5-19-2008



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs
Registration Division (7505P)
Ariel Rios Building
1200 Pennsylvania Ave., NW
Washington, D.C. 20460

EPA R	leg. N	umbe	r:	

279-3337

Date of Issuance:

1 9 MAY 2008

NOTICE OF PESTICIDE:

x Registration
Reregistration
(under FIFRA, as amended)

Term of Issuance: conditional

Name of Pesticide Product:

F7127 SE Herbicide

Name and Address of Registrant (include ZIP Code):

FMC Corporation

1735 Market Street

Philadelphia, PA 19103

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

- 1. Submit and/or cite all data required for registration/reregistration review of your product when the Agency requires all registrants of similar products to submit data.
- 2. Submit the results of one year storage stability (830.6317) and corrosion characteristics (830.6320) studies, within a year of the date of this notice.
 - 3. On the basic Confidential Statement of Formula (CSF), dated 9/12/07:
 - a. Correct the CAS Registration Number of one of the inert ingredients (see enclosed review).
 - b. Correct concentration of Sulfentrazone (block #10) as 91.0%.
 - 4. Submit corrected CSF for our records.
 - 5. Delete the phrase "Contains Petroleum Disillates" from the label.

anne J. Miller

Signature of Approving Official:

Joanne I. Miller Product Manager 23 Herbicide Branch

Registration Division (7505P)

Date:

19 MAY 2006

EPA Form 8570-6

Page 2 EPA Registration No. 279-3337

6. Add EPA Registration Number 279-3337 to the label.

Submit one copy of the revised final printed label for the record.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

FROM



F7127 SE (SPARTAN PLUS) For Use Only by Individuals/Firms Certified As Licensed Pesticide Applicators

EPA Reg. No. 279-XXX	EPA Est. XXX
Active Ingredient: (1)	By Wt.
Carfentrazone-ethyl*	3.53%
Sulfentrazone**	31.77%
Other Ingredients:	<u>64.7%</u>
Total: ,	100.0%
*SPARTAN PLUS Herbicide contains 0.35	pounds per US gallon of the active
ingredient Carfentrazone-ethyl. ** SPARTAN PLUS Herbicide contains 3.1:	5 pounds per US gallon of the active
ingredient Sulfentrazone. Contains Petroleum Distillates	
U.S. Patent Pending	

KEEP OUT OF REACH OF CHILDREN

CAUTION-AVISO

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

FIRST AID (2)

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 (3)

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 CARFENTRAZONE-ETHYL IS MADE IN CHINA

THE ACTIVE INGREDIENT SULFENTRAZONE IS MADE IN USA.
SPARTAN PLUS IS FORMULATED AND PACKAGED IN USA.

ACCEPTED
with COMMENTS
In EPA Letter Dated:
1 9 MAY 2008

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

ATTENTION (4)

-Although this label may appear similar to the label on a product you may have used, there may be important label differences. Users must read, understand and strictly follow all label directions, precautions and restrictions.

-It is the user's responsibility to be sure the product is approved for sale or use on the intended crop and for use in the specific geographic area.

-It is the user's responsibility to be aware of and to follow all State or local precautions or restrictions not appearing on this product label

-Prior to purchase or use of this product, read the Conditions of Sale and Limitation of Warranty and Liability on page 2 of this label. If the terms and conditions are unacceptable, return the product immediately in the original and unopened container.

TABLE OF CONTENTS

Section Title/ (Section Number)	Page
Active Ingredient (1)	
Agricultural Use Requirements (9)	2
Application Information (21)	5
Attention (4)	1
Conditions of Sale, Warranty and Liability (11)	2
Corn (30)	8
Crop Liability Disclaimer (12)	
Crop Rotation Intervals (26)	
Directions for Use (15)	3
Dry Shelled Beans and Peas (33)	11
Environmental and Soil Factors (18)	4
Environmental Hazards (7)	
Fallow Systems (29)	8
First Aid (2)	1
General Information (16)	3
General Postemergent Weeds Controlled (28)	7
Hot Line Number (3)	1
Label Tracking (35)	12
Lima Beans, Succulent (Tennessee Only) (34)	12
Maximum Annual Use Rate (24)	6
Mixing and Loading Instructions (20)	4
Physical/Chemical Hazards (8)	2
PPE Requirements (6)	2
Precautionary Statements (5)	
Rate Conversion Chart (25)	
Replanting Instructions (27)	,7
Restricted Entry Interval (REI) (10)	
Resistance Management (14)	
Soil Classification Chart (19)	4
Soybeans (31)	9
Spray Equipment Clean-out (23)	6
Spray Drift Reduction Advisory (22)	5
Storage and Disposal (13)	
Sunflowers (32)	10

