

# OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

November 6th, 2025

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

Subject: Label Amendment - Registration Review Mitigation for Sulfentrazone

Product Name: F7120 SC (SPARTAN ADVANCE)

EPA Registration Number: 279-3334

Case Number: 672955

Application Dates: November 20, 2018

# 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 and must be used at your next label printing. You must submit one copy of the final printed labeling before you release the product for

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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 by phone at 202-566-0636, or via email at <a href="mailto:carr.caleb@epa.gov">carr.caleb@epa.gov</a>.

Sincerely,

Maryam K. Muhammad-Perch, Team Lead Risk Management and Implementation Branch 4 Pesticide Re-Evaluation Division

Office of Pesticide Programs

**ENCLOSURE: Stamped label** 

# ACCEPTED

11/06/2025

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 272, 2004

279-3334

SULFENTRAZONEGROUP14HERBICIDEGLYPHOSATEGROUP9HERBICIDE

# F7120 SC(SPARTAN ADVANCE)

EPA Reg. No. 279-3334	EPA Est.
Active Ingredient:	By Wt.
Sulfentrazone*	5.70%
Glyphosate IPA**	41.48%
Other Ingredients:	. 52.82%
Total:	100.0%

\*F7120 SC (SPARTAN ADVANCE) contains 0.56 pounds per US gallon of the active ingredient Sulfentrazone.

Contains Petroleum Distillates

U.S. Patent Pending

# KEEP OUT OF REACH OF CHILDREN CAUTION

#### FIRST AID

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 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 in Eyes:** 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.

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.

# **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.

THE ACTIVE INGREDIENT SULFENTRAZONE IS MADE IN CHINA.
THE ACTIVE INGREDIENT GLYPHOSATE IS MADE IN USA.
F7120 SC (SPARTAN ADVANCE) IS FORMULATED AND PACKAGED IN USA.



Label Code: D-4143 110325

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<sup>\*\*</sup> F7120 SC (SPARTAN ADVANCE) contains 4.04 pounds per US gallon of the active ingredient Glyphosate, in the form of isopropylamine salt, (3.00 pounds per gallon of glyphosate acid).

# PRECAUTIONARY STATEMENTS

# **Hazards to Humans and Domestic Animals**

#### CAUTION

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

#### Personal Protective Equipment (PPE)

Applicators, mixers, loaders and other pesticide handlers must wear: protective eyewear (goggles or face shield), long-sleeved shirt and long pants, chemical resistant gloves 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:

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using the toilet, or using tobacco. Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Remove PPE immediately after handling the product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into 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 wash waters or rinsate.

Groundwater Advisory
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.

## **Surface Water Advisory**

This product can contaminate surface water through spray drift. Under some conditions, this product 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 overlying tile drainage systems that drain to surface waters.

# **Physical/Chemical Hazards**

Combustible. Do not use or store near heat or open flame.

# 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. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard. Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard

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

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, and shoes plus socks.

# WEED RESISTANCE MANAGEMENT

F7120 SC (SPARTAN ADVANCE) which contains the active ingredients sulfentrazone and glyphosate is a group 14 and 9 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 F7120 SC (SPARTAN ADVANCE)] 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 these MOAs have been found in your region. Do not assume that each listed weed is being controlled by multiple sites of action. Products with multiple active ingredients

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

- · If resistance is suspected, treat weed escapes with an herbicide having a site of action other than Group 14 and 9 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 and 9 herbicides.
- · Avoid making more than two applications of F7120 SC (SPARTAN ADVANCE) and any other Group 14 and 9] 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.

## DIRECTIONS FOR USE

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

Read all Directions for Use carefully before applying.

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

## PRODUCT INFORMATION

F7120 SC (SPARTAN ADVANCE) is an herbicide that may be applied before or after weed emergence for control of many broadleaf and grassy weeds. Annual weeds are easiest to control when they are small. For most perennial weeds, applications at late growth stages result in better performance. Always use the higher listed rate of this product, for the appropriate soil texture and organic matter, when weed growth is dense or heavy, or weeds are growing in an undisturbed or non-cultivated area. Reduced weed control may occur if weeds are experiencing drought stress, disease or insect damage, or when weeds are thickly covered with dust.

F7120 SC (SPARTAN ADVANCE) is a soluble concentrate herbicide with systemic and soil residual activity. F7120 SC (SPARTAN ADVANCE) is to be mixed with water, liquid fertilizer, or mixtures of water and liquid fertilizer for preemergence weed control in labeled crops. F7120 SC (SPARTAN ADVANCE) also contains the herbicide glyphosate which will kill non-tolerant crops if applied after crop emergence. This herbicide is designed to provide both burndown control of emerged weeds and residual control of weeds prior to planting or crop emergence.

F7120 SC (SPARTAN ADVANCE) is a dual mode of action herbicide and involves uptake by weed roots and shoots. Sulfentrazone, one of the active ingredients in F7120 SC (SPARTAN ADVANCE), is a potent inhibitor of the enzyme Protoporpyrinogen Oxidase IX (PPO IX) required for the formation of chlorophyll. Glyphosate, the second active ingredient in F7120 SC (SPARTAN ADVANCE), inhibits an enzyme found only in plants and microorganisms that is required for amino acid formation. Soil applications of F7120 SC (SPARTAN ADVANCE) must be made before crop seed germination to prevent injury to the emerging crop seedlings. F7120 SC (SPARTAN ADVANCE) applied after crop emergence will cause severe injury to the crop. Refer to the specific directions of use for a particular crop/use pattern as set forth below for additional information.

F7120 SC (SPARTAN ADVANCE) herbicide exhibits excellent crop safety when used as directed. Poor growing conditions, such as excessive moisture, cool temperatures, and soil compaction or the presence of various pathogens may impact seedling vigor. Under these conditions, the active ingredients in F7120 SC (SPARTAN ADVANCE) can contribute to crop response.

If adequate moisture (1/2" to 1" of rainfall or irrigation) is not received within 7 to 10 days, erratic preemergent weed control may result. Erratic preemergent weed control may also occur if dry conditions persist throughout the growing season. Additional moisture is needed throughout the growing season to maintain herbicide activity and prevent weed escapes.

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 F7120 SC (SPARTAN ADVANCE). In addition to product application information, refer to the specific directions of use for a particular crop/use pattern as set forth below.

# **Proper Handling Instructions**

This product may not be mixed or loaded within 50 feet of any wells (including abandoned wells and drainage wells), sink holes, 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 pad 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 wash water, 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

pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment.

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

Do not use flood irrigation to apply or incorporate this product.

This product must be used in a manner which will prevent back siphoning into wells, spills or improper disposal of excess pesticide, spray mixtures or rinsates.

## RATE CONVERSION CHART

F7120 SC (SPARTAN ADVANCE)		F7120 SC (SPARTAN SULFENTRAZONE ADVANCE)	
Product oz/A	Total lb ai	lb ai	lb ai
21.0	0.75	0.09	0.66
25.9	0.93	0.11	0.82
29.5	1.06	0.13	0.93
32.0	1.15	0.14	1.01
44.2	1.59	0.19	1.40
85.7	3.08	0.375	2.7

# SOIL CLASSIFICATION CHART

COARSE	MEDIUM	FINE
Sand	Sandy clay loam	Silty clay loam
Loamy sand	Sandy clay	Silty clay
Sandy loam	Loam	Clay loam
1	Silt loam	Clay
	Silt	,

## CROP ROTATIONAL INTERVALS

Shown below are the minimum intervals in months from the time of F7120 SC (SPARTAN ADVANCE) application until F7120 SC (SPARTAN ADVANCE) treated soil may be replanted with the crops listed. When F7120 SC (SPARTAN ADVANCE) is tank mixed with other herbicide(s), refer to all those labels for re-cropping instructions, following the intervals that are the most restrictive. For crops not listed, the interval is 12 months in addition to a successful field bioassay.

The field bioassay is a test strip of the intended crop planted across the previously treated field and grown to maturity. The test strip should include low spots, knolls, and variable pH and soil types. If crop responses are not observed, the crop may be planted the following year.

#### **CROP ROTATION INTERVALS\***

CROP	INTERVAL (Months)	
Alfalfa	12	
Barley	4	
Berries (Crop subgroup 13-07	Anytime	
Cabbage (transplant only)	Anytime	
Canola, Crambe	24	
Chickpeas	Anytime	
Citrus (Crop Group 10)	Anytime	
Corn, field	Anytime	
Corn, pop	10	
Corn, seed	Anytime	
Corn, sweet	4	
Cotton	18	
Dry Shell Peas & Beans	Anytime	
Grapes	Anytime	
Horseradish	Anytime	
Lima Beans (Tennessee only)	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	
Tobacco	Anytime	
Tree Nuts (Crop Group 14)	Anytime	
Triticale	4	
Turf	Anytime	
* 19 month rotation for rates above 57.6 fl.oz/A	4	

<sup>\* 18</sup> month rotation for rates above 57.6 fl oz/A

# REPLANTING INSTRUCTIONS

If the initial planting of labeled crops fails to produce a uniform stand, only labeled crops for F7120 SC (SPARTAN ADVANCE) or the tank mix partner; whichever is most restrictive, may be replanted. Do not retreat fields with a second application of F7120 SC (SPARTAN ADVANCE) or other herbicide containing sulfentrazone. When tank mixing with a labeled product, refer to the replant instructions for that product. Do not replant treated fields with any crop at intervals that are inconsistent with the CROP ROTATION INTERVALS on this label. When replanting use minimum soil tillage to preserve the herbicide barrier and achieve maximum weed control

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

## APPLICATION INFORMATION

#### **Ground Application**

Use a conventional low pressure herbicide boom sprayer equipped with suitable nozzles and screens. Apply uniformly using properly calibrated nozzles and screens and strainers no finer than 50 mesh. Use 10 to 40 gallons of spray solution per acre. When tank mixed with a contact burndown herbicide, ground applicators must use a minimum spray volume of 15 gallons per acre. Do not exceed 40 psi spray pressure unless required by the spray nozzle manufacturer.

Water or clear liquid fertilizer solutions (28–32% nitrogen only) may be used as the carrier for F7120 SC (SPARTAN ADVANCE) when applied alone or in tank mixtures with other registered herbicides. A jar test is recommended to determine the compatibility of F7120 SC (SPARTAN ADVANCE) and the fertilizer solution.

A nonionic surfactant (NIS) or a wetting agent labeled for use with herbicides is required for F7120 SC (SPARTAN ADVANCE) applications. Add surfactant at 2 quarts per 100 gallons of spray solution. The surfactant must contain at least 70% active ingredient. Read and follow all applicable use directions, precautions and restrictions on the surfactant label.

When an adjuvant is to be used with this product, FMC recommends use of a Chemical Producers and Distributors Association certified adjuvant.

Continuous agitation is required until all spray mixture has been applied. Avoid swath overlaps. Shut off spray booms while turning, slowing or stopping, as over application may result. Do not allow F7120 SC (SPARTAN ADVANCE) spray mixtures to sit overnight as settling of product and difficulty of re-suspending may occur.

To avoid injury to sensitive crops, spray equipment used for F7120 SC (SPARTAN ADVANCE) applications must be drained and thoroughly cleaned with water plus ammonia before being used to apply other products. See Spray Clean-out Section 21 on page 6

**Avoid all direct, and/or indirect spray contact with non-target plants.** Do not apply near desirable vegetation. Allow adequate distance between target area and desirable plants to minimize exposure.

#### MANDATORY SPRAY DRIFT MANAGEMENT

#### **Aerial Application**

Use Restrictions

- Aerial application is allowed only when environmental conditions prohibit ground application.
- When this product is allowed to be 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 down.
- 3. Observe the regulations of the State where applications are made.
- 4. Applicators are required to select the nozzle and pressure that deliver medium or coarser droplets in accordance with the most current version of the American Society of Agricultural & Biological Engineers Standard 641 (ASABE S641).

#### **Ground Applications**

Spray Volume

- Ground applicators must use a minimum finished spray volume of 10 gallons per acre.
- When sulfentrazone is tank mixed with a contact burndown herbicide, ground applicators must use a minimum spray volume of 15 gallons per acre.

#### Spray Nozzle and Droplet Size

- Applicators are required to select the nozzles and pressure that deliver medium or coarser droplets in accordance with the most current version of the American Society of Agricultural & Biological Engineers Standard 572 (ASAE S-572).
- · Select coarse to very coarse droplet size when sulfentrazone is used as a preemergent/preplant application.
- Select medium to very coarse droplet size when sulfentrazone is used postemergence with a contact burndown herbicide.
- Applicators may spray only when wind speed is between 3 and 10 mph.
- For boom spraying, the minimum release height must be 30 inches from the soil for ground applications.
- Do not apply as spray droplets smaller than medium to coarse (defined by the ASAE\* standard).

### SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMETAL CONDITIONS.

# Information on Droplet Size Information

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 will provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift when applications are made improperly, or under unfavorable environmental conditions (See Wind, Temperature and Humidity and Temperature Inversions in subsequent sections). 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).

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

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

**Pressure** – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

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

Nozzle 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. 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  $\frac{3}{4}$  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 practical reduces exposure of spray droplets to evaporation and wind movement.

**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 distance must increase with increasing drift potential (higher wind, smaller droplets, etc.)

**Wind** – Drift potentials are lowest between wind speeds of 3 to 10 miles per hour. Applicators may spray only when wind speed is between 3 and 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. Applications in wind conditions outside of this range could increase the risk of off-target effects and should be avoided. Note that local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

**Temperature and Humidity -** When making applications in conditions of 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 light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the following morning. Their presence can be indicated by ground fog. However, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or a smoke generator. Smoke that layers and moves laterally in a concentrated clod (under low wind conditions) indicate an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

**Sensitive Areas** – Applications should be made when the wind is blowing away from adjacent sensitive areas (e.g. residential areas, bodies of water, known habitats for threatened or endangered species and non-target crops).

# Off-Target Movement of F7120 SC (SPARTAN ADVANCE)

Drift of dilute spray mixtures containing F7120 SC (SPARTAN ADVANCE) 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. F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE).

# **BAND TREATMENT APPLICATIONS**

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

Band Width in Inches Row Width in Inches	X	Broadcast Rate Per Acre	II	Band Rate
•				
Band Width in Inches	_	Broadcast	_	Band Volume
Row Width in Inches		Volume Per Acre		Danu volume

# MIXING AND LOADING INSTRUCTIONS

#### F7120 SC (SPARTAN ADVANCE) Applied Alone

Select the proper F7120 SC (SPÁRTÁN ADVANCE) application rate from the following tables in the crop section of this label. Fill the spray tank with approximately one-half of the volume of water needed for the acreage being treated. With agitator operating, add the required amount of F7120 SC (SPARTAN ADVANCE) for acreage being treated by opening the bottle(s) and measuring directly into the spray tank. Allow the product to fully disperse. Complete the addition of spray water. Maintain agitation during filling, mixing and application. Apply the F7120 SC (SPARTAN ADVANCE) spray mixture immediately after mixing.

Do not store spray mixture.

Do not prepare spray mixtures in nurse tanks.

F7120 SC (SPARTAN ADVANCE) Applied in Tank Mix Combination
Select the proper F7120 SC (SPARTAN ADVANCE) application rate from TIMING AND METHOD OF APPLICATION section of label. Read and follow all applicable use directions, precautions and restrictions on the respective tank mix product labels. To ensure product compatibility, a jar test should be conducted before large volume mixing. Provided the jar test indicates the mixture is compatible, prepare the tank mixture as follows.

Fill the spray tank with approximately one-half of the volume of water needed for the acreage being treated. With agitator operating, add the required amount of F7120 SC (SPARTAN ADVANCE) for the acreage being treated by opening the bottle(s) and measuring add the required amount of F720 SC (SPARTAN ADVANCE) for the acreage being treated by opening the bottle(s) and measuring directly into the spray tank. Allow the product to fully disperse. Next, add the recommended amount(s) of the additional tank mix product(s) in the following order: first dry formulations (e.g., wettable powders, dry flowables), next liquid suspensions (e.g., flowables) and finally liquids (e.g., EC's). Allow time for complete mixing and dispersion after each addition, adding water as necessary. Complete the addition of spray water. Maintain agitation during filling, mixing and application. Use F7120 SC (SPARTAN ADVANCE) tank mixtures immediately after mixing.

Do not store tank mixtures.

Do not prepare spray mixtures in nurse tanks.

F7120 SC (SPARTAN ADVANCE) Applied Alone with Liquid Fertilizer
When adding F7120 SC (SPARTAN ADVANCE) to a liquid fertilizer carrier, F7120 SC (SPARTAN ADVANCE) should be premixed

Fill the spray tank one-half full with fertilizer solution. With agitator operating, add the F7120 SC (SPARTAN ADVANCE) slurry to the spray tank. Use a minimum of one gallon of water for each container of F7120 SC (SPARTAN ADVANCE). Stir until completely dissólved. Then add slurry to the spray tank through a 20-35 mesh screen. Rinse container used for pre-mixing and add rinsate to the spray tank. Complete filling the sprayer tank with fertilizer. Maintain agitation during filling, mixing and application. Use F7120 SC (SPARTAN ADVANCE) spray mixture immediately after mixing.

Do not prepare spray mixtures in nurse tanks.

Fertilizer Spray Mixtures
Applications of F7120 SC (SPARTAN ADVANCE) alone, or with recommended tank mixtures, in conjunction with clear liquid fertilizer solutions (28-32% nitrogen only) may be used unless use directions specifically state otherwise. Small quantities should be tested for compatibility by the following procedure before mixing in full spray tank quantities.

- 1) Add 1 pint of fertilizer solution in a quart iar.
- 2) Add the appropriate amount of herbicide based on the MIXTURE COMPATIBILITY table below. If more than one product is to be used, add each separately using the following sequence: dry formulations (e.g., wettable powders, dry flowables) first, liquid suspensions (e.g., flowables) next and finally liquids (e.g., EC's).
- 3) Close jar and shake well.
- 4) Watch mixture for several seconds, again after 5 minutes and again after 30 minutes. If herbicide/fertilizer combination remains mixed or can be remixed readily (i.e., does not permanently separate, foam, gel or become lumpy), the mixture is compatible and can be mixed in full volumes and sprayed. If the mixture is compatible, prepare spray by adding fertilizer solution to the tank first, and then follow directions noted below.

#### MIXTURE COMPATIBILITY TESTING

MIXTORE COMM / CHIDIEN		
Herbicide Type	Herbicide Field Use Rate	Amount Herbicide Added Per Pint
Wettable Powder or Dry	0.5 pound	0.75 teaspoon
Flowable	1.0 pound	1.50 teaspoons
	2.0 pounds	3.00 teaspoons
	3.0 pounds	4.50 teaspoons
Emulsified Concentrates	1.0 pint	0.5 teaspoon
Liquid Flowables	1.0 quart	1.0 teaspoon
	2.0 quarts	2.0 teaspoons
	3.0 quarts	3.0 teaspoons

\*Based on a spray volume of 25 gallons per acre. For lower or higher spray volumes, adjust fluid fertilizer quantity accordingly.

#### **Adiuvants**

A nonionic surfactant (NIS) or a wetting agent labeled for use with herbicides is required for F7120 SC (SPARTAN ADVANCE) applications. Add surfactant at 2 quarts per 100 gallons of spray solution. The surfactant must contain at least 70% active ingredient. Read and follow all applicable use directions, precautions and restrictions on the surfactant label.

## **Ammonium Sulfate**

Where hard water conditions exist, the addition of 8 to 16 pounds of dry ammonium sulfate per 100 gallons of water (or the equivalent of ammonium sulfate in a liquid formulation or high quality water conditioner) may improve the performance of this product. Thoroughly dissolve the dry ammonium sulfate in the spray tank before adding herbicides or surfactants. After use, completely rinse the spray system with clean water to reduce corrosion.

# **Drift Reduction Agents**

Drift reduction agents may be used, especially near sensitive vegetation. Drift reduction agents can affect the spray pattern, causing reduced performance if adequate coverage is not obtained. Check your local county or state regulations that may require the use of a drift reduction agent.

# SPRAY EQUIPMENT CLEAN-OUT

After spraying F7120 SC (SPARTAN ADVANCE) and before using sprayer equipment for any other applications, the sprayer must be thoroughly cleaned using the following procedure.

- 1. Drain sprayer tank, hoses, and spray boom and thoroughly rinse the inside of the sprayer tank with clean water to remove sediment and residues. Thoroughly flush sprayer hoses, boom and nozzles with clean water.
- 2. Fill the tank 1/2 full with clean water, and add appropriate detergent or ammonia (follow manufacturer's directions for use). Fill the tank to capacity and operate the sprayer for 15 minutes to flush hoses, boom, and nozzles.
- 3. Convenient and thorough cleaning of the sprayer can be achieved if the cleaning solution is left in the spray tank, hoses, spray booms and spray nozzles overnight or during storage.
- 4. Before using the sprayer, drain the spray system. Rinse the tank with clean water and flush through the hoses, boom, and nozzles. Remove and clean spray tips and screens separately with the detergent or ammonia solution.

5. Properly dispose of all cleaning solution and rinsate in accordance with Federal, State and local regulations and guidelines.

Do not drain or 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.

Should small quantities of F7120 SC (SPARTAN ADVANCE) 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.

# MAXIMUM ALLOWABLE F7120 SC (SPARTAN ADVANCE) USE PER ACRE PER 12 MONTH PERIOD\*

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

Crop	oz/A F7120 SC (SPARTAN ADVANCE)	Ib ai/A F7120 SC (SPARTAN ADVANCE)**
Row Crops		
Corn	85.7	3.08
Fallow	57.6	2.07
Peanut	64.8	2.32
Potato	57.6	2.07
Soybeans	85.7	3.08
Sugarcane	85.7	3.08
Sunflowers	57.6	2.07
Tobacco	85.7	3.08
Vegetable Crops		
Cabbage (Transplanted only)	85.7	3.08
Dry shelled Beans & Peas	57.6	2.07
Horseradish	57.6	2.07
Lima Beans, Succulent (Tennessee Only)	43.0	1.55
Oil Crops		
Mint	85.7	3.08
Berries (Crop Group 13-07)	85.7	3.08
Citrus (Crop Group 10)	85.7	3.08
Grapes	85.7	3.08
Tree Nuts (Crop Group 14)	85.7	3.08

<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 F7120 SC (SPARTAN ADVANCE) application.

# **Weeds Controlled Pre-Plant Burndown**

Use Restrictions:

This product, F7120 SC (SPARTAN ADVANCE), may only be used in accordance with the Product Application information and the specific crop use directions, F7120 SC (SPARTAN ADVANCE) applied alone or in recommended tank mixtures will provide control of the following weeds. Refer to the specific crop section.

# Preemergent Weeds Controlled (Refer to individual crop sections for pre-emergent weeds controlled)

### **BROADLEAVES**

Common Name	Scientific Name
Amaranth, Palmer	Amaranthus palmeri
Amaranth, spiny	Amaranthus, spinosus
Amaranth, spleen	Amaranthus dubius
Jimsonweed	Datura stramonium
Kochia	Kochia scoparia
Lambsquarters, common	Chenopodium album
Morningglory, Entireleaf	Ipomea hederacea integriusc
Morningglory, Ivyleaf	Ipomea hederacea hederacea
Morningglory, Palmleaf	Ipomea Wrightii
Morningglory, pitted	Ipomea lacunosa
Morningglory, purple	Ipomea turbinata
Morningglory, red	Ipomea coccinea
Morningglory, scarlet	Ipomea hederifolia
Morningglory, smallflower	Jacquemontia tamnifolia
Morningglory, tall	Ipomea, purpurea
Nightshade, black	Solanum nigrum
Nightshade, Eastern black	Solanum americanum
Pigweed, redroot	Amaranthus retroflexus
Pigweed, smooth	Amaranthus hybridus
Prickly Sida, Teaweed	Sida spinosa
Smartweed, Pennsylvania	Polygonum pensylvanicum
Thistle, Russian	Lactuca serriola
Waterhemp, common	Amaranthus rudis
Waterhemp, tall	Amaranthus tuberculatos
SEDGES	
Nutsedge, purple	Cyperus rotundus
Nutsedge, yellow	Cyperus esculentus
Sedge, annual	Cares spp.

<sup>\*\*</sup> Based on total active sulfentrazone and glyphosate IPA

# Postemergent Weeds Controlled BROADLEAVES

Common Name Amaranth, Palmer' Amaranth, Selentinc Name Amaranth, Powell Amaranth, Spelmen' Amaranthus Spelmen' Amaranthus Spelmen' Bassia fyselmen' Bassia fyselm	DRUADLEAVES	Oniontific Name
Amaranth, Powell Amaranthus powelli Amaranth, spiny Amaranthus, spinosus Amaranth, spien Amaranthus, spinosus Bassia, fivehook Bassia,	Common Name	Scientific Name
Amaranth, spiny   Amaranthus, spinosus   Amaranth, spiny   Amaranthus, spinosus   Amaranth, spiny   Amaranthus, spinosus   Amaranthus, spinosus   Amaranthus dubius   Bassia, hyssopifolia   Cardamine hirsulta   Buttercup   Ranunculus spp.   Carolinia quantina   Carpetweed   Multigo vericiliata   Carethweed Badstraw   Galium aparine   Chervil   Anthriscus cerefolium   Carpetweed   Multigo vericiliata   Carethweed Badstraw   Galium aparine   Chervil   Anthriscus cerefolium   Chekweed, Common   Stellaria media   Cocklebur, common   Stellaria media   Cocklebur, common   Xanthium strumarium   Copperleaf, Hophornbeam   Acalypha ostryeafolia   Corposis, plains   Corespis tinctoria   Coron, volunteer   Zea maize   Coron, volunteer   Zea maize   Coron, tropic   Coron, tropic   Croton, tropic	Amaranth, livid	Amaranthus lividus
Amaranth, spiny   Amaranthus, spinosus   Amaranth, spiny   Amaranthus, spinosus   Amaranth, spiny   Amaranthus, spinosus   Amaranthus, spinosus   Amaranthus dubius   Bassia, hyssopifolia   Cardamine hirsulta   Buttercup   Ranunculus spp.   Carolinia quantina   Carpetweed   Multigo vericiliata   Carethweed Badstraw   Galium aparine   Chervil   Anthriscus cerefolium   Carpetweed   Multigo vericiliata   Carethweed Badstraw   Galium aparine   Chervil   Anthriscus cerefolium   Chekweed, Common   Stellaria media   Cocklebur, common   Stellaria media   Cocklebur, common   Xanthium strumarium   Copperleaf, Hophornbeam   Acalypha ostryeafolia   Corposis, plains   Corespis tinctoria   Coron, volunteer   Zea maize   Coron, volunteer   Zea maize   Coron, tropic   Coron, tropic   Croton, tropic	Amaranth, Palmer*	Amaranthus palmeri
Amaranth, spiny Amaranthus spinosus Ammania, purple Amaranth, spinen Amaranthus dubius Ammania, purple Ammania coccinea AAnoda, spured Anoda, spured Bassia, fivehook Bassia fivesopifolia Beggarweed-Florida Desmondiom fortuosum Bittercress Cardanine hirsuta Butrecreup Ranunculus spin Carolina geranium Geran	Amaranth Powell	Amaranthus nowellii
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Bassia, fivehook	Ammania, purple	
Bassia, fivehook	Anoda, spurred	Anoda cristata
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Cutleaf evening primrose	Croton, tropic	Croton glandulosis
Dwarfdandelion	Cutleaf evening primrose	Oenothera laciniata
Eclipta   Eclipta prostrata   Falseflax, smallseed   Camelina microcarpa   Fiddleneck   Amsinckia menziesii   Field pennycress   Thlaspi arvense   Fieabane, hairy   Conyza bonariensis   Fleabane, annual   Erigeron strigosus   Fleabane, rough   Erigeron strigosus   Flizweed   Descurainia sophia   Galinsoga, hairy   Galinsoga ciliat   Golden crownbeard   Verbesina encelioides   Groundcherry, calmmy (seedling)   Physalis heterophylla   Groundcherry, cutleaf   Physalis heterophylla   Groundcherry, cutleaf   Physalis heterophylla   Groundcherry, cutleaf   Physalis angulata   Groundsel, common   Senecio vulgaris   Hempi   Lamium amplexicaule   Jimsonweed   Datura stramonium   Knotweed, prostrate   Polygonum aviculare   Ladysthumb   Polygonum persicaria   Lambsquarters, common*   Chenopodium album   London rocket   Sisymbrium irio   Mallow, common   Malva neglecta   Morningglory, Entireleaf   Ipomea hederacea integriusc   Morningglory, Palmleaf   Ipomea hederacea hederacea   Morningglory, purple   Ipomea lacunosa   Morningglory, purple   Ipomea lacunosa   Morningglory, scarlet   Ipomea hederifolia   Morningglory, scarlet   Ipomea purpurea   Mustard, blue   Sisymbrium altissimum   Mustard, blue   Sisymbrium altissimum   Mustard, blue   Sisymbrium altissimum   Mustard, wild   Brassica kaber   Nightshade, back   Solanum americanum   Nightshade, back   Solanum americanum   Nightshade, Bastern black   Solanum americanum   Nightshade, Solanum americanum   Nightshade, Solanum   Portulaca oleracea   Pilyweed, redroot   Amaranthus retroflexus   Pilyweed, smooth   Amaranthus retroflexus   Pilyweed, smooth   Amaranthus retroflexus   Pilyweed, smooth   Amaranthus retroflexus	Dwarfdandelion	
Falseflax, smallseed Fiddleneck Amsinckia menziesii Field pennycress Fielabane, hairy Conyza bonariensis Fieabane, annual Erigeron strigosus Fleabane, rough Fleabane, rough Fixweed Descurainia sophia Galinsoga, hairy Galinsoga, hairy Golden crownbeard Groundcherry, cutleaf Groundcherry, cutleaf Groundsel, common Hemp sesbania Henbit Jimsonweed Ladysthumb Lambsquarters, common* London rocket Sisymbrium irio Mallow, common Mava neglecta Morningglory, Palmleaf Morningglory, Palmleaf Morningglory, pred Morningglory, red Morningglory, scarlet Morningglory, tall Mustard, blue Chorispora tenella Mustard, blue Mustard, lanke Mustard, tumble Mustard, blue Mustard, blue Mustard, black Nightshade, Bascro Palygonum persicaria Polygonum aviculare Polygonum aviculare Polygonum aviculare Polygonum persicaria Lamium amplexicaule Datura stramonium Nercencia Polygonum persicaria Lamium amplexicaule Datura stramonium Nava neglecta Malva neglecta Malva neglecta Malva neglecta Ipomea hederacea integriusc Domea hederacea integriusc Ipomea hederacea hederacea Ipomea lacunosa Ipomea lacunosa Ipomea lacunosa Ipomea lacunosa Ipomea lacunosa Ipomea hederacea hederacea Ipomea hederifolia Morningglory, purple Ipomea lacunosa Ipomea hederifolia Morningglory, scarlet Ipomea hederifolia Morningglory, scarlet Ipomea hederifolia Morningdiory, scarlet Ipomea hederifolia Ipomea purpurea Ipomea h		Foliate prostrata
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Groundsel, common  Hemp sesbania  Sesbania exaltata  Henbit  Jimsonweed  Knotweed, prostrate  Ladysthumb  Lamium amplexicaule  Joygonum aviculare  Ladysthumb  Polygonum aviculare  Ladysthumb  London rocket  Mallow, common  Malva neglecta  Morningglory, Entireleaf  Morningglory, Palmleaf  Morningglory, Palmleaf  Morningglory, pitted  Morningglory, purple  Morningglory, purple  Morningglory, scarlet  Morningglory, scarlet  Morningglory, scarlet  Morningglory, smallflower  Morningglory, stall  Morningglory, tall  Morsad, tansy  Mustard, blue  Chorispora tenella  Mustard, wild  Brassica kaber  Nightshade, Eastern black  Nightshade, Eastern black  Nightshade, Eastern black  Nightshade, Eastern black  Ragweed, common  Portulaca oleracea  Redstem Filaree  Sespania exaltata  Lamium amplexicaule  Datura stramonium  Alustard, tansy  Descuraria pinnata  Mustard, wild  Brassica kaber  Nightshade, Eastern black  Nightshade, Eastern black  Nightshade, Eastern black  Nightshade, Eastern black  Solanum americanum  Nightshade, Eastern  Ragweed, common  Portulaca oleracea  Purslane, common  Portulaca oleracea  Ragweed, giant*  Ragweed, giant*  Ragweed, par  Polygonum ersicaria  Datura stramonium  Nestrad, in a pelecta  Datura stramonium  Nestrada exaltata  Lamium anericanum  Nestrada scabra  Ragweed, common*  Ambrosia trifida  Ragweed, common*  Ragweed, common*  Ragweed, common*  Ragweed, common*  Ragweed, giant*  Ambrosia trifida  Ragweed, common*  Ragweed, common*  Ragweed, giant*  Ambrosia trifida  Ragweed, common*  Ragweed, giant*  Ambrosia trifida  Ragweed, common*  Ragweed, common*	Groundcherry cutleaf	Physalis angulata
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Lambsquarters, common*  Lambsquarters, common*  Chenopodium album  London rocket  Mallow, common  Malva neglecta  Mayweed  Anthemis cotula  Morningglory, Entireleaf  Morningglory, Ivyleaf  Morningglory, Palmleaf  Morningglory, pitted  Morningglory, purple  Morningglory, purple  Morningglory, scarlet  Morningglory, scarlet  Morningglory, scarlet  Morningglory, smallflower  Morningglory, smallflower  Morningglory, tall  Mustard, black  Mustard, blue  Chorispora tenella  Mustard, tumble  Sisymbrium altissimum  Mustard, wild  Rightshade, Eastern black  Nightshade, hairy  Pigweed, redroot  Pigweed, smooth  Purslane, common  Pusley, Florida  Ragweed, giant*  Ragweed, giant*  Red rice  Solanum sapronica  Solanum sapronica  Solanum cicutarium  Red sice  Capsella bursa pastoris  Sida spinosa  Solanum pensylvanicum  Sonchus asper  Solanum pensylvanicum  Sonchus asper  Solanum pensylvanicum  Sonchus asper		
Lambsquarters, common*  London rocket  Mallow, common  Malva neglecta  Maryweed  Morningglory, Entireleaf  Morningglory, Entireleaf  Morningglory, Palmleaf  Morningglory, Palmleaf  Morningglory, pitted  Morningglory, pitted  Morningglory, pupple  Morningglory, scarlet  Morningglory, scarlet  Morningglory, scarlet  Morningglory, smallflower  Morningglory, smallflower  Morningglory, stall  Morningglory, smallflower  Morningglory, stall  Morningglory, stall  Morningglory, stall  Morningglory, smallflower  Morningglory, stall  Mustard, black  Brassica nigra  Mustard, black  Brassica nigra  Mustard, tumble  Mustard, tumble  Mustard, tumble  Mightshade, black  Nightshade, Eastern black  Nightshade, hairy  Pigweed, redroot  Pigweed, smooth  Purslane, common  Pusley, Florida  Ragweed, giant*  Ragweed, giant*  Ragweed, giant*  Ragweed, pack  Solanum pensylvanicum  Sheprishylvanicum  Sheprishylvanicum  Solan artemisiifolia  Ragweed, giant*  Ambrosia artemisiifolia  Ragweed, pack  Solan pensylvanicum  Sheperdspurse  Capsella bursa pastoris  Sida spinosa  Smartweed, PA  Polygonum pensylvanicum  Sonchus asper  Spanishneedles  Bidens bipinnata	Knotweed, prostrate	
Lambsquarters, common*  London rocket  Mallow, common  Malva neglecta  Maryweed  Morningglory, Entireleaf  Morningglory, Entireleaf  Morningglory, Palmleaf  Morningglory, Palmleaf  Morningglory, pitted  Morningglory, pitted  Morningglory, pupple  Morningglory, scarlet  Morningglory, scarlet  Morningglory, scarlet  Morningglory, smallflower  Morningglory, smallflower  Morningglory, stall  Morningglory, smallflower  Morningglory, stall  Morningglory, stall  Morningglory, stall  Morningglory, smallflower  Morningglory, stall  Mustard, black  Brassica nigra  Mustard, black  Brassica nigra  Mustard, tumble  Mustard, tumble  Mustard, tumble  Mightshade, black  Nightshade, Eastern black  Nightshade, hairy  Pigweed, redroot  Pigweed, smooth  Purslane, common  Pusley, Florida  Ragweed, giant*  Ragweed, giant*  Ragweed, giant*  Ragweed, pack  Solanum pensylvanicum  Sheprishylvanicum  Sheprishylvanicum  Solan artemisiifolia  Ragweed, giant*  Ambrosia artemisiifolia  Ragweed, pack  Solan pensylvanicum  Sheperdspurse  Capsella bursa pastoris  Sida spinosa  Smartweed, PA  Polygonum pensylvanicum  Sonchus asper  Spanishneedles  Bidens bipinnata	Ladysthumb	Polygonum persicaria
London rocket   Sisymbrium irio	Lambsquarters, common*	Chenopodium album
Mallow, common         Malva neglecta           Mayweed         Anthemis cotula           Morningglory, Entireleaf         Ipomea hederacea integriusc           Morningglory, Ivyleaf         Ipomea hederacea hederacea           Morningglory, Palmleaf         Ipomea Wrightii           Morningglory, pitted         Ipomea lacunosa           Morningglory, purple         Ipomea coccinea           Morningglory, red         Ipomea coccinea           Morningglory, scarlet         Ipomea hederifolia           Morningglory, smallflower         Jacquemontia tamnifolia           Morningglory, scarlet         Ipomea purpurea           Mustard, black         Brassica nigra           Mustard, black         Brassica nigra           Mustard, tansy         Descurainia pinnata           Mustard, tumble         Sisymbrium altissimum           Mustard, wild         Brassica kaber           Nightshade, black         Solanum nigrum           Nightshade, black         Solanum sarrachoides		
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Morningglory, Entireleaf	Mallow, Common	iviaiva riegiecia
Morningglory, Palmleaf	Mayweed	
Morningglory, Palmleaf	Morningglory, Entireleaf	Ipomea hederacea integriusc
Morningglory, Palmleaf Ipomea Wrightii Morningglory, pitted Ipomea lacunosa Morningglory, purple Ipomea turbinata Morningglory, red Ipomea coccinea Morningglory, scarlet Ipomea hederifolia Morningglory, scarlet Ipomea, purpurea Mustard, black Ipomea, purpurea Mustard, black Brassica nigra Mustard, blue Chorispora tenella Mustard, tumble Sisymbrium altissimum Mustard, tumble Sisymbrium altissimum Mustard, wild Brassica kaber Nightshade, black Solanum nigrum Nightshade, hairy Solanum sarrachoides Pigweed, redroot Amaranthus retroflexus Pigweed, smooth Amaranthus retroflexus Pigweed, smooth Amaranthus retroflexus Purslane, common Portulaca oleracea Pusley, Florida Richardia scabra Ragweed, giant* Ambrosia artemisiifolia Ragweed, giant* Ambrosia artemisiifolia Red rice Oryza punctata Redstem Filaree Erodium cicutarium Shidy Solanum pensylvanicum Sonchus asper Spanishneedles Bidens bipinnata	Morningglory, lyyleaf	Ípomea hederacea hederacea
Morningglory, pitted   Ipomea lacunosa   Morningglory, purple   Ipomea turbinata   Ipomea coccinea   Ipomea coccinea   Ipomea hederifolia   Ipomea hederifolia   Ipomea hederifolia   Ipomea, purpurea   Ipomea, Ipom	Morningglory Palmleaf	Inomea Wrightii
Morningglory, purple		
Morningglory, scarlet	Morninggiory, pitted	
Morningglory, scarlet	Morningglory, purple	Ipomea turbinata
Morningglory, scarlet	Morningglory, red	Ipomea coccinea
Morningglory, smallflower Jacquemontia tamnifolia Morningglory, tall Ipomea, purpurea Mustard, black Brassica nigra Mustard, blue Chorispora tenella Mustard, tansy Descurainia pinnata Mustard, tumble Sisymbrium altissimum Mustard, wild Brassica kaber Nightshade, black Solanum nigrum Nightshade, Eastern black Solanum sarrachoides Pigweed, redroot Amaranthus retroflexus Pigweed, smooth Amaranthus retroflexus Pigweed, smooth Amaranthus retroflexus Pigweed, smooth Amaranthus retroflexus Ragweed, common Portulaca oleracea Pusley, Florida Richardia scabra Ragweed, common* Ambrosia artemisiifolia Ragweed, giant* Ambrosia trifida Red rice Oryza punctata Redstem Filaree Erodium cicutarium Sheperdspurse Capsella bursa pastoris Sicklepod Senna obtusifolia Sida, prickly (Teaweed) Sida spinosa Smartweed, PA Polygonum pensylvanicum Spanishneedles Bidens bipinnata	Morningglory scarlet	
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Mustard, tumble  Mustard, wild  Mustard, wild  Mustard, wild  Mightshade, black  Nightshade, Eastern black  Nightshade, hairy  Pigweed, redroot  Pigweed, smooth  Purslane, common  Pusley, Florida  Ragweed, common*  Ragweed, giant*  Red rice  Redmaids  Redstem Filaree  Sheperdspurse  Siexhepd  Si		
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Pigweed, smooth         Amaranthus hybridus           Purslane, common         Portulaca oleracea           Pusley, Florida         Richardia scabra           Ragweed, common*         Ambrosia artemisiifolia           Ragweed, giant*         Ambrosia trifida           Red rice         Oryza punctata           Redmaids         Calandrinia caulescens           Redstem Filaree         Erodium cicutarium           Sheperdspurse         Capsella bursa pastoris           Sicklepod         Senna obtusifolia           Sida, prickly (Teaweed)         Sida spinosa           Smrtweed, PA         Polygonum pensylvanicum           Sowthistle, annual         Sonchus asper           Spanishneedles         Bidens bipinnata		Solanum sarracholdes
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Redstem Filaree     Erodium cicutarium       Sheperdspurse     Capsella bursa pastoris       Sicklepod     Senna obtusifolia       Sida, prickly (Teaweed)     Sida spinosa       Smartweed, PA     Polygonum pensylvanicum       Sowthistle, annual     Sonchus asper       Spanishneedles     Bidens bipinnata		
Sheperdspurse     Capsella bursa pastoris       Sicklepod     Senna obtusifolia       Sida, prickly (Teaweed)     Sida spinosa       Smartweed, PA     Polygonum pensylvanicum       Sowthistle, annual     Sonchus asper       Spanishneedles     Bidens bipinnata		
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Sicklepod Senna obtusifolia Sida, prickly (Teaweed) Sida spinosa Smartweed, PA Polygonum pensylvanicum Sowthistle, annual Sonchus asper Spanishneedles Bidens bipinnata	Sheperdspurse	Capsella bursa pastoris
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Smartweed, PA     Polygonum pensylvanicum       Sowthistle, annual     Sonchus asper       Spanishneedles     Bidens bipinnata		Sida spinosa
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Spanishneedles Bidens bipinnata		
Spanishneedles Bidens bipinnata	Sowthistle, annual	Sonchus asper
Opecamon, pursiane Vervinea percynna		
	I CASSONSII. DUI SIBIIS	v cronica peregnina

Spurge, prostrate	Euphorbia humistrata			
Spurge, spotted	Euphorbia maculata			
Spurry, umbrella	Holosteum umbellatum			
Sunflower, wild, volunteer	Helianthus annuus			
Swinecress	Coronopus didymus			
Velvetleaf	Abutilon theophrasti			
Virginia pepperweed	Lepidium virginicum			
Waterhemp, common*	Amaranthus rudis			
Waterhemp, tall*	Amaranthus tuberculatos			
Yellow rocket	Barbarea vulgaris			
GRASSES	-			
Barley	Hordeum vulgare			
Barnyardgrass	Echinochloa crus-galli			
Cheat	Bromus secalinus			
Crabgrass, large	Digitaria sanguinalis			
Crabgrass, smooth	Digitaria ischaemum			
Crabgrass, Southern	Digitaria ciliaris			
Crowfootgrass	Dactyloctenium aegypticum			
Cupgrass, woolly	Erichloa villosa			
Fall panicum	Panicum dichotomiflorum			
Foxtail, giant	Setaria faberi			
Foxtail, bristly	Setaria verticillata			
Foxtail, Carolina	Alopecurus carolinianus			
Foxtail, green	Setaria viridis			
Foxtail, yellow	Setaria lutescens			
Goatgrass, jointed	Aegilops cylindrica			
Goosegrass	Eleusine indica			
Grain sorghum (milo)	Sorghum bicolor			
Itchgrass	Rottboellia cochinchinensis			
Johnsongrass, seedling	Sorghum halapense			
Junglerice	Echinochloa colona			
Oats	Avena sativa			
Rye	Secale cereale			
Ryegrass*	Lolium multiflorum			
Sandbur, field	Cenchrus spinifex			
Sandbur, longspine	Cenchrus longispinus			
Shattercane	Sorghum bicolor			
Signalgrass, broadleaf	Brachiaria platyphylla			
Sprangletop	Leptochloa fusca			
Stinkgrass	Eragrostis cilianensis			
Texas panicum	Panicum texanum			
Wheat, volunteer	Triticum aestivum			
Wild oats	Avena fatua			
Wild proso millet	Panicum miliaceum			
Witchgrass	Panicum capillare			
lote: Reneated use of the same herbicide or herbicide class can lead to increas				

Note: Repeated use of the same herbicide or herbicide class can lead to increased levels of weed tolerance or resistance to those herbicides. Some weeds in the list above may exhibit reduced levels of control due to repeated applications of glyphosate in the past. See resistance management statement on page 3 for further information.

# FIELD CORN AND SEED FIELD CORN

F7120 SC (SPARTAN ADVANCE) Use Rate Table (Corn) Fall, Spring Early Preplant and Preemergence Applications					
Broadcast Rate	fl oz/A F7	'120 SC (SPARTAN AI	DVANCE)*		
Divaucasi Nate	Soil Texture				
% Organic Matter	Coarse Medium Fine				
<1.5 21.0 – 32.0 21.0 – 32.0 26.0 – 35.0					
1.5-3.0	21.0 – 32.0	26.0 - 43.0	32.0 – 46.0		
>3 26.0 - 43.0 32.0 - 46.0 43.0 - 57.0					
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 lowest rate for pH greater than 7.0 within the rate range.

#### **Preplant Fall Applications**

Preplant Fall Applications
F7120 SC (SPARTAN ADVANCE) may be applied in the fall as a preplant treatment prior to corn planting the following spring.
F7120 SC (SPARTAN ADVANCE) can be used alone or in a tank mixture with other herbicides to control susceptible broadleaves, sedges and grasses in corn. Apply F7120 SC (SPARTAN ADVANCE) in conventional tillage or conservation tillage (reduced tillage or no-tillage) cropping systems using rates listed in Table above. F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE) runoff from rain or snowmelt that may occur following application. F7120 SC (SPARTAN ADVANCE) may be tank mixed 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 F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE) should be the mid to high rate within the rate range for the appropriate soil type and organic matter. soil type and organic matter.

<sup>\*</sup>Glyphosate resistant weeds will not be controlled postemergence with this product.

<sup>\*\*</sup>For improved postemergence control of difficult to control weeds, such as Kochia, ragweeds, Russian Thistle, and Pigweeds (including Tall Waterhemp), additional glyphosate and or Aim EC will be necessary.

<sup>\*</sup> When use rates of F7120 SC (SPARTAN ADVANCE) are less than 32 oz, additional glyphosate will be required for effective control of emerged

Early Preplant and Preemergence (Spring Applications)
F7120 SC (SPARTAN ADVANCE) may be applied preplant on the soil surface in the spring to control weeds in conventional and conservation tillage systems. F7120 SC (SPARTAN ADVANCE) can be applied 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 14-21 or more 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. To improve weed control spectrum, F7120 SC (SPARTAN ADVANCE) can be tank mixed with Aim<sup>®</sup>, Rage™ D-Tech, or other herbicides labeled for use in corn. To control insect pests such as cutworm or armyworm that may be present, F7120 SC (SPARTAN ADVANCE) may be tank mixed with insecticides including Mustang<sup>®</sup> Max or Brigade<sup>®</sup>. When planting into soil treated preplant with F7120 SC (SPARTAN ADVANCE), minimize soil disturbance to maintain the herbicide barrier on the soil surface to achieve maximum weed control. Observe all precautions 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.

These Crop Specific Use directions are based upon the interactive effects of F7120 SC (SPARTAN ADVANCE) 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, Product F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE). Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F7120 SC (SPARTAN ADVANCE) under presific local penditions. ADVANCE) under specific local conditions.

#### **Hybrid Corn Seed Production**

Corn inbred lines grown for hybrid seed production may be injured in the growing season following an application of F7120 SC (SPARTAN ADVANCE). Inbred lines should be thoroughly tested for crop tolerance before rotating to production scale acreages

Do not apply more than 85.7 fl oz/A (0.37 lb ai sulfentrazone and 2.7 lb ai glyphosate) per twelve-month period.

Do not apply more than 57.6 fl oz/A (0.25 lb ai sulfentrazone and 1.81 lb ai glyphosate) in a single application.

Do not apply more than two applications per year when using reduced application rates equal or less than 42.8 fl/oz/A of this product.
The twelve-month period is considered to begin upon the initial F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE) runoff from rain or snowmelt that may occur following application.

#### FALLOW OR POST HARVEST BURNDOWN

F7120 SC (SPARTAN ADVANCE) may be applied in the fall following crop harvest or in existing fallow fields using rates recommended in table below. Follow crop rotational restrictions when replanting following F7120 SC (SPARTAN ADVANCE) applications.

F7120 SC (SPARTAN ADVANCE) Use Rate Table (Fallow or Post Harvest Burndown) Fall and Spring Fallow Applications					
Broadcast Rate	fl oz/A F7	7120 SC (SPARTAN ADVA	NCE)*		
	Soil Texture				
% Organic Matter	Coarse Medium Fine				
<1.5	21.0 - 26.0 21.0 - 32.0 26.0 - 35.0				
1.5-3.0 26.0 – 35.0 26.0 – 43.0 32.0 – 46.0					
>3 32.0 – 43.0 32.0 – 57.0 35.0 – 57.0					
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 lowest rate for pH greater than 7.0 within the rate range.					

<sup>\*</sup> When use rates of F7120 SC (SPARTAN ADVANCE) are less than 32 oz, additional glyphosate will be required for effective control of emerged weeds.

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

F7120 SC (SPARTAN ADVANCE) may be applied in the fall following crop harvest or in existing fallow fields to control or suppress weeds the following season. The Rotational Crop Guidelines in the Crop Rotational Guideline Table must be followed if crops are planted the next season. F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE) runoff from rain or snow that may occur following application. F7120 SC (SPARTAN ADVANCE) may be tank mixed with herbicides to control emerged weeds. Sequential applications may be needed depending on weed size. Use full, listed rates of burndown herbicides in combination with F7120 SC (SPARTAN ADVANCE), or sequential applications as needed. Higher aerial spray volumes are required when there is a dense weed population or canopy.

F7120 SC (SPARTAN ADVANCE) can be tank mixed 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**F7120 SC (SPARTAN ADVANCE) may be applied as a fallow treatment early in the spring. Follow the same use rate recommendations and application guidelines listed under the Fall Application section above.

When applied according to directions, F7120 SC (SPARTAN ADVANCE) will provide control of:

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

#### **Precautions**

These Crop Specific Use directions are based upon the interactive effects of F7120 SC (SPARTAN ADVANCE) 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, Product F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE). Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F7120 SC (SPARTAN ADVANCE) under specific local conditions.

Do not apply more than 57.6 fl oz/A (0.25 lb ai sulfentrazone and 1.81 lb ai glyphosate) per twelve-month period.

Do not apply more than 57.6 fl oz/A (0.25 lb ai sulfentrazone and 1.81 lb ai glyphosate) in a single application.

Do not apply more than two applications per year when using reduced application rates equal or less than 28.8 fl/oz/A of this product.
The twelve-month period is considered to begin upon the initial F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE) runoff from rain or snowmelt that may occur following application.

See the CROP ROTATION INTERVALS Table for crops which can be planted after a fallow (fall or spring) or post harvest

## **PEANUTS**

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

Apply F7120 SC (SPARTAN ADVANCE) 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. Spartan Herbicide is registered for use on peanuts only in the following states: AL, GA, MS, NC, SC and VA.

#### When applied as directed at 34 fl oz/A, F7120 SC (SPARTAN ADVANCE) will provide control of the following weed species1:

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

1Specified 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 higher rate shown below (45 oz)

# When applied as directed at 45 fl oz/A, F7120 SC (SPARTAN ADVANCE) will provide control of the following weed species2:

All the weeds controlled at 34 fl oz/A plus:	
Amaranthus, Palmer	Morningglory, smallflower
Crabgrass, large	Poinsettia, wild
Crabgrass, Southern	Redweed
Eclipta	Senna, coffee
Goosegrass	Signalgrass, broadleaf
Morningglory, pitted	Smartweed, PA (seedling)

<sup>2</sup>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 higher rate shown below (57 oz).

### When applied as directed at 57 fl oz/A, F7120 SC (SPARTAN ADVANCE) will provide control of the following weed species3:

All the weeds controlled at 45 fl oz/A plus:	
Anoda, spurred	Purslane, common
Cocklebur, common	Sida, prickly
Nutsedge, yellow	Starbur, prickly
Nutsedge, purple	

3 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 application rates between 57 and 64.8 oz/A. Do not exceed 64.8 oz/A.

In soils with pH greater than 7, use the next lower Spartan F7120 SC (SPARTAN ADVANCE) application rate. Irrigation with alkaline (pH 8 to 9) water can result in adverse crop response. The extent of crop response is dependent on F7120 SC (SPARTAN ADVANCE) application rate, soil type (including %OM and pH), timing (after F7120 SC (SPARTAN ADVANCE) application relative to crop emergence), amount and pH of irrigation water. Do not irrigate with water greater than pH 9.

F7120 SC (SPARTAN ADVANCE) may be applied in the fall as a preplant treatment prior to peanut planting the following spring. F7120 SC (SPARTAN ADVANCE) can be used alone or in a tank mixture with other herbicides to control susceptible broadleaves, sedges and grasses in soybean. Apply F7120 SC (SPARTAN ADVANCE) in conventional tillage or conservation tillage (reduced tillage or no-tillage) cropping systems using rates listed above. F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE) runoff from rain or snowmelt that may occur following application. F7120 SC (SPARTAN ADVANCE) and be tank mixed with other burndown herbicides to control emerged weeds in the fall or residual soil herbicides that are labeled for fall use on peanut. Due to the extended period of time between the fall application and peanut planting, the use rate of F7120 SC (SPARTAN ADVANCE) should be the mid to high rate within the rate range for the appropriate soil type and organic matter.

Early Preplant and Preemergence
F7120 SC (SPARTAN ADVANCE) herbicide may be applied to the soil surface at planting, or within 12 hours after planting. See above for listed use rates. Do not use F7120 SC (SPARTAN ADVANCE) Herbicide for "at-crack" type applications or apply to exposed peanut tissue. Such use can result in significant adverse crop response. Under conditions of exceptionally high weed

populations or when weeds not controlled by F7120 SC (SPARTAN ADVANCE) are anticipated, the use of suitable postemergent peanut herbicides is recommended.

#### **Precautions**

These Crop Specific Use directions are based upon the interactive effects of F7120 SC (SPARTAN ADVANCE) 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, F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE). Consult university or extension weed management specialists for additional information on specific local`varieties or cultivars and any other pertinent information on F7120 SC (SPARTAN ADVANCE) under specific local conditions.

#### Restrictions

Do not apply more than 64.8 fl oz/A of F7120 SC (SPARTAN ADVANCE) (0.28 lb ai sulfentrazone and 2.0 lb ai glyphosate) per twelve-month period.

Do not apply more than 57.6 fl oz/A (0.25 lb ai sulfentrazone and 1.81 lb ai glyphosate) in a single application.

Do not apply more than two applications per year when using reduced application rates equal or less than 32.4 fl/oz/A of this

The twelve-month period is considered to begin upon the initial Spartan 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**

#### **Preemergence Applications**

Apply Spartan Herbicide by aerial application as a preemergence treatment following planting and after dragoff, but prior to potato emergence. Optimum performance can be achieved if F7120 SC (SPARTAN ADVANCE) 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 below. Do not apply F7120 SC (SPARTAN ADVANCE) if the potatoes have emerged from the soil as undesirable crop response may occur. F7120 SC (SPARTAN ADVANCE) is the potatoes have emerged from the soil as undesirable crop response may occur. F7120 SC (SPARTAN ADVANCE) is the potatoes have emerged from the soil as undesirable crop response may occur. F7120 SC (SPARTAN ADVANCE) is the potatoes have emerged from the soil as undesirable crop response may occur. F7120 SC (SPARTAN ADVANCE) is the potatoes have emerged from the soil as undesirable crop response may occur. F7120 SC (SPARTAN ADVANCE) is the potatoes have emerged from the soil as undesirable crop response may occur. F7120 SC (SPARTAN ADVANCE) is the potatoes have emerged from the soil as undesirable crop response may occur. ADVANCE) may be tank mixed with other soil-applied herbicides labeled for use in potatoes to improve weed management and increase weed control spectrum.

F7120 SC (SPARTAN ADVANCE) Use Rate Table (Potatoes) Preemergence Application			
Broadcast Rate fl oz/A F7120 SC (SPARTAN ADVANCE)*			
Dioducasi Rate	Soil Texture		
% Organic Matter	Coarse	Medium	Fine
<1.5	14.0 – 21.0	14.0 – 21.0	18.0 – 25.0
1.5 – 3.0	14.0 – 21.0	18.0 – 28.0	21.0 – 28.0
>3.0	21.0 – 28.0	25.0 – 32.0	28.0 - 38.0
*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 lowest rate for pH greater than 7.0 within the rate range.			

When use rates of F7120 SC (SPARTAN ADVANCE) are less than 32 oz, additional glyphosate will be required for effective control of emerged weeds.

# Weeds Controlled

When applied according to directions, F7120 SC (SPARTAN ADVANCE) 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

### **Precautions**

Potato varieties may vary in their response to herbicide applications. When using F7120 SC (SPARTAN ADVANCE) on an untested variety, always determine the crop tolerance before planting. Some potato varieties, including Sangre, Shepody and Snowden, have shown sensitivity to Spartan 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 F7120 SC (SPARTAN ADVANCE) 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, Product F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE). Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F7120 SC (SPARTAN ADVANCE) under specific local conditions.

# Restrictions

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

Do not apply Spartan Herbicide after potato emergence from the soil as undesirable crop response may occur.

Do not apply more than 57.6 fl oz/A (0.25 lb ai sulfentrazone and 1.81 lb ai glypohosate) per twelve-month period.

Do not apply more than 57.6 fl oz/A (0.25 lb ai sulfentrazone and 1.81 lb ai glyphosate) in a single application.

Do not apply more than two applications per year when using reduced application rates equal or less than 28.8 fl/oz/A of this product.

The twelve-month period is considered to begin upon the initial F7120 SC (SPARTAN ADVANCE) application.

# **SOYBEANS**

Apply F7120 SC (SPARTAN ADVANCE) in conventional tillage, conservation tillage, reduced tillage or no-tillage cropping systems using rates listed in the F7120 SC (SPARTAN ADVANCE) Use Rate Table below.

Fall, Spring Early Preplant and Preemergence Applications  fl o/A F7120 SC (SPARTAN ADVANCE)*			
Broadcast Rate	Soil Texture		
% Organic Matter	Coarse	Medium	Fine
<1.5	32.0 – 43.0	43.0 – 57.0	57.0
1.5-3	43.0 – 57.0	57.0 – 70.0	70.0
>3	57.0 – 70.0	70.0 – 85.0	85.0

<sup>\*</sup> When use rates of F7120 SC (SPARTAN ADVANCE) are less than 32 oz, additional glyphosate will be required for effective control of emerged weeds.

Do not harvest soybean forage for livestock feed.

#### **Preplant Fall Applications**

Preplant Fall Applications
F7120 SC (SPARTAN ADVANCE) may be applied in the fall as a preplant treatment prior to soybean planting the following spring using rates listed in Table above. F7120 SC (SPARTAN ADVANCE) can be used alone or in a tank mixture with other herbicides to control susceptible broadleaves, sedges and grasses in soybean. F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE) runoff from rain or snowmelt that may occur following application. F7120 SC (SPARTAN ADVANCE) may be tank mixed with other burndown herbicides to control emerged weeds in the fall or residual soil herbicides that are labeled for fall use on soybean. Due to the extended period of time between the fall application and soybean planting, the use rate of F7120 SC (SPARTAN ADVANCE) should be the mid to high rate within the rate range for the appropriate soil type and organic matter appropriate soil type and organic matter.

Preplant & Preemergence Applications
F7120 SC (SPARTAN ADVANCE) can be applied prior to planting or up to 3 days after planting as a preemergent soil application if seedlings have not broken the soil surface and if the seed furrow is completely closed. When applications are delayed greater than 3 days after planting, injury may occur if seeds are germinating. F7120 SC (SPARTAN ADVANCE) applied near or after crop emergence may cause severe injury to the crop. Refer to table above for listed use rates. To improve weed control spectrum, F7120 SC (SPARTAN ADVANCE) can be tank mixed with AimTM, Rage D-TechTM, or other herbicides labeled for use in soybean. Always follow the most restrictive label when tank mixing.

Reduced Rates for Roundup Ready® Soybeans
F7120 SC (SPARTAN ADVANCE) may be used at reduced rates in conjunction with planned follow-up weed control applications with glyphosate based herbicide products labeled for use on Roundup Ready® soybean varieties. For preemergent weed control in reduced rate programs additional glyphosate may be needed to provide more consistent burndown of existing weeds, especially if rates below 32 oz of F7120 SC (SPARTAN ADVANCE) are used. Follow all F7120 SC (SPARTAN ADVANCE) application directions

Apply before planting, at planting time or prior to seed germination. Do not apply later than 3 days after planting or if seeds are germinating. Properly closed seed furrows are required when applying at planting time or before seed germination. Recommended postemergence treatments may include any product or combination of products labeled for use.

# **SOYBEANS - REDUCED RATE APPLICATIONS**

F7120 SC (SPARTAN ADVANCE) Use Rate Table for Reduced Rates			
Fall, Preplant, And Preemergence Applications			
(Reduced rates for the Suppression of Weeds Listed to Reduce Early Season Weed Competition in			
Glyphosate Tolerant Soybean Systems.)			
Broadcast Rate fl oz/A F7120 SC (SPARTAN ADVANCE)*		CE)*	
Dioducasi Rate	Soil Texture		
% Organic Matter	Coarse	Medium	Fine
1.0 – 2.0	23.0	23.0-30.0	30.0-36.0
2.0 – 4.0	23.0-30.0	30.0-36.0	36.0
Refer to the following chart for information on soil type under the COARSE, MEDIUM, and FINE categories.			
Use higher rates for soils of pH less than 7.0 and lowest rate for pH greater than 7.0 within the rate range.			

<sup>\*</sup> Do not use on coarse soils classified as sand, which have less than 1% organic matter. \*When use rates of F7120 SC (SPARTAN ADVANCE) are less than 32 oz, additional glyphosate will be required for effective control of emerged weeds.

# **Precautions**

When applying F7120 SC (SPARTAN ADVANCE) with other registered herbicides, refer to specific label information on precautions,

when applying F7120 SC (SPARTAN ADVANCE) with other registered herbicides, refer to specific laber information on precautions, instructions, limitations, application methods and timings, and weeds controlled.

F7120 SC (SPARTAN ADVANCE) is especially effective against a wide range of economic broadleaf and grass weeds. The same processes that F7120 SC (SPARTAN ADVANCE) 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 a return to normal growing conditions.

#### Restrictions

Do not apply more than 85.7 fl oz/A of F7120 SC (SPARTAN ADVANCE) (0.37 lb ai sulfentrazone and 2.7 lb ai glyphosate per twelve-month period.

Do not apply more than 85.7 fl oz/A (0.37 lb ai sulfentrazone and 2.7 lb ai glyphosate) in a single application.

Do not apply more than two applications per year when using reduced application rates equal or less than 42.8 fl/oz/A of this product.

The twelve-month period is considered to begin upon the initial F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE) runoff from rain or snowmelt that may occur following application. Do not apply after crop seed germination.

Do not harvest forage of feed forage to livestock

#### SUGARCANE

Apply F7120 SC (SPARTAN ADVANCE) as a broadcast or banded preemerge soil applied treatment for the control of broadleaf weeds, grasses and sedges in sugarcane. Refer to the F7120 SC (SPARTAN ADVANCE) Product Use Rate Table below for specific use information.

F7120 SC (SPARTAN ADVANCE) Use Rate Table (Sugarcane) Preemerge and Planting Time Applications			
Broadcast Rate fl oz/A F7120 SC (SPARTAN ADVANCE)		Ε)	
Dioaucast Nate		Soil Texture	
% Organic Matter	Coarse	Medium	Fine
<1.5	32.0 – 43.0	43.0 – 57.0	57.0
1.5-3	43.0 – 57.0	57.0 – 70.0	70.0
>3	57.0 – 70.0	70.0 – 85.0	85.0

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 lowest rate for pH greater than 7.0 within the rate range.

Planting Time Applications
Apply F7120 SC (SPARTAN ADVANCE) preemergent to newly planted 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. F7120 SC (SPARTAN ADVANCE) may be applied with other herbicides registered for use in sugarcane.

**Aerial Applications** 

F7120 SC (SPARTAN ADVANCE) may be applied preemergent to newly planted sugarcane by air in a minimum of 5 gallons of finished spray per acre. F7120 SC (SPARTAN ADVANCE) may be applied with other herbicides or insecticides registered for aerial application in sugarcane.

#### **Precautions**

These Crop Specific Use directions are based upon the interactive effects of F7120 SC (SPARTAN ADVANCE) 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, Product F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE). Consult university or extension weed management specialists for additional information on specific legal, varieties or a publicate and any other portions information on specific legal, varieties or a publicate portion of the product information on specific legal, varieties or a publicate portion of the product information on specific legal, varieties or a publicate portion of the product information on specific legal, varieties or a publicate product information on specific legal, varieties or a publicate product information on specific legal, varieties or a publicate product information on specific legal. for additional information on specific local varieties or cultivars and any other pertinent information on F7120 SC (SPARTAN ADVANCE) under specific local conditions.

#### Restrictions

Do not apply more than 85.7 fl oz/A of F7120 SC (SPARTAN ADVANCE) (0.37 lb ai sulfentrazone and 2.7 lb ai glyphosate) per twelve-month period.

Do not apply more than 85.7 fl oz/A (0.37 lb ai sulfentrazone and 2.7 lb ai glyphosate) in a single application.

Do not apply more than two applications per year when using reduced application rates equal or less than 42.8 fl/oz/A of this product.

The twelve-month period is considered to begin upon the initial F7120 SC (SPARTAN ADVANCE) application.

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

Do not allow spray to contact crop leaves.

#### **Weeds Controlled**

# When applied according to directions, F7120 SC (SPARTAN ADVANCE) will provide control of:

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

See section for POST-emergent weeds controlled

## SUNFI OWERS

SOIN EOWERO			
F7120 SC (SPARTAN ADVANCE) Use Rate Table (Sunflowers) Fall, Early Spring Preplant and Preemergence Applications			
Broadcast Rate fl oz/A F7120 SC (SPARTAN ADVANCE)*			
Dioducasi Kale	Soil Texture		
% Organic Matter	Coarse	Medium	Fine
<1.5	21.0 – 26.0	21.0 – 32.0	26.0 - 35.0
1.5-3.0	21.0 – 32.0	26.0 – 43.0	32.0 – 46.0
>3	26.0 – 43.0	32.0 – 46.0	43.0 – 57.0
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 lowest rate for pH greater than 7.0 within the rate range.			

<sup>\*</sup> When use rates of F7120 SC (SPARTAN ADVANCE) are less than 32 oz, additional glyphosate will be necessary for control of emerged weeds. For enhanced control of emerged very small kochia and other broadleaf weeds, the addition of Aim Herbicide is recommended

Fall Applications
F7120 SC (SPARTAN ADVANCE) may be applied in the fall as a preplant treatment to control or suppress weeds prior to planting sunflowers the following spring. F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE) runoff from rain or snow melt that may occur following application. F7120 SC (SPARTAN ADVANCE) may be tank mixed with other residual soil herbicides that are labeled for fall use on sunflowers. Select the appropriate rate from Table above above within the correct soil type and organic matter range. When applying F7120 SC (SPARTAN ADVANCE) in the fall use a mid to high rate within the rate range for the appropriate soil type and organic matter. ADVANCE) 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)
F7120 SC (SPARTAN ADVANCE) may be applied preplant on the soil surface in the spring to control weeds in sunflowers. F7120 SC (SPARTAN ADVANCE) can be applied early preplant prior to planting up to 3 days after planting as a preemergent soil application if seedlings have not broken the soil surface and if the seed furrow is completely closed. For preemergent 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. To improve weed control spectrum, F7120 SC (SPARTAN ADVANCE) can be tank mixed with Aim, Rage, or other herbicides labeled for use in sunflower. If adequate moisture (1/2" to 1" of rainfall or irrigation) is not received within 7 to 10 days, erratic preemergent weed control may result. Erratic preemergent weed control may also occur if dry conditions persist throughout the growing season. Additional moisture is needed throughout the growing season to maintain herbicide activity and prevent weed escapes. prevent weed escapes.

#### **Precautions**

When applying F7120 SC (SPARTAN ADVANCE) to coarse textured soils, growers must allow a minimum of 7-14 days from application to planting. Best results are achieved with F7120 SC (SPARTAN ADVANCE) when applications are made early preplant and greater than 14 days 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. F7120 SC (SPARTAN ADVANCE) use rates should be reduced or F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE) 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, Product F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE). Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F7120 SC (SPARTAN ADVANCE) under specific local conditions.

#### Restrictions

Do not apply more than the use rate listed, by soil type, % OM and pH, in table above of the sunflower section in a 12 month period.

Do not apply more than 57.6 fl oz/A of F7120 SC (SPARTAN ADVANCE) (0.25 lb ai sulfentrazone and 1.81 lb ai glyphosate) per twelve-month period.

Do not apply more than 57.6 fl oz/A (0.25 lb ai sulfentrazone and 1.81 lb ai glyphosate) in a single application.

Do not apply more than two applications per year when using reduced application rates equal or less than 28.8 fl/oz/A of this

The twelve-month period is considered to begin upon the initial F7120 SC (SPARTAN ADVANCE) application.

Do not apply to frozen soils or existing snow cover to prevent F7120 SC (SPARTAN ADVANCE) 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.

# **Weeds Controlled**

When applied according to directions, F7120 SC (SPARTAN ADVANCE) will provide control of:

Amaranth, Palmer	Pigweed, red root
Kochia (ALS and Triazine Resistant)	Pigweed, smooth
Lambsquarters, common	Thistle, Russian
Nightshade, Eastern black	Waterhemp, common
Nightshade, black	Waterhemp, tall

See section for POST-emergent weeds controlled

# CABBAGE (Transplanted Only)

F7120 SC (SPARTAN ADVANCE) Use Rate Table (Cabbage) Fall or Spring Early Preplant and Pretransplant Applications				
Broadcast Rate	Broadcast Rate fl oz/A F7120 SC (SPARTAN ADVANCE)*			
Soil Texture				
% Organic Matter	Coarse Medium Fine			
<1.5	<1.5 16.0 – 21.0 21.0 – 32.0 21.0 – 43.0			
1.5-3.0 21.0 - 43.0 43.0 - 64.0 43.0 - 64.0				
>3.0 43.0 – 64.0 43.0 – 85.0 43.0 – 85.0				
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 lowest rate for pH greater than 7.0 within the rate range.

Early Preplant (Fall Application or Spring Application)

F7120 SC (SPARTAN ADVANCE) may be applied in the fall or spring preceding the growing season to control weeds prior to transplanting cabbage. See rate table above for listed application rates. F7120 SC (SPARTAN ADVANCE) may be applied in the spring from 60 days prior to planting up to planting time. F7120 SC (SPARTAN ADVANCE) 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

<sup>\*</sup> When use rates of F7120 SC (SPARTAN ADVANCE) are less than 32 oz, additional glyphosate will be required for effective control of emerged weeds.

occur. Do not apply to frozen soils to prevent F7120 SC (SPARTAN ADVANCE) runoff from rain or snow that may occur following application. F7120 SC (SPARTAN ADVANCE) 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 fall use on cabbage. Use the full, listed rates of burndown herbicides in combination with F7120 SC (SPARTAN ADVANCE), 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** 

F7120 SC (SPARTAN ADVANCE) may be applied Pretransplant as a broadcast or banded treatment to transplanted cabbage only. Make applications broadcast or banded treatment prior to transplanting.

These Crop Specific Use directions are based upon the interactive effects of F7120 SC (SPARTAN ADVANCE) 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, Product F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE). Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F7120 SC (SPARTAN ADVANCE) under preside local varieties or cultivars and any other pertinent information on F7120 SC (SPARTAN ADVANCE) and the president information on the president information on F7120 SC (SPARTAN ADVANCE) under president information on the president information on F7120 SC (SPARTAN ADVANCE) and the president information on the president information informatio ADVANCE) under specific local conditions.

#### Restrictions

Do not apply more than 85.7 fl oz/A of F7120 SC (SPARTAN ADVANCE) (0.37 lb ai sulfentrazone and 2.7 lb ai glyphosate) per twelve-month period.

Do not apply more than 85.7 fl oz/A (0.37 lb ai sulfentrazone and 2.7 lb ai glyphosate) in a single application.

Do not apply more than two applications per year when using reduced application rates equal or less than 42.8 fl/oz/A of this

The twelve-month period is considered to begin upon the initial F7120 SC (SPARTAN ADVANCE) application.

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

The preharvest interval is 80 days.

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.

F7120 SC (SPARTAN ADVANCE) Use Rate Table (Dry Shelled Beans Peas) Fall or Spring Early Preplant and Preemergence Applications				
Broadcast Rate	Prendent Pete fl oz/A F7120 SC (SPARTAN ADVANCE)*			
Divaucasi Nate	Soil Texture			
% Organic Matter	Coarse Medium Fine			
<1.5	<1.5			
1.5-3.0	21.0 – 32.0 26.0 – 43.0 32.0 – 43.0			
>3.0	26.0 – 43.0	32.0 – 46.0	35.0 – 57.0	
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 lowest rate for pH greater than 7.0 within the rate range.

Early Preplant and Fall Applications (For use only in ND, SD, MT, MN, WY, CO, NE, KS, WI, MI, OR, ID, WA, OR, MT)
F7120 SC (SPARTAN ADVANCE) may be applied in the fall as a preplant treatment to control or suppress weeds prior to planting the following spring. F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE) runoff from rain or snow melt that may occur following application. F7120 SC (SPARTAN ADVANCE) may be tank mixed with other residual soil herbicides that are labeled for fall use on dry bean and dry peas. Select the appropriate rate from Table above within the correct soil type and organic matter. use a mid to high rate within the rate range for the appropriate soil type and organic matter.

Early Preplant and Preemergence (Spring Applications)
F7120 SC (SPARTAN ADVANCE) may be applied preplant on the soil surface in the spring to control weeds in dry bean and dry peas. F7120 SC (SPARTAN ADVANCE) 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. F7120 SC (SPARTAN ADVANCE) can be tank mixed with other preemerge herbicides labeled for use on dry bean and dry peas. If adequate moisture (1/2" to 1" of rainfall or irrigation) is not received within 7 to 10 days, erratic preemergent weed control may result. Erratic preemergent weed control may also occur if dry conditions persist throughout the growing season. Additional moisture is needed throughout the growing season to maintain herbicide activity and prevent weed secanes escapes.

#### **Precautions**

When applying F7120 SC (SPARTAN ADVANCE) to coarse textured soils, growers must allow a minimum of 7-14 days from application to planting. Best results are achieved with F7120 SC (SPARTAN ADVANCE) when applications are made early preplant and greater than 14 days 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. F7120 SC (SPARTAN ADVANCE) use rates should be reduced in these 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.

<sup>\*</sup> When use rates of F7120 SC (SPARTAN ADVANCE) are less than 32 oz, additional glyphosate will be required for effective control of emerged

These Crop Specific Use directions are based upon the interactive effects of F7120 SC (SPARTAN ADVANCE) 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, Product F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE). Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F7120 SC (SPARTAN ADVANCE) under specific local conditions.

Do not apply more than 57.6 fl oz/A (0.25 lb ai sulfentrazone and 1.81 lb ai glyphosate) per twelve-month period.

Do not apply more than 57.6 fl oz/A (0.25 lb ai sulfentrazone and 1.81 lb ai glyphosate) in a single application.

Do not apply more than two applications per year when using reduced application rates equal or less than 28.8 fl/oz/A of this product.

The twelve-month period is considered to begin upon the initial F7120 SC (SPARTAN ADVANCE) application.

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

Do not apply to frozen soils or to existing snow cover to prevent F7120 SC (SPARTAN ADVANCE) 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.

Do not feed livestock treated crop or allow them to graze harvested fields.

The preharvest interval is 90 days.

#### **Weeds Controlled**

When applied according to directions, F7120 SC (SPARTAN ADVANCE) will provide control of:

Kochia (ALS and Triazine Resistant)	Thistle, Russian
Lambsquarters, common	Pigweed, smooth
Nightshade, Eastern black	Waterhemp, common
Nightshade, black	Waterhemp, tall
Pigweed, red root	

See section for POST-emergent weeds controlled

## HORSERADISH

F7120 SC (SPARTAN ADVANCE) Use Rate Table (Horseradish) Fall or Spring Early Preplant and Preemergence Applications				
Broadcast Rate	fl oz/A F7120 SC (SPARTAN ADVANCE)*			
Divaucasi Nate	Soil Texture			
% Organic Matter	Coarse Medium Fine			
<1.5	16.0 – 32.0 21.0 – 32.0 21.0 – 32.0			
1.5-3.0	32.0 - 43.0 43.0 - 57.0 43.0 - 57.0			
>3.0 43.0 - 53.0 43.0 - 57.0 43.0 - 57.0				
Refer to the previous information on soil types under the COARSE, MEDIUM, and FINE categories				

<sup>\*</sup> When use rates of F7120 SC (SPARTAN ADVANCE) are less than 32 oz, additional glyphosate will be required for effective control of emerged weeds.

F7120 SC (SPARTAN ADVANCE) may be applied as a preplant preemerge 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)
F7120 SC (SPARTAN ADVANCE) 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. See rate table above for application rates. F7120 SC (SPARTAN ADVANCE) may be applied in the spring from 60 days prior to planting up to planting. F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE) runoff from rain or snow that may occur following application. F7120 SC (SPARTAN ADVANCE) 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 horseradish. Use full, listed rates of burndown herbicides in combination with F7120 SC (SPARTAN ADVANCE), 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.

Preemergence
F7120 SC (SPARTAN ADVANCE) may be applied preemerge 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. Use the higher F7120 SC (SPARTAN ADVANCE) rates on clay soils and/or soils with greater than 1% organic matter. F7120 SC (SPARTAN ADVANCE) may be applied with other pesticides registered for use on horseradish.

#### **Precautions**

These Crop Specific Use directions are based upon the interactive effects of F7120 SC (SPARTAN ADVANCE) 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, Product F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE). Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F7120 SC (SPARTAN ADVANCE) under specific local conditions.

Do not apply more than 57.6 fl oz/A of F7120 SC (SPARTAN ADVANCE) (0.25 lb ai sulfentrazone and 1.81 lb ai glyphosate) per twelve-month period.

Do not apply more than 57.6 fl oz/A (0.25 lb ai sulfentrazone and 1.81 lb ai glyphosate) in a single application.

Do not apply more than two applications per year when using reduced application rates equal or less than 28.8 fl/oz/A of this product.
The twelve-month period is considered to begin upon the initial F7120 SC (SPARTAN ADVANCE) 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.

**LIMA BEANS, SUCCULENT (Tennessee Only)**F7120 SC (SPARTAN ADVANCE) may be applied to limas prior to planting, up to 3 days after planting if seedlings have not broken the soil surface and if the seed furrow is completely closed. See rate table below for soil-specific application rates. Applications should be made with ground equipment in a minimum of 10 gallons of finished spray per acre.

F7120 SC (SPARTAN ADVANCE) Use Rate Table (Succulent Lima Beans) Spring Preemergence Applications			
Broadcast Rate	President Pete fl oz/A F7120 SC (SPARTAN ADVANCE)*		
Dioaucast Nate	Soil Texture		
% Organic Matter	Coarse Medium Fine		
<1.5 16.0 – 26.0 21.0 – 43.0 26.0 – 43.0			
1.5 – 3.0	21.0 – 32.0	26.0 – 43.0	32.0 – 43.0
>3.0	26.0 – 43.0	32.0 – 43.0	35.0 – 43.0
D.C. I. H. COADOE MEDIUM LEME I			

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 lowest rate for pH greater than 7.0 within the rate range.

When applying F7120 SC (SPARTAN ADVANCE) to coarse textured soils, growers must allow a minimum of 7-14 days from application to planting. Best results are achieved with F7120 SC (SPARTAN ADVANCE) when applications are made early preplant and greater than 14 days before planting.

Some adverse crop response may occur on coarse textured soils with low organic matter (less than 1%) and pH of 7.8 or higher, or on highly eroded soils, or in areas of calcareous outcroppings. F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE) and the primary soil Inese Crop Specific Use directions are based upon the interactive effects of F7120 SC (SPARTAN ADVANCE) 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, Product F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE). Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F7120 SC (SPARTAN ADVANCE) under specific local conditions. ADVANCE) under specific local conditions.

Do not apply more than 43.0 fl oz/A (0.18 lb ai sulfentrazone and 1.35 lb ai glyphosate) per twelve-month period.

Do not apply more than 43 fl oz/A (0.18 lb ai sulfentrazone and 1.35 lb ai glyphosate) in a single application.

Do not apply more than one application per year when using reduced application rates equal or less than 21.5 fl/oz/A of this product. The twelve-month period is considered to begin upon the initial F7120 SC (SPARTAN ADVANCE) application.

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

Do not harvest crop for 90 days after the last application.

Do not harvest forage or feed forage to livestock.

## PEPPERMINT AND SPEARMINT

New Planting Applications
F7120 SC (SPARTAN ADVANCE) may be applied to new mint plantings preemergence to the mint if seedlings have not broken the soil surface and if the seed furrow is completely closed. Refer to F7120 SC (SPARTAN ADVANCE) Use Rate Table below 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.

F7120 SC (SPARTAN ADVANCE) Use Rate Table (Mint) For New Planting Applications			
Broadcast Rate	Propheset Pete fl oz/A F7120 SC (SPARTAN ADVANCE)		
Divaucasi Nate	Soil Texture		
% Organic Matter	Coarse	Medium	Fine
<1.5	32.0 – 43.0	43.0 – 57.0	57.0
1.5 - 3.0	43.0 – 57.0	57.0 – 70.0	70.0
>3.0	57.0 – 70.0	70.0 – 85.0	85.0

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 lowest rate for pH greater than 7.0 within the rate range.

<sup>\*</sup> When use rates of F7120 SC (SPARTAN ADVANCE) are less than 32 oz, additional glyphosate will be required for effective control of emerged weeds.

#### **Precautions**

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

These Crop Specific Use directions are based upon the interactive effects of F7120 SC (SPARTAN ADVANCE) 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, Product F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE). Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F7120 SC (SPARTAN ADVANCE) under specific local conditions.

#### Restrictions

Apply F7120 SC (SPARTAN ADVANCE) only to 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 85.7 fl oz/A of F7120 SC (SPARTAN ADVANCE) (0.37 lb ai sulfentrazone and 2.7 lb ai glyphosate) per twelve-month period.

Do not apply more than 85.7 fl oz/A (0.37 lb ai sulfentrazone and 2.7 lb ai glyphosate) in a single application.

Do not apply more than two applications per year when using reduced application rates equal or less than 42.8 fl/oz/A of this product

The twelve-month period is considered to begin upon the initial F7120 SC (SPARTAN ADVANCE) application.

Do not harvest for 92 days after last application.

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

F7120 SC (SPARTAN ADVANCE) Use Rate Table (Tobacco) Pre-Plant and Pre-Plant Incorporated Applications			
Broadcast Rate fl oz/A F7120 SC (SPARTAN ADVANCE)			
Soil Texture			
Coarse	Medium	Fine	
32 to 43	43 to 57	57	
43 to 57 57 to 72 72			
>3 57 to 72 72 to 86 86			
Refer to the previous information on soil types under COURSE, MEDIUM and FINE categories.  Use higher rates for soil of pH less than 7 and lower rates pH greater than 7 within the rate range.			
	Pre-Plant and Pre-Plant Inc fl oz/A F71  Coarse 32 to 43 43 to 57 57 to 72  formation on soil types under COU	Pre-Plant and Pre-Plant Incorporated Application           fl oz/A F7120 SC (SPARTAN ADVAI Soil Texture           Coarse         Medium           32 to 43         43 to 57           43 to 57         57 to 72           57 to 72         72 to 86           formation on soil types under COURSE, MEDIUM and FINE	

F7120 SC (SPARTAN ADVANCE) may be applied pre-plant or pre-plant incorporated (to a depth no greater than 2 inches) from 12 hours to 14 days prior to transplanting tobacco. In corporating F7120 SC (SPARTAN ADVANCE) deeper than 2 inches can result in inconsistent weed control.

Broadcast apply the appropriate F7120 SC (SPARTAN ADVANCE) 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, fertilizater/fungicide incorporated, etc. prior to the application of F7120 SC (SPARTAN ADVANCE). Once the field has been prepared for planting, F7120 SC (SPARTAN ADVANCE) may be surface applied or lightly pre-plant incorporated from 12 hours up to 14 days prior to transplanting.

If F7120 SC (SPARTAN ADVANCE) is surface applied and it is necessary to remove equipment tracks 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 F7120 SC (SPARTAN ADVANCE) to formed beds as a surface application from 12 hours to 14 days prior to transplanting. If it is customary to drag/knock down beds prior to transplanting, this procedure must be performed prior to the F7120 SC (SPARTAN ADVANCE) application. When incorporating prior to bedding, F7120 SC (SPARTAN ADVANCE) must be thoroughly and uniformly incorporated to a depth no greater than 2 inches to avoid concentrating F7120 SC (SPARTAN ADVANCE) 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 F7120 SC (SPARTAN ADVANCE) and 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.

When Applied according to directions, F7120 SC (SPARTAN ADVANCE) will provide control of emerged weeds as a burndown application to beds. Refer to Product Postemergent Weeds Controlled Table.

When Applied according to directions, F7120 SC (SPARTAN ADVANCE) will provide Pre-Emergent control of:

Redroot Pigweed	Lambsquarter, Common
Smooth Pigweed	Morningglory, Ivyleaf
Redstem Filaree	Broadleaf Signalgrass
Prickly Sida	Morningglory, Tall
Hairy Gallinsoga	Pennsylvania Smartweed

#### Restrictions

Do not apply more than 85.7 fl oz of F7120 SC (SPARTAN ADVANCE) (0.37 lb ai sulfentrazone and 2.72 lb ai glyphosate) per twelve-month period.

Do not apply more than 85.7 fl oz/A (0.37 lb ai sulfentrazone and 2.7 lb ai glyphosate) in a single application.

Do not apply more than two applications per year when using reduced application rates equal or less than 42.8 fl/oz/A of this product.

The twelve-month period is considered to begin upon the initial F7120 SC (SPARTAN ADVANCE) 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.

# CITRUS FRUIT, TREE NUTS, GRAPES and BERRIES

Citrus Fruits (Crop Group 10): Australian desert lime; Australian finger-lime; Australian round lime; Brown River finger lime; calamondin; citron; citrus hybrids; grapefruit; Japanese summer grapefruit; kumquat; lemon; lime; Mediterranean mandarin; mount white lime; New Guinea wild lime; orange, sour; orange, sweet; pummelo; Russell River lime; satsuma mandarin; sweet lime; tachibana orange; Tahiti lime; tangelo; tangerine (mandarin); tangor; trifoliate orange; uniq fruit; cultivars, varieties, and/or hybrids of these

Preharvest Interval: 3 days

**Grapes:** Wine, Raisin, Table and Juice, Amur river grape

Preharvest Interval: 3 days

Berries (Crop Group 13-07): aronia berry; bayberry; bearberry; bilberry; blackberry (including Andean blackberry, arctic blackberry, bingleberry, black satin berry, boysenberry, brombeere, California blackberry, Chesterberry, Cherokee blackberry, Cheyenne blackberry, common blackberry, coryberry, darrowberry, dewberry, Dirksen thornless berry, evergreen blackberry, Himalayaberry, hullberry, lavacaberry, loganberry, lowberry, Lucretiaberry, mammoth blackberry, marionberry, mora, mures deronce, nectarberry, Northern dewberry, dallieberry, Orgeon evergreen berry, phenomenalberry, rangeberry, ravenberry, rossberry, Shawnee blackberry, Southern dewberry, tayberry, youngberry, zarzamora, and cultivars, varieties and/or hybrids of these); blueberry, highbush; blueberry, lowbush; buffalo currant; buffaloberry; che; Chilean guava; chokecherry; cloudberry; cranberry; dosseberry; highbush; currant, black; currant, red; elderberry; European barberry; gooseberry; honeysuckle, edible; huckleberry; jostaberry; Juneberry (Saskatoon berry); kiwifruit, fuzzy; kiwifruit, hardy; lingonberry; maypop; mountain pepper berries; mulberry; muntries; native currant; partridgeberry; phalsa; pincherry; raspberry, black and red; riberry; salal; schisandra berry; sea buckthorn; serviceberry; strawberry; wild raspberry; cultivars, varieties, and/or hybrids of these

Preharvest interval: 3 days

Tree Nuts (Crop Group 14): Almond, Beech Nut, Brazil Nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (Hazelnut), Hickory Nut, Macadamia Nut (Bush Nut), Pecan, Pistachio and Walnut (Black and English),

Preharvest Interval: 3 days

#### **APPLICATION INFORMATION**

F7120 SC (SPARTAN ADVANCE) should be applied as a uniform broadcast soil application to orchard and vineyard floors or as a uniform band application directed to the base of the trunk to provide preemergence control weeds Listed on this section.

For best control, F7120 SC (SPARTAN ADVANCE) should be applied to emerged weeds.

For broadcast applications, a single application of F7120 SC (SPARTAN ADVANCE) should be made at 29.4 to 85.7 fl oz/A (1.06 to 3.08 lb ai/A). Do not apply more than 85.7 fl oz/A (3.08 lb ai) per twelve-month period. The twelve-month period is considered to begin when the initial application of Spartan is applied.

For improved weed management, F7120 SC (SPARTAN ADVANCE) can be applied in a tank mixture with other preemergence and postemergence burndown herbicides. Refer to the tank mix partner's labels for additional restrictions, including minimum spray volumes and crops in which they are labeled. Burndown herbicides may include, but are not limited to, Rage D-Tech, glyphosate, paraquat, Rely®, and 2,4-D.

When applied as a banded treatment (50% band or less), F7120 SC (SPARTAN ADVANCE) may be applied twice per year. Do not apply more than 85.7 fl oz/A product on a broadcast application basis per year. Allow a minimum of 60 days between applications, unless otherwise specified on the label or separate published FMC recommendations.

A minimum of 10 gallons of spray solution per acre should be used to ensure uniform spray coverage. Nozzle selection should meet manufacturer's spray volume and pressure recommendations for preemergence and postemergence herbicide applications. The spray solution should have a pH between 5.0 and 9.0.

F7120 SC (SPARTAN ADVANCE) should only be applied to crops that have been established for one full growing season and are in good health and vigor. Avoid contact of the spray solution on the green bark of trunks of 1-2 year old vines and trees by wrapping the trunk with a nonporous wrap, grow tubes, or wax containers which will keep the spray solution from coming in direct contact with the green tissue. Avoid direct or indirect spray contact with crop foliage and fruit.

Use ground equipment only. Do not apply using an airblast sprayer or by air. Do not apply using a mechanically pressurized handgun.

Best results are obtained when the soil is moist at the time of application and allows for sufficient time for F7120 SC (SPARTAN ADVANCE) to dry on the weed foliage prior to irrigation or rainfall and the application is followed by at least ½ inch of rainfall or sprinkler irrigation within two weeks after application. Applications should be timed to take advantage of normal rainfall patterns and cool temperatures, especially where drip or micro sprinkler irrigation is used which may not uniformly incorporate the herbicide.

## WEED CONTROL INFORMATION

F7120 SC (SPARTAN ADVANCE) provides burndown and is a selective soil-applied herbicide for the control of susceptible broadleaf, grass and sedge weeds found in the Permanent Crop Weed List in this section. Adequate moisture of at least ½ inch is required within 14 days after application for optimal control. If adequate rainfall is not received in a timely fashion, irrigate with a minimum of ½ inch of water. When activating moisture is delayed, a reduced level of weed control may occur. These escaped weeds can be removed using a burndown herbicide.

F7120 SC (SPARTAN ADVANCE) provides both burndown and residual weed control; however, it can be tank-mixed with other burndown herbicides and use an appropriate adjuvant when weeds are present at the time of application. Refer to the tank mix partner's product label for the proper use rates by weed sizes. Use the most restrictive label limitations and precautions of the tank mix product(s).

Residual weed control may be reduced when F7120 SC (SPARTAN ADVANCE) is applied where heavy crop trash such as leaves and branches and /or weed residues exists. It is best to rake or blow off the leaves and trash when they fall and prior to the F7120 SC (SPARTAN ADVANCE) application.

Do not apply after petal fall unless using a hooded or shielded sprayer to ensure that the spray solution will not come in contact with the crop or foliage.

# Permanent Crop Weed List

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
Barnyardgrass, common	Echinochloa crus-galli
Bedstraw, catchweed	Galium aparine
Bindweed, field	Convolvulus arvensis
Bluegrass, annual	Poa annua
Bromegrass species	Bromus spp.
Burclover, California	Medicago polymorpha
Carpetweed	Mollugo verticillata
Cheatgrass	Bromus tectorum
Cheeseweed species	Malva spp.
Chickweed, common	Stellaria media
Clover species	Trifolium spp.
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 louisiana
Dock, curly	Rumex crispus
Eclipta	Eclipta prostrata
Eveningprimrose, cutleaf	Oenothera laciniata
Fescue, Red	Fetuca rubra
Fiddleneck speicies	Amsinckia spp.
Filaree, broadleaf	Eroduim botrys
Filaree, redstem	Erodium cicutarium
Filaree, whitestem	Erodium moschatum
Fleabane, hairy	Conyza bonariensis
Flixweed	Descurainia sophia
Foxtail, bristly	Setari verticillata

Foxtail, green Galinsoga, hairy Galinsoga, ciliata Goosegrass Eleusine indica Chenopodium murale Groundcherry, clammy (seedling) Groundcherry, cutleaf Groundcherry, cutleaf Groundsel, common Forendcherry, cutleaf Forendsel, common Forendcherry, cutleaf	Foxtail, giant	Setaria faberi
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Lovegrass species  Mallow, common  Malva neglecta wall r.  Malva parviflora  Maywed, Chamomile  Milkweed, honeyvine  Morningglory, entireleaf  Morningglory, pulmleaf  Morningglory, pulmleaf  Morningglory, purple  Morningglory, purple  Morningglory, scarlet  Morningglory, scarlet  Morningglory, smallflower  Morningglory, smallflower  Morningglory, smallflower  Morningglory, smallflower  Morningglory, smallflower  Morningglory, stall  Morningglory, smallflower  Morningglory, stall  Mullein, turkey  Eremocarpus setigerus  Mustard, Species  Brassica spp.  Mustard, tumble  Sisybrium altissimum  Nettle, burning  Urtica urens  Nightshade, black  Solanum nigrum  Nutsedge, purple  Cyperus rotundus  Nutsedge, purple  Cyperus esculentus  Orchardgrass  Dactylis glomerata  Panicum, fall  Panicum dichotomiflorum  Pigweed, prostrate  Amaranthus retroflexus  Pigweed, smooth  Amaranthus nybridus  Pigweed, Tumble  Amaranthus nybridus  Pigweed, Tumble  Amaranthus nybridus  Pigweed, Tumble  Plantain, plarced  Plantago lanceolata  Poorjoe  Diodia teres  Porophyllum  Redweed  Melochia corchorifolia  Radish, Wild  Raphanus raphanistrum  Redweed  Melochia corchorifolia  Radish, Wild  Raphanus raphanistrum  Sedge, annual  Carex spp.  Senna, coffee  Cassia occidentalis  Sheperdspurse  Capsella bursa-pastoris  Sida spinosa	Lambsquarters, common	Chenopodium album
Mallow, common         Malva neglecta wall r.           Mallow, little         Malva parviflora           Mayweed, Chamomile         Anthemis cotula I.           Milkweed, honeyvine         Ampelamus albidus           Morningglory, entireleaf         Ipomoea hederacea integriuscula           Morningglory, palmleaf         Ipomoea wrightii           Morningglory, palmleaf         Ipomoea urbinata           Morningglory, palmleaf         Ipomoea coccinea           Morningglory, scarlet         Ipomoea, coccinea           Morningglory, scarlet         Ipomoea, coccinea           Morningglory, smallflower         Jacquemontia tamnifolia           Morningglory, stall         Ipomoea, purpurea           Mullein, turkey         Eremocarpus setigerus           Mustard, Species         Brassica spp.           Mustard, Species         Brassica spp.           Mustard, tumble         Sisybrium altissimum           Nettle, burning         Urtica urens           Nightshade, black         Solanum nigrum           Nightshade, Eastern black         Solanum ptycanthum           Nutsedge, purple         Cyperus rotundus           Nutsedge, yellow         Cyperus rotundus           Orchardgrass         Dactylis glomerata           Panicum, fall	Lettuce, miners	Montia perfoliata
Mallow, common         Malva neglecta wall r.           Mallow, little         Malva parviflora           Mayweed, Chamomile         Anthemis cotula I.           Milkweed, honeyvine         Ampelamus albidus           Morningglory, entireleaf         Ipomoea hederacea integriuscula           Morningglory, palmleaf         Ipomoea wrightii           Morningglory, palmleaf         Ipomoea urbinata           Morningglory, palmleaf         Ipomoea coccinea           Morningglory, scarlet         Ipomoea, coccinea           Morningglory, scarlet         Ipomoea, coccinea           Morningglory, smallflower         Jacquemontia tamnifolia           Morningglory, stall         Ipomoea, purpurea           Mullein, turkey         Eremocarpus setigerus           Mustard, Species         Brassica spp.           Mustard, Species         Brassica spp.           Mustard, tumble         Sisybrium altissimum           Nettle, burning         Urtica urens           Nightshade, black         Solanum nigrum           Nightshade, Eastern black         Solanum ptycanthum           Nutsedge, purple         Cyperus rotundus           Nutsedge, yellow         Cyperus rotundus           Orchardgrass         Dactylis glomerata           Panicum, fall	Lovegrass species	
Mallow, little Malva parviflora Anthemis cotula I.  Milkweed, honeyvine Ampelamus albidus Morningglory, entireleaf Ipomoea hederacea integriuscula Ipomoea hederacea hederacea Morningglory, purple Ipomoea wrightii Morningglory, purple Ipomoea urightii Morningglory, purple Ipomoea coccinea I.  Morningglory, purple Ipomoea coccinea I.  Morningglory, scarlet Ipomoea coccinea I.  Morningglory, smallflower Jacquemontia tamnifolia Ipomoea, purpurea Mustard, Species Brassica spp.  Mustard, Species Brassica spp.  Mustard, tumble Sisybrium altissimum Vittica urens Nightshade, black Solanum nigrum Nightshade, Eastern black Solanum pitycanthum Nutsedge, purple Cyperus rotundus Cyperus esculentus Orchardgrass Dactylis glomerata Panicum, fall Panicum dichotomiflorum Pigweed, redroot Amaranthus blitoides Piqweed, redroot Amaranthus albus Pineapple-weed Chamonilla suaveolens Plantain, narrow-leaved Plantain, narrow-leaved Plantago Inceolata Porophyllum Redracea Redmaids Calandrinia ciliata Redweed Melochia corchorifolia Radish, Wild Raphanus raphanistrum Sedge, annual Carex spp.  Senna, coffee Cassia occidentalis Shouthern Sida acuta		
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Signalgrass, broadleaf Brachiaria platyphylla		
	Signalgrass, broadleaf	Brachiaria platyphylla

Smartweed, PA (seedling)	Polygonum pensylvanicum
Smellmellon	Cucumis melo
Sowthistle species	Sonchus spp.
Srangletop, red	Leptochloa filiformis
Spurge, spotted	Chamaesyce maculate
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
Willowleaf, panicle-leaf	Epilobium brachycarpum
Witchgrass	Panicum capillare

#### ANNUAL AND PERENNIALSEDGE CONTROL INCLUDING NUTSEDGE

F7120 SC (SPARTAN ADVANCE) applied at 85.7 fl oz/A may provide control or suppression of sedges whether applied preemergence or postemergence to the sedges. Postemergence applications to sedges allows Spartan to be taken into the sedge through the foliage as well as soil uptake through the roots. Soil uptake is the major means of uptake by sedges. Good spray coverage is required for optimum control of sedges especially when applying postemergence to the sedges. Use a quality nonionic surfactant (NIC) at the rate of 0.25% v/v when applying postemergence to sedges.

#### When applied as directed, F7120 SC (SPARTAN ADVANCE) 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

Optimum control of purple nutsedge may be obtained using split applications of F7120 SC (SPARTAN ADVANCE). Apply 29.4 to 44.2 fl oz/A followed by a second *application to actively growing nutsedge. Do not exceed the maximum rate* of 85.7 fl oz (3.08 lb ai) per twelve month period. Spartan symptoms on nutsedge will be observed as reduced nutsedge stands, necrosis, chlorosis, and/or stunting. Optimum control may not be observed until the second year after the original treatment.

# REPLANTING IN NEW OR MATURE ORCHARDS AND VINEYARDS

Delay replanting at least 30 days after Spartan applications when replacing trees and vines in established orchards. Use untreated soil when replanting trees and vines.

#### **Precautions**

These Crop Specific Use directions are based upon the interactive effects of F7120 SC (SPARTAN ADVANCE) 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, Product F7120 SC (SPARTAN ADVANCE). 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 F7120 SC (SPARTAN ADVANCE). Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F7120 SC (SPARTAN ADVANCE) under specific local conditions.

# Restrictions

Use ground equipment only. Do not apply F7120 SC (SPARTAN ADVANCE) using airblast sprayers or by air. Do not apply using a mechanically pressurized handgun.

Do not apply more than 85.7 fl oz/A product (0.37 lb ai sulfentrazone and 2.70 lb ai glyphosate) per twelve month period.

Do not apply more than 85.7 fl oz/A (0.37 lb ai sulfentrazone and 2.7 lb ai glyphosate) in a single application.

Do not apply more than three applications per year when using reduced application rates equal or less than 28.5 fl/oz/A of this product.

Apply to crops that have been growing for at least one full year and are in good condition.

Avoid direct or indirect spray contact to foliage and green bark (wrap trunk with non-porous wrap, grow tubes, or wax containers to keep spray solution off of green tissue).

Do not apply to powdery soils or soils where wind may displace the soil, unless irrigation can be applied immediately after application.

Follow the most restrictive label of tank mix partners

including all references to potential carryover and crop injury warnings or restrictions.

Pre-harvest Interval (PHI): 3 days

If two banded treatments are made in a growing season, allow a minimum of 60 days between applications; however, do not exceed the seasonal maximum use rate.

# Storage and Disposal

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

#### 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.

Do not store below 32°F degrees.

#### In Case of Spill

Avoid contact. Isolate areas and keep out animals and unprotected persons.

#### To Confine Spills.

Dike surrounding area, sweep up spillage, Dispose of in accordance with information given under Pesticide Disposal. Wash spill area with water, absorb with sand, cat litter or commercial clay, sweep up and dispose of in an approved manner. Place damaged container in a large holding container. Identify contents per required hazardous waste labeling regulations.

#### Pesticide Disposa

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

#### **Container Handling**

Metal or Plastic Containers - 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. Then offer for recycling if available, or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. Do not cut or weld metal containers.

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.

# CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

Notice: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product

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 permitted by applicable law, Buyer and User agree to hold FMC and Seller harmless for any claims relating to such factors.

Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the Directions for Use when used in accordance with the directions under normal conditions of use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, FMC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE SELECTION, PURCHASE, OR USE OF THIS PRODUCT. Any warranties, express or implied, having been made are inapplicable if this product has been used contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to (or beyond the control of) seller or FMC, and, to the extent consistent with applicable law, buyer assumes the risk of any such use.

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.

This Conditions of Sale and Limitation of Warranty and Liability may not be amended by any oral or written agreement.

### LABEL TRACKING INFORMATION

Label Code: D-4143 110325 xx-xx-xx

FMC Corporation 2929 Walnut Street Philadelphia, PA 19104 215-299-6000

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