organic matter.

Do not incorporate to depths greater than 2 inches.

#### DRY SHELLED BEANS AND PEAS

Dried cultivars of bean (*Lupinus*); bean (*Phaseolus*)(includes field bean, kidney bean, lima bean (dry), navy bean, pinto bean, tepary bean); bean (*Vigna*) (includes adzuki bean, blackeyed pea, catjang, cowpea, crowder pea moth bean, lentil, mung bean, rice bean, southern pea, urd bean); broad bean (dry); chickpea; guar; lab lab bean; pea (*Pisum*) (includes field pea) and pigeon pea.

F9021-2 SE CAL Herbicide Use Rate Table (Dry Shelled Beans Peas) Fall or Spring Early Preplant, Preemergence, and Preplant Incorporated Applications			
Broadcast Rate	fl oz/A F9021-2 SE CAL Herbicide		
	Soil Texture		
% Organic Matter	Coarse	<u>Medium</u>	<u>Fine</u>
<1.5%	4.5 – 6.0	6.0 - 10.5	6.0 - 10.5
1.5-3.0 %	6.0 – 10.5	7.5 – 12.0	10.5 – 12.0
>3.0 %	7.5 – 12.0	10.5 – 13.5	10.5 – 16.0

#### Early Preplant and Fall Applications (For use only in ND, SD, MT, MN, WY, CO, NE, KS, WI, MI, OR, ID, WA, OR, MT)

F9021-2 SE CAL Herbicide may be applied in the fall as a preplant treatment to control or suppress weeds prior to planting the following spring. F9021-2 SE CAL Herbicide should be applied to the stubble or soil surface and allow moisture from rainfall or snow to move the product into the soil. Do not mechanically incorporate in the fall or spring as this can destroy the herbicide barrier and weed escapes can occur. Do not apply to frozen soils or to existing snow cover to prevent F9021-2 SE CAL Herbicide runoff from rain or snow melt that may occur following application. F9021-2 SE CAL Herbicide may be tank mixed with other residual soil herbicides that are labeled for fall use on dry bean and dry peas. If weeds are emerged at the time of F9021-2 SE CAL Herbicide application, use a burndown herbicide such as glyphosate or paraquat at the full-labeled rate in combination with F9021-2 SE CAL Herbicide or split application as needed. Select the appropriate rate from Table above within the correct soil type and organic matter range. When applying F9021-2 SE CAL Herbicide in the fall, use a mid to high rate within the rate range for the appropriate soil type and organic matter.

#### Early Preplant and Preemergence (Spring Applications)

F9021-2 SE CAL Herbicide may be applied preplant on the soil surface in the spring to control weeds in dry bean and dry peas. F9021-2 SE CAL Herbicide can be applied early preplant prior to planting up to 3 days after planting as a preemerge soil application if seedlings have not broken the soil surface and if the seed furrow is completely closed. For preemerge applications greater than 3 weeks prior to planting, use the high rate within the appropriate rate range for the soil and organic matter type listed in the use rate chart above. F9021-2 SE CAL Herbicide can be tank mixed with other preemerge herbicides labeled for dry bean and dry peas use. If dry conditions persist following preemerge application of F9021-2 SE CAL Herbicide, a shallow incorporation may be needed to incorporate and activate the herbicide. If weeds are emerged at the time of F9021-2 SE CAL Herbicide application, use a burndown herbicide at the full-labeled rate in combination with F9021-2 SE CAL Herbicide or split application as needed.

#### Preplant Incorporated (PPI)

F9021-2 SE CAL Herbicide may be applied as a Preplant Incorporated treatment in the spring prior to planting in reduced and conventional tillage dry bean and dry pea. Do not incorporate to depths greater than 2 inches. F9021-2 SE CAL Herbicide use rates for PPI applications are similar to those used in preplant and preemergence applications. F9021-2 SE CAL Herbicide can be tankmixed with other burndown or soil-applied herbicides labeled for use in dry bean or dry pea. Use the full, specified rates of burndown herbicides, or split applications as needed. Observe all precautions, instructions, and rotational cropping guidelines of each product's label when tank mixing, including all references to potential carryover and crop injury warnings or restrictions.

#### Weeds Controlled

#### When applied according to directions, F9021-2 SE CAL Herbicide will provide control of:

Amaranth, Palmer	Pigweed, red root
Filaree, redstem	Pigweed, smooth
Kochia (ALS and Triazine	Sida, prickly
Resistant)	
Lambsquarters, common	Thistle, Russian
Morningglory, ivyleaf	Waterhemp, common
Morningglory, tall	Waterhemp, tall
Nightshade, Eastern black	

For information on other weeds not listed above, refer to Weeds Controlled section (Table 5) in this label.

#### **Precautions**

If applying F9021-2 SE to coarse textured soils with less than 1.5% oganic matter, wait a minimum of 7 days after application before planting.

Under extended periods of dry weather, adequate weed control may not be achieved

Some adverse crop response may occur on coarse textured soils with low organic matter (less than 1.5%) and pH of 7.8 or higher, or on highly eroded soils, or in areas of calcareous outcroppings. F9021-2 SE CAL Herbicide use rates should be reduced in those areas. Inadequate seed furrow closure or shallow planting (less than 1.0 inch) may result in undesirable crop response. As expected, poor growing conditions such as excessive moisture, low temperatures, soil compaction and diseases may also cause undesirable crop response.

These Crop Specific Use directions are based upon the interactive effects of F9021-2 SE CAL Herbicide (sulfentrazone) and the primary soil and environmental factors, which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Product Application Instructions, F9021-2 SE CAL Herbicide Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with F9021-2 SE CAL Herbicide. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F9021-2 SE CAL Herbicide under specific local conditions.

#### Restrictions

Do not apply more than 16.0 fl oz/A (0.25 lb ai/A) total per twelve-month period.

Do not apply more than 16.0 fl oz/A (0.25 lb ai/A) in a single application.

Do not apply more than two applications per year when using reduced application rates equal to or less than 8 fl oz/A of this product per application.

The twelve-month period is considered to begin upon the initial F9021-2 SE CAL Herbicide application.

Do not apply after crop emerges, or if the seedling is close to the soil surface.

Do not incorporate to depths greater than 2 inches.

Do not apply to frozen soils or to existing snow cover to prevent F9021-2 SE CAL Herbicide runoff from rain or snow melt that may occur following application.

Do not use on soils classified as sand, which have less than 1% organic matter.

#### FRUITING VEGETABLES (EXCEPT CUCURBITS) AND OKRA

African eggplant, bush tomato, cocona, currant tomato, eggplant, garden huckleberry, goji berry, groundcherry, martynia, naranjilla, okra, pea eggplant, pepino, bell pepper, nonbell pepper (chili pepper, cooking pepper, pimento, sweet pepper), roselle, hibiscus, scarlet eggplant, sunberry, tomatillo, tomato, tree tomato and cultivars, varieties and/or hybrids

F9021-2 SE CAL Herbicide Use Rate Table (Fruiting Vegetables, except cucurbits, and Okra)					
	Preplant Applications				
Broadcast Rate	fl oz/A F9021-2 SE CAL Herbicide				
	Soil Texture				
% Organic Matter	<u>Coarse</u>	<u>Medium</u>	<u>Fine</u>		
<1.5%	4.5 - 6.0	6.0 - 9.0	6.0 - 12.0		
1.5 – 3.0 %	6.0 - 12.0	12.0 – 18.0	12.0 – 18.0		
>3.0 %	12.0 – 18.0	12.0 – 24.0	12.0 – 24.0		

Refer to the previous information on soil types under the COARSE, MEDIUM, and FINE categories. Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

#### **Preplant Applications**

F9021-2 SE CAL Herbicide may be applied preemergence as a banded treatment on fruiting vegetables. Applications must be made prior to transplant. F9021-2 SE CAL Herbicide can be tankmixed with other burndown or soil-applied herbicides labeled for use on tomatoes. Use the full, specified rates of burndown herbicides or split applications as needed. Observe all precautions, instructions and rotational cropping guidelines of each product's label when tank mixing including all references to potential carryover and crop injury warnings or restrictions.

#### Preplant Incorporated (PPI)

F9021-2 SE CAL Herbicide may be applied as a preplant incorporated treatment in the spring prior to transplanting tomatoes. Do not incorporate to depths greater than 2 inches. F9021-2 SE CAL Herbicide can be tankmixed with other burndown or soil-applied herbicides labeled for use on tomatoes. Use the full, specified rates of burndown herbicides or split applications as needed. Observe all precautions, instructions and rotational cropping guidelines of each product's label when tank mixing including all references to potential carryover and crop injury warnings or restrictions.

#### **Weeds Controlled**

When applied according to directions, F9021-2 SE CAL Herbicide will provide control of:

Lambsquarters, common	Pigweed, redroot
Morningglory, ivyleaf	Waterhemp, common
Nutsedge, yellow	Waterhemp, tall

#### **Precautions**

These Crop Specific Use directions are based upon the interactive effects of F9021-2 SE CAL Herbicide (sulfentrazone) and the primary soil and environmental factors, which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Product Application Instructions, F9021-2 SE CAL Herbicide Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with F9021-2 SE CAL Herbicide. Consult university or extension weed management specialists for

additional information on specific local varieties or cultivars and any other pertinent information on F9021-2 SE CAL Herbicide under specific local conditions.

#### Restrictions

Do not apply more than 24.0 fl oz/A (0.375 lb ai/A) of F9021-2 SE CAL per twelve-month period.

Do not apply more than 24.0 fl oz/A (0.375 lb ai/A) in a single application.

Do not apply more than two applications per year when using reduced application rates equal to or less than 12 fl oz/A of this product per application.

The twelve-month period is considered to begin upon the initial F9021-2 SE CAL Herbicide application.

Do not use on soils classified as sand, which have less than 1% organic matter.

#### **HORSERADISH**

F9021-2 SE CAL Herbicide Use Rate Table (Horseradish) Fall or Spring Early Preplant, Preemergence, and Preplant Incorporated Applications			
Broadcast Rate	Broadcast Rate fl oz/A F9021-2 SE CAL Herbicide		
	Soil Texture		
% Organic Matter	<u>Coarse</u>	<u>Medium</u>	<u>Fine</u>
<1.5%	4.5 – 9.0	6.0 – 9.0	6.0 - 9.0
1.5-3.0 %	9.0 – 12.0	12.0 – 16.0	12.0 – 16.0
>3.0 %	12.0 – 7.5	12.0 – 16.0	12.0 – 16.0
Refer to the previous information on soil types under the COARSE, MEDIUM, and FINE categories			

Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

F9021-2 SE CAL Herbicide may be applied as a preplant preemerge or preplant incorporated treatment by ground in a minimum of 15 gallons of finished spray.

#### Early Preplant (Fall Application or Spring Application) (MN, ND, SD, MT, CO, NE, WY, ID, WA, OR, WI, MI)

F9021-2 SE CAL Herbicide may be applied in the fall or spring preceding the growing season to control or suppress weeds prior to or up to the planting of horseradish. F9021-2 SE CAL Herbicide may be applied in the spring from 60 days prior to planting up to planting. F9021-2 SE CAL Herbicide should be applied to the harvested crop stubble or soil surface without incorporation. Moisture in the form of rain or snow will move and activate the product into the soil. Do not mechanically incorporate in the fall or spring after application as this may destroy the herbicide barrier and weed escapes may occur. Do not apply to frozen soils to prevent F9021-2 SE CAL Herbicide runoff from rain or snow that may occur following application. F9021-2 SE CAL Herbicide may be tankmixed with other burndown herbicides to control emerged weeds in the fall or spring or with residual soil herbicides that are labeled for use on horseradish. Use full, specified rates of burndown herbicides in combination with F9021-2 SE CAL Herbicide, or split applications as needed. Observe all precautions, instructions, and rotational cropping guidelines of each product label when tank mixing, including all references to potential carryover and crop injury warnings or restrictions.

#### Preplant Incorporated (PPI)

F9021-2 SE CAL Herbicide may be applied as a preplant incorporated treatment in the spring prior to planting of horseradish. Do not incorporate to depths greater than 2 inches. F9021-2 SE CAL Herbicide can be tankmixed with other burndown or soil-applied herbicides labeled for use on horseradish. Use the full, specified rates of burndown herbicides or split applications as needed. Observe all precautions, instructions and rotational cropping guidelines of each product's label when tank mixing including all references to potential carryover and crop injury warnings or restrictions.

#### Pre-Emergence (PRE)

F9021-2 SE CAL Herbicide may be applied pre-emergence as a broadcast or banded treatment on horseradish. Applications should be made broadcast prior to planting, broadcast soon after planting but at least 5 days before crop emergence. F9021-2 SE CAL Herbicide may be applied as a banded treatment into the row middles after crop emergence. Use the higher F9021-2 SE CAL Herbicide rates on clay soils and/or soils with greater than 1% organic matter. F9021-2 SE CAL Herbicide may be applied with other pesticides registered for use on horseradish.

#### **Weeds Controlled**

#### When applied according to directions, F9021-2 SE CAL Herbicide will provide control of:

Lambsquarters, common	Pigweed, redroot
Morningglory, ivyleaf	Waterhemp, common
Nutsedge, yellow	Waterhemp, tall

For information on other weeds not listed above, refer to Weeds Controlled section (Table 5) in this label.

#### **Precautions**

These Crop Specific Use directions are based upon the interactive effects of F9021-2 SE CAL Herbicide (sulfentrazone) and the primary soil and environmental factors, which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Product Application Instructions, F9021-2 SE CAL Herbicide Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with F9021-2 SE CAL Herbicide. Consult university or extension weed management specialists for

additional information on specific local varieties or cultivars and any other pertinent information on F9021-2 SE CAL Herbicide under specific local conditions.

#### Restrictions

Do not apply more than 16.0 fl oz/A (0.25 lb ai/A) of F9021-2 SE CAL Herbicide per twelve-month period.

Do not apply more than 16.0 fl oz/A (0.25 lb ai/A) in a single application.

Do not apply more than two applications per year when using reduced application rates equal to or less than 8 fl oz/A of this product per application.

The twelve-month period is considered to begin upon the initial F9021-2 SE CAL Herbicide application.

Do not apply directly on the crop after the crop emerges or if the seedling sprouts are close to the soil surface.

Do not use on soils classified as sand, which have less than 1% organic matter.

Do not incorporate to depths greater than 2 inches.

#### **MELONS**

Citron melon, muskmelon, watermelon

F9021-2 SE CAL Herbicide Use Rate Table (Melons)  Preemergence Applications				
Broadcast Rate	Broadcast Rate fl oz/A F9021-2 SE CAL Herbicide			
	Soil Texture			
% Organic Matter	Coarse	Medium	Fine	
<1.5	6.0 – 7.5	6.0 - 9.0	7.5 – 10.5	
1.5 – 3.0	6.0 - 9.0	7.5 – 12.0	9.0 – 13.6	
>3.0	7.5 – 12.0	9.0 – 13.6	12.0 – 16.0	

Refer to the previous information on soil types under the COARSE, MEDIUM, and FINE categories Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

#### Preemergence

F9021-2 SE CAL Herbicide can be applied 48 hours prior to planting to anytime after planting but before seedlings have emerged. F9021-2 SE CAL Herbicide applied after crop emergence may cause severe injury to the crop. F9021-2 SE CAL Herbicide can be applied alone or in combination with other labeled melon herbicides. F9021-2 SE CAL Herbicide may be followed by labeled postemergence melon herbicides for increased control of grass and broadleaf weeds. Always follow the most restrictive label when tank mixing. When using F9021-2 SE CAL Herbicide in no-till or minimum till cropping systems, tank mix with an appropriate burndown herbicide for improved control of existing weeds.

#### **Weeds Controlled**

When applied according to directions, F9021-2 SE CAL Herbicide will provide control of:

Lambsquarters, common	Pigweed, redroot	
Morningglory, ivyleaf	Waterhemp, common	
Nutsedge, yellow	Waterhemp, tall	

#### **Precautions**

These Crop Specific Use directions are based upon the interactive effects of F9021-2 SE CAL Herbicide (sulfentrazone) and the primary soil and environmental factors, which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Product Application Instructions, F9021-2 SE CAL Herbicide Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with F9021-2 SE CAL Herbicide. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F9021-2 SE CAL Herbicide under specific local conditions.

#### Restrictions

Do not apply more than 16.0 fl oz/A (0.25 lb ai/A) of F9021-2 SE CAL Herbicide per twelve-month period.

Do not apply more than 16.0 fl oz/A (0.25 lb ai/A) in a single application.

Do not apply more than two applications per year when using reduced application rates equal to or less than 8 fl oz/A of this product per application.

The twelve-month period is considered to begin upon the initial F9021-2 SE CAL Herbicide application.

Do not apply directly on the crop after the crop emerges or if the seedling sprouts are close to the soil surface.

Do not use on soils classified as sand, which have less than 1% organic matter.

#### **STRAWBERRY**

F9021-2	F9021-2 SE CAL Herbicide Use Rate Table (Strawberry) Preemergence Applications			
Broadcast Rate	Broadcast Rate fl oz/A F9021-2 SE CAL Herbicide			
	Soil Texture			
% Organic Matter	Coarse	<u>Medium</u>	<u>Fine</u>	
<1.5%	4.5 – 6.0	6.0 - 9.0	6.0 – 12.0	
1.5 – 3.0 %	6.0 - 12.0	12.0 – 18.0	12.0 – 18.0	
>3.0 %	12.0 – 18.0	12.0 – 24.0	12.0 – 24.0	

Refer to the previous information on soil types under the COARSE, MEDIUM, and FINE categories. Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

#### Preemergence

F9021-2 SE CAL Herbicide can be applied prior to planting and before seedlings have emerged. F9021-2 SE CAL Herbicide applied after crop emergence may cause severe injury to the crop. F9021-2 SE CAL Herbicide can be applied alone or in combination with other labeled strawberry herbicides. F9021-2 SE CAL Herbicide may be followed by labeled postemergence strawberry herbicides for increased control of grass and broadleaf weeds. Always follow the most restrictive label when tank mixing. When using F9021-2 SE Herbicide in no-till or minimum till cropping systems, tank mix with an appropriate burndown herbicide for improved control of existing weeds.

#### **Weeds Controlled**

When applied according to directions, F9021-2 SE CAL Herbicide will provide control of:

Corn spurry	Pineapple weed
Field Pansy	Prostrate knotweed
Groundsel, common	Sheperdspurse
Ladysthumb	Waterhemp, common
Lambsquarters, common	Waterhemp, tall
Mayweed	White Campion
Morningglory, ivyleaf	Wild buckwheat
Nutsedge, yellow	Yellow nutsedge
Pigweed, redroot	Yellow woodsorrel

#### **Precautions**

These Crop Specific Use directions are based upon the interactive effects of F9021-2 SE CAL Herbicide (sulfentrazone) and the primary soil and environmental factors, which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Product Application Instructions, F9021-2 SE CAL Herbicide Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with F9021-2 SE CAL Herbicide. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F9021-2 SE CAL Herbicide under specific local conditions.

#### Restrictions

Do not apply more than 24.0 fl oz/A (0.375 lb ai/A)of F9021-2 SE CAL Herbicide per twelve-month period.

Do not apply more than 24.0 fl oz/A (0.375 lb ai/A) in a single application.

Do not apply more than two applications per year when using reduced application rates equal to or less than 12 fl oz/A of this product per application.

The twelve-month period is considered to begin upon the initial F9021-2 SE CAL Herbicide application.

Do not apply directly on the crop after the crop emerges or if the seedling sprouts are close to the soil surface.

#### SUCCULENT PEAS

Cajanus cajan (includes pigeon pea); Cicer spp. (includes chickpea and garbanzo bean); Lens culinaris (lentil); Pisum spp. (includes dwarf pea, garden pea, green pea, English pea, field pea, and edible pod pea)

F9021-2 SE CAL Herbicide Use Rate Table (Succulent Peas)  Preemergence Applications			
Broadcast Rate fl oz/A F9021-2 SE CAL Herbicide			
	Soil Texture		
% Organic Matter	Coarse	<u>Medium</u>	<u>Fine</u>
<1.5	4.5 – 7.5	6.0 - 12.0	7.5 – 12.0
1.5 – 3.0	6.0 - 9.0	7.5 – 12.0	9.0 – 12.0
>3.0	7.5 – 12.0	9.0 – 12.0	10.5 – 12.0
Refer to the previous information on soil types under the COARSE, MEDIUM, and FINE categories Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.			

#### Preemergence

F9021-2 SE CAL Herbicide may be applied to succulent peas as a preemergence treatment at 8.0 fl oz/A (0.187 lb ai/A). Applications should be made with ground equipment in a minimum of 10 gallons of finished spray per acre.

#### **Weeds Controlled**

When applied according to directions, F9021-2 SE CAL Herbicide will provide control of:

Copperleaf, hophornbeam	Pigweed, redroot
Morningglory, entireleaf	Pigweed, smooth
Morningglory, ivyleaf	

#### **Precautions**

If applying F9021-2 SE to coarse textured soils with less than 1.5% organic matter, wait a minimum of 7 days after application before planting.

Under extended periods of dry weather, adequate weed control may not be achieved

Some adverse crop response may occur on coarse textured soils with low organic matter (less than 1.5%) and pH of 7.8 or higher, or on highly eroded soils, or in areas of calcareous outcroppings. F9021-2 SE CAL Herbicide use rates should be reduced in those areas. Inadequate seed furrow closure or shallow planting (less than 1.0 inch) may result in undesirable crop response. As expected, poor growing conditions such as excessive moisture, low temperatures, soil compaction and diseases may also cause undesirable crop response.

These Crop Specific Use directions are based upon the interactive effects of F9021-2 SE CAL Herbicide (sulfentrazone) and the primary soil and environmental factors, which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Product Application Instructions, F9021-2 SE CAL Herbicide Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with F9021-2 SE CAL Herbicide. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F9021-2 SE CAL Herbicide under specific local conditions.

#### Restrictions

Do not apply more than 12.0 fl oz/A (0.1875 lb ai/A) per twelve-month period.

Do not apply more than 12.0 fl oz/A (0.1875 lb ai/A) in a single application.

Do not apply more than one application per year.

The twelve-month period is considered to begin upon the initial F9021-2 SE CAL Herbicide application.

Do not apply to coarse soils classified as sand, which have less than 1% organic matter.

Do not incorporate.

# OIL CROPS

F9021-2 SE CAL Herbicide Use Rate Table (Flax)				
	Preemergence Applications			
Broadcast Rate fl oz/A F9021-2 SE CAL Herbicide				
	Soil Texture			
% Organic Matter	Coarse	<u>Medium</u>	<u>Fine</u>	
<1.5%	4.5 – 6.0	6.0 - 9.0	6.0 - 12.0	
1.5 – 3.0 %	6.0 - 12.0	12.0 – 18.0	12.0 - 18.0	
>3.0 %	12.0 – 18.0	12.0 – 24.0	12.0 – 24.0	

Refer to the previous information on soil types under the COARSE, MEDIUM, and FINE categories. Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

#### Fall Applications (For use only in ND, SD, MT, MN, WY, CO, NE, KS)

F9021-2 SE CAL Herbicide may be applied in the fall as a preplant treatment to control or suppress weeds prior to planting flax the following spring. F9021-2 SE CAL Herbicide should be applied to the stubble or soil surface and allow moisture from rainfall or snow to move the product into the soil. Do not mechanically incorporate in the fall or spring as this can destroy the herbicide barrier and allow weed escapes to occur. Do not apply to frozen soils or to existing snow cover to prevent F9021-2 SE CAL Herbicide runoff from rain or snow melt that may occur following application. If weeds are emerged at the time of F9021-2 SE CAL Herbicide application, use a labeled burndown herbicide at the full-labeled rate in combination with F9021-2 SE CAL Herbicide or a sequential application as needed. Select the appropriate rate from Table above within the correct soil type and organic matter range. When applying F9021-2 SE CAL Herbicide in the fall, use a mid to high rate within the rate range for the appropriate soil type and organic matter.

#### Early Preplant and Preemergence (Spring Applications)

F9021-2 SE CAL Herbicide may be applied preplant on the soil surface in the spring to control weeds in flax. F9021-2 SE CAL Herbicide can be applied early preplant prior to planting up to 3 days after planting as a preemerge soil application if seedlings have not broken the soil surface and if the seed furrow is completely closed. F9021-2 SE CAL Herbicide applied after crop emergence may

cause severe injury to the crop. For preemerge applications greater than 3 weeks prior to planting, use the mid to high rate within the appropriate rate range for the soil and organic matter type listed in the use rate chart above. Spartan Herbicide can be applied alone or in combination with other labeled flax herbicides. Always follow the most restrictive label when tank mixing. F9021-2 SE CAL Herbicide may be followed by labeled postemergence flax herbicides for increased control of grass and broadleaf weeds. If dry conditions persist following preemerge application of F9021-2 SE CAL Herbicide, weed control may be poor. If weeds are emerged at the time of F9021-2 SE CAL Herbicide application, use a burndown herbicide at the full-labeled rate in combination with F9021-2 SE CAL Herbicide or split application as needed. When using F9021-2 SE CAL Herbicide in no-till or minimum till cropping systems, tank mix with an appropriate burndown herbicide for improved control of existing weeds.

#### **Weeds Controlled**

#### When applied according to directions, F9021-2 SE CAL Herbicide will provide control of:

	Copperleaf, hophornbeam	Morningglory, tall
	Kochia (ALS and Triazine	Nightshade, Eastern black
Resistant)		_
	Morningglory, entireleaf	Pigweed, redroot
	Morningglory, ivyleaf	Pigweed, smooth

#### **Precautions**

If applying F9021-2 SE to coarse textured soils with less than 1.5% oganic matter, wait a minimum of 7 days after application before planting. Some adverse crop response may occur on coarse textured soils with low organic matter (less than 1.5%) and pH of 7.2 or higher, or on highly eroded soils, hilltops or in areas of calcareous outcroppings. F9021-2 SE CAL Herbicide use rates should be reduced to 3.0 oz/A in those areas or F9021-2 SE CAL Herbicide should not be used in those areas. Inadequate seed furrow closure or shallow planting (less than 1.0 inch) may result in undesirable crop response. As expected, poor growing conditions such as excessive moisture, low temperatures, soil compaction and diseases may also cause undesirable crop response.

These Crop Specific Use directions are based upon the interactive effects of F9021-2 SE CAL Herbicide (sulfentrazone) and the primary soil and environmental factors, which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Product Application Instructions, F9021-2 SE CAL Herbicide Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with F9021-2 SE CAL Herbicide. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F9021-2 SE CAL Herbicide under specific local conditions.

#### Restrictions

Do not apply more than 24.0 fl oz/A (0.375 lb ai/A) of F9021-2 SE CAL per twelve-month period.

Do not apply more than 24.0 fl oz/A (0.375 lb ai/A) in a single application.

Do not apply more than two applications per year when using reduced application rates equal to or less than 12 fl oz/A of this product per application.

The twelve-month period is considered to begin upon the initial F9021-2 SE CAL Herbicide application.

Do not apply directly on the crop after the crop emerges or if the seedling sprouts are close to the soil surface.

Do not apply to frozen soils or existing snow cover to prevent F9021-2 SE CAL Herbicide runoff from rain or snowmelt that may occur following application.

Do not use on soils classified as sand, which have less than 1% organic matter.

Do not incorporate greater than 2 inches deep.

#### **MINT**

F9021-2 SE CAL Herbicide Use Rate Table (Mint)			
For Dormant and New Planting Applications			
Broadcast Rate fl oz/A F9021-2 SE CAL Herbicide			
	Soil Texture		
% Organic Matter	Coarse	<u>Medium</u>	<u>Fine</u>
<1.5%	9.0 – 12.0	12.0 – 16.0	16.0
1.5 - 3.0 %	12.0 – 16.0	16.0 – 20.2	20.2
>3.0 %	16.0 – 20.2	20.2 – 24.0	24.0
Refer to the previous information on soil types under the COARSE MEDIUM, and FINE categories			

Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

#### **Dormant Applications**

Apply F9021-2 SE CAL Herbicide to established stands of dormant mint after post harvest and/or spring land cultivation has been completed and before emergence of new mint growth.

Split applications of F9021-2 SE CAL Herbicide may be used for preemergence sequential control of winter annuals and summer annuals. Fall applications must be applied after post harvest cultivation has been completed and spring application made after spring cultivation has been completed and before emergence of new mint growth.

Apply F9021-2 SE CAL Herbicide in tank-mixtures with a registered burndown herbicide to control emerged weeds at the time of application. A surfactant is recommended with these tank mixtures to improve control of the emerged weeds.

F9021-2 SE CAL Herbicide may also be applied in tank mixtures with other products registered for use in mint.

#### **New Planting Applications**

F9021-2 SE CAL Herbicide may be applied to new mint plantings preemergence to the weeds and mint. The rate of application should be reduced approximately twenty five percent of the rate specified for established plantings for particular soil characteristics. Refer to F9021-2 SE CAL Herbicide Use Rate Table for the appropriate use rate for the soil type and organic matter content. The higher rates in the range are recommended for soils of pH less than 7.0.

#### **Weeds Controlled**

#### When Applied according to directions, F9021-2 SE CAL Herbicide will provide control of:

Amaranth, Powell	Nutsedge, yellow
Bedstraw, catchweed	Pigweed, redroot
Chamomile, mayweed	Sheperdspurse
Kochia (ALS and Triazine Resistant)	Toadflax, yellow
Lambsquarters, common	Thistle, Russian
Morningglory, ivyleaf	Waterhemp, common
Nightshade, Eastern black	Waterhemp, tall

For information on other weeds not listed above, refer to Weeds Controlled section (Table 5) in this label.

#### **Precautions**

Applications made to mint that has emerged will result in severe injury to exposed plant tissue.

Only apply to healthy mint fields. Applications to mint under stress from disease, pests and cultural or environmental conditions may result in crop injury.

Moisture in the form of rainfall or overhead irrigation is required after application to activate the herbicide

These Crop Specific Use directions are based upon the interactive effects of F9021-2 SE CAL Herbicide (sulfentrazone) and the primary soil and environmental factors, which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Product Application Instructions, F9021-2 SE CAL Herbicide Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with F9021-2 SE CAL Herbicide. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F9021-2 SE CAL Herbicide under specific local conditions.

#### Restrictions

Apply F9021-2 SE CAL Herbicide only to dormant mint or new mint plantings before new growth emerges.

Do not use on soils classified as sand, which have less than 1% organic matter.

Do not apply more than 24.0 fl oz/A (0.375 lb ai/A) per twelve-month period.

Do not apply more than 24.0 fl oz/A (0.375 lb ai/A) in a single application.

Do not apply more than two applications per year when using reduced application rates equal to or less than 12 fl oz/A of this product per application.

The twelve-month period is considered to begin upon the initial F9021-2 SE CAL Herbicide application.

#### SOD PRODUCTION

F9021-2 SE CAL Herbicide may be applied to established seeded, sodded or sprigged turfgrasses following the second mowing for the control of key grass, sedge and broadleaf weeds. Turf grasses should have developed a good root system, a uniform stand with healthy root systems to fill in the exposed edges prior to application. Sod injury could result from application of this product on sod that is not well established or has been weakened by stresses such as unfavorable weather conditions, diseases, chemical, recent harvesting or mechanical influences.

#### **Turf Grass Tolerance**

When applied as directed, the following established turf grasses are tolerant to F9021-2 SE CAL Herbicide at the specified use rates.

**Table 6 Tolerant Grasses** 

Grass Type	Maximum Use Rate*** For Single Application	•
Cool Season Grasses **	fl oz/A F9021-2 SE CAL Herbicide	lb ai/A
Bentgrass, creeping	8	0.125
Fescue, fine * (Festuca rubra) Fescue, tall * (Festuca arundinacea) Ryegrass, perennial (Lolium perenne) Bluegrass, Kentucky (Poa pratensis) Bluegrass, Rough (Poa trivalis)	8-16	0.125-0.25
Warm Season Grasses **		
Bahiagrass (Paspalum notatum) Buffalograss (Buchloe dactyloides) Carpetgrass (Axonopus affinis) Centipedegrass (Eremochloa ophuioides) Kikuyugrass (Pennisetum clandestinum) Seashore Paspalum (Paspalum vaginatum) Zoysiagrass (Zoysia japonica) Bermudagrass (Cynadon dactylon) Bermudagrass Hybrids (Cynadon) St. Augustinegrass (Stenotaphrum secundatum)	16-24	0.25-0.375

<sup>\*</sup> Applications of F9021-2 SE CAL Herbicide to certain varieties of Chewings Fine Fescue or Tall Fescue may result in undesirable plant response.

#### Applications to Reseeded, Overseeded or Sprigged Areas

Reseeding, overseeding or sprigging may be done following F9021-2 SE CAL Herbicide applications to turfgrasses. If reseeding, overseeding or sprigging is done within 1 month following a F9021-2 SE CAL Herbicide treatment, the establishment of desirable grasses may be inhibited. Overseeding of bermudagrass with perennial ryegrass may be done two (2) to four (4) weeks following a F9021-2 SE CAL Herbicide application provided slight grass plant response can be tolerated.

Optimum reseeding and overseeding results may be obtained with the use of mechanical or power seeding equipment, and where proper soil cultivation, irrigation and fertilization practices are followed.

#### **Adjuvant Use**

Good spray coverage is required for optimum control of weeds. Temporary discoloration of some sod species may result from use of surfactant. Use of surfactants is not recommended.

#### **Postemergence Control of Sedges**

F9021-2 SE CAL Herbicide may be applied at the rate of 8-24 fl oz/A to established turf grasses for the control or suppression of sedges. Select the correct F9021-2 SE CAL Herbicide use rate from Table 6.

<sup>\*\*</sup> It is important to note that not all varieties or cultivars have been evaluated under treatment with F9021-2 SE CAL Herbicide. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F9021-2 SE CAL Herbicide under specific local conditions.

<sup>\*\*\*</sup>Do not apply more than 24 fl oz/A (0.375 lb ai/A) of F9021-2 SE CAL Herbicide per twelve-month period. The twelve-month period is considered to begin upon the initial F9021-2 SE CAL Herbicide application.

When applied as directed, F9021-2 SE CAL Herbicide will provide control or suppression of the following sedges.

Common Name	Scientific Name
Kyllinga, green	Kyllinga brevifolia
Kullinga, false green	Kyllinga gracillima
Nutsedge, purple	Cyperus rotundus
Nutsedge, yellow	Cyperus esculentus
Sedge, cylindrical	Cyperus retrorsus
Sedge, globe	Cyperus globulosus
Sedge, Surinam	Cyperus surinamensis
Sedge, Texas	Cyperus polystachyos

Purpe nutsedge: For optimum control of purple nutsedge, split applications are recommended below. Apply 4-8 fluid ounces per acre as an initial application followed by a second application when evidence of actively growing purple nutsedge is visible. Do not exceed the maximum rate per acre based on the turf variety as listed in Table 6: Tolerant Grasses.

Split Application Rates for Optimum Purple Nutsedge Control

Grass Type	First Application (fl oz/A)	Second Application (fl oz/A)
Cool Season Grasses	4-8	4-12
Warm Season Grasses	8-12	8-12

Allow 35 days after first application for second application.

#### **Postemergence Control of Grassy Weeds**

F9021-2 SE CAL Herbicide will control or suppress specific annual grasses when applied at a rate of 8 to 24 fl oz/A. Apply the highest rate consistent with the rate needed for turfgrass tolerance in Table 6. Rates lower than 24 fl oz/A will generally control grasses for at least 60 days. F9021-2 SE CAL Herbicide works best if applied when the annual grasses are small (pre tiller stage) and actively growing.

Common Name	Scientific Name
Goosegrass	Eleusine indica

#### Postemergence Control of Broadleaf Weeds

F9021-2 SE CAL Herbicide will control or suppress the weeds listed in the broadleaf chart below when applied alone shortly after weeds have emerged. F9021-2 SE CAL Herbicide may be applied at the rate of 8-24 fl oz/A to established turf grasses for the control or suppression of broadleaf weeds. Select the correct F9021-2 SE CAL Herbicide use rate from Table 6. For optimum results, F9021-2 SE CAL Herbicide applications should be made shortly after weeds have emerged.

F9021-2 SE CAL Herbicide may be tankmixed with other herbicides, insecticides and fungicides registered for use on turfgrasses. Read and follow the label instructions of the tank mix partner to determine turfgrass specie tolerance, use rates and application requirements. Follow all label restrictions, use directions and precautionary statements before use.

When applied as directed, F9021-2 SE CAL Herbicide will provide control or suppression of the following broadleaf weeds.

Common Name	Scientific Name
Bittercress	Cardamine spp.
Black Medic	Medicago lupulina
Buttercup	Ranunculus spp.
Carolina geranium	Geranium carolinianum
Carpetweed	Mollugo verticillata
Chickweed, common	Stellaria media
Chickweed, mousear	Cerastium vulgatum
Cinquefoil	Potentilla spp.
Clover	Trifolium spp.
Cudweed	Gnaphalium spp.
Dandelion	Taraxacum officinale
Dock, curly	Rumex crispus
Evening primrose	Oenothera biennis
Fiddleneck	Amsinckia spp.
Filaree	Erodium spp.
Garlic, wild	Allium vineale
Goldenrod	Solidago spp.
Ground ivy	Glechema hederasea
Henbit	Lamium amplexicaule
Knotweed, prostrate	Polygonum aviculare
Kochia	Kochia scoparia
Lambsquarters, common	Chenopodium album
Lawn burweed	Soliva pterosperma
Lespedeza, common	Lespedeza striata
Mallow, common	Malva neglecta
Onion, wild	Allium canadense

Parsley piert	Alchemilla arvensis
Pigweed, redroot	Amaranthus retroflexus
Pigweed, tumble	Amaranthus albus
Pineapple weed	Matricaria matricariodes
Plantain, buckhorn	Plantago lanceolata
Puncture weed	Tribulus terrestris
Purslane, common	Portulaca oleracea
Pusley, Florida	Richardia scabra
Redweed	Melochia corchorifolia
Rocket, London	Sisymbrium irio
Smartweed, PA	Polygonum pensylvanicum
Sorrel, red	Rumex acetosella
Speedwell	Veronica spp.
Spurge, annual	Euphorbia spp.
Spurge, prostrate	Euphorbia humistrata
Spurge, spotted	Euphorbia maculata
Star of Bethlehem	Omithogalum umbellatum
Velvetleaf	Abutilon theophrasti
Violet, wild	Viola pratincola
Woodsorrel, creeping	Oxalis corniculata
Woodsorrel, yellow	Oxalis stricta

#### **Precautions**

The use of additional surfactants may cause temporary undesirable effects to turfgrasses.

Do not apply more than 24.0 fl oz/A (0.375 lb ai/A) in a single application.

Do not apply more than three applications per year when using reduced application rates equal to or less than 8 fl oz/A of this product per application.

Sod production areas must be established three (3) months prior to the initial treatment of F9021-2 SE CAL Herbicide.

Not for use on commercial or residential turf other than that grown for sod.

Do not apply F9021-2 SE CAL Herbicide to golf course greens or tees.

Do apply F9021-2 SE CAL Herbicide to turf grasses not listed on this label.

Do not apply with surfactants without on-site evaluations for spray mixture compatibility and physical effects to turf grasses. Do not graze or feed forage harvested from F9021-2 SE CAL Herbicide treated areas.

Do not apply to landscape ornamental plants or ornamental beds.

Do not harvest sod within three (3) months of F9021-2 SE CAL Herbicide application.

### STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Do not use or store around the home.

#### **Pesticide Storage**

Store product in original container only, away from other pesticides, fertilizer, food or feed.

Store in a cool, dry place and avoid excess heat.

#### In Case of Spill

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. Call CHEMTREC (Transportation and spills): (800) 424-9300.

#### To Confine Spill

To confine spill: If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

#### Pesticide Disposa

Waste resulting from the use of this product may be disposed of at an approved waste disposal facility.

#### **Container Disposal**

Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: (For containers greater than 5 gallons) Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. (For containers 5 gallons or less) Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Triple rinse (or equivalent). Then offer for recycling if available, or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Returnable/Refillable Containers** - Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

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Notice: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions beyond the control or FMC or Seller. All such risks shall be assumed by Buyer and User, and, to the extent consistent with applicable law, Buyer and User agree to hold FMC and Seller harmless for any claims relating to such factors.

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To the extent consistent with applicable law, FMC or seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF FMC AND SELLER FOR ANY AND ALL CLAIMS. LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF FMC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

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#### LABEL TRACKING INFORMATION

Label Code: D-4148 112123 xx-xx-xx

#### **FMC Corporation**

Agricultural Products Group 2929 Walnut Street Philadelphia, PA 19104 215-299-6000

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