PRECAUTIONARY STATEMENTS (5) Hazards to Humans and Domestic Animals Caution

Causes moderate eye 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) (b)

Applicators and other handlers must wear: long-sleeved shirt and long pants, chemical resistant gloves made of waterproof material such as polyethylene or polyvinyl chloride, 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, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations

Users should:

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Remove clothing 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 (7)

This pesticide is toxic to algae, marine/estuarine invertebrates, and moderately toxic to fish. 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 (8)

Do not use or store near heat or open flame.

AGRICULTURAL USE REQUIREMENTS (9)

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.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours. (10)

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.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY (11)

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

The Directions for Use of this product should 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 PERMITTED BY 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 permitted by applicable law, buyer assumes the risk of any such use.

To the extent permitted by 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 PERMITTED BY 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.

Crop Liability Disclaimer (12)

FMC Corporation intends to offer this product only to those end users and/or growers who have liability and indemnification agreements with FMC Corporation for failure to perform and crop damage from the use of SPARTAN PLUS on Dry Shelled Peas & Beans and Limas. If, after purchasing the product, the release of liability and indemnification is unacceptable to the user and/or grower, FMC Corporation requests that the user and/or grower return SPARTAN PLUS to the place of purchase at once, unopened.

This product when used Dry Shelled Peas & Beans and Limas may lead to crop injury, loss, or damage. FMC Corporation recommends that the user and/or grower test product in order to determine its suitability for such intended use. FMC Corporation makes the product available to the user and/or grower solely to the extent the benefit and utility, in sole opinion of the user and/or grower, outweigh the extent of potential injury associated with the use of this product. The decision to use or not to use this herbicide must be made by each individual user and/or grower on the basis of possible crop injury from SPARTAN PLUS, the severity of weed infestation, the cost of alternative weed controls and other factors, because of the risk of crop damage all such use is at the user's and/or grower's risk.

Storage and Disposal (13)

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 32F 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 Disposal

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 Disposal

Metal Containers

Metal containers should be triple rinsed (or equivalent). Then offered for recycling or reconditioning, or punctured and disposed of in a sanitary landfill, or by other procedures approved by state and local authorities. Do not cut or weld metal containers.

Plastic Containers

Plastic containers should be triple rinsed (or equivalent). Then offered to an approved pesticide container recycling program. Or punctured and disposed of in an approved waste disposal facility. Provided on-site incineration is allowed by State and local authorities, containers may be burned. Stay out of smoke.

Returnable/Refillable Sealed Containers

Do not break container seals. Do not empty remaining formulated product. Do not rinse inside of container. Return container intact to point of purchase.

RESISTANCE MANAGEMENT (14)

Some weeds are known to develop resistance to herbicides that have been used repeatedly. While the development of resistance is well understood, it is not easily predicted. Therefore herbicides should be used in conjunction with resistance management strategies in the area. Consult the local or State agricultural advisors for details. If weed resistance should develop in the area, this product used alone may not continue to provide sufficient levels of weed control. It the reduced levels of control can not be attributed to improper application timing, unfavorable weather conditions or abnormally high weed pressure, a resistant strain may have developed.

To reduce the potential for weed resistance, use this product in a rotation program with other classes of chemistry and modes of action. Always apply this product at the recommended rates and in accordance with the use directions. Do not use less than recommended label rates alone or in tank mixtures. Do not use reduced rates of the tank mix partner. For optimum performance, scout fields carefully and begin applications when weeds are smaller rather than larger. If resistance is suspected, contact the local or State agricultural advisors.

DIRECTIONS FOR USE (15)

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

SPARTAN PLUS herbicide 11.07.07

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.

GENERAL INFORMATION (16)

SPARTAN PLUS is a selective herbicide that provides contact and residual weed control. SPARTAN PLUS may be applied as a burndown prior to planting, early preplant, or as a preemergent application before or after weed emergence for control of susceptible broadleaf weeds. SPARTAN PLUS is a 3.5 pound per gallon suspoemulsion containing the active ingredients carfentrazone-ethyl and sulfentrazone. If adequate moisture (1/2" to 1") from rainfall or irrigation is not received within 7 to 10 days after the SPARTAN PLUS treatment, a shallow incorporation may be needed for herbicide activation. When activating moisture is received after dry conditions. SPARTAN PLUS may provide a reduced level of control of susceptible germinating weeds. 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. Applications of SPARTAN PLUS must be made before crop seed germination to prevent injury to the emerging crop seedlings. When applications after planting are delayed, injury may occur if seeds are germinating or if they are located near the soil surface.

Observe all instructions, crop restrictions, mixing directions, application precautions, replanting directions, rotational crop guidelines and other label information of each product when tank mixing with SPARTAN PLUS. In addition to general 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 Containment capacities as described above shall be maintained at all times. The above specific minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment.

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.

GENERAL APPLICATION INSTRUCTIONS (17)

SPARTAN PLUS is to be mixed with water, liquid fertilizer, or mixtures of water and liquid fertilizer and applied in fallow systems or as a preplant burndown or preemergence herbicide to labeled crops. SPARTAN PLUS provides contact and residual control of susceptible weed species.

Emerged, susceptible broadleaf weeds are easiest to control when they are small (less than 3 inches tall) and actively growing. Thorough coverage is essential for control of small susceptible broadleaf weeds. If thorough coverage is not achieved postemergent weed control will be poor. Always use the higher recommended rate of this product, for the appropriate soil texture and organic matter, when weed growth is dense or heavy, or when weeds are growing in an undisturbed or noncultivated area. Reduced weed control may occur if weeds are experiencing drought stress, disease or insect damage, or when weeds are thickly covered with dust. For control of weeds not listed on this label SPARTAN PLUS may be tank-mixed with other herbicides. Read and follow all manufacturers' label recommendations for the companion herbicide(s) except for specific recommendations on this label. The use of a quality spray adjuvant is required for optimum Refer to the individual crop control of emerged weeds. recommendation sections of this label for specific adjuvant type and use rates.

The residual activity of SPARTAN PLUS applications requires adequate moisture for herbicidal activation. The amount of residual activity is dependent on several factors. These factors include, but are not limited to, existing soil moisture at application, soil type, organic matter, and tilth. In crop situations dependent on rainfall, SPARTAN PLUS can await activating moisture for extended periods (10-14 days or longer) depending on the soil parameters described above. Once activated, SPARTAN PLUS may provide activity on existing weeds. The level of activity will depend on the weed species and their size at the time of activation. Where irrigation is not available and rainfall has not provided activation, particularly for surface applications of SPARTAN PLUS, a shallow incorporation is recommended for destruction of any existing weeds and to incorporate SPARTAN PLUS. Herbicide incorporation will initiate the process of activation with existing soil moisture. In circumstances where rainfall has not occurred and/or irrigation is not possible, alternative or additional weed management practices may be required.

Under normal growing conditions, SPARTAN PLUS exhibits excellent crop safety. Soil applications of SPARTAN PLUS must be made before crop seed germination to prevent injury to the emerging crop seedlings. SPARTAN PLUS applied after crop emergence will cause severe injury to the crop. SPARTAN PLUS herbicide exhibits excellent crop safety. 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 SPARTAN PLUS can contribute to crop response. Refer to the specific directions of use for a particular crop/use pattern as set forth below for additional information.

ENVIRONMENTAL AND SOIL FACTORS INFLUENCING SPARTAN PLUS APPLICATIONS (18)

Do not apply to soils classified as sand with less than 1% organic matter.

The user is required to read and follow the specific SPARTAN PLUS use directions and restrictions for each crop as defined in subsequent sections of this label. The user is cautioned that some crops respond differently to SPARTAN PLUS. This response is governed by the SPARTAN PLUS application rate, various soil factors and inherent crop sensitivity. The Crop Specific use Directions have been designed to minimize the risk of adverse crop response while maintaining optimum weed control.

INFLUENCE OF CL., SOIL TYPE, AND PH ON SPARTAN PLUSUSE RATES AND CROP RESPONSE

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

Table 1. SOIL CLASSIFICATION CHART (19)

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

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

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

The total amount of SPARTAN PLUS available, in any given soil, is determined by the interaction of soil type (clay content), % organic matter, and pH. The application timing (relative to the emergence of the crop and weeds) and amount of rainfall and/or irrigation received will ultimately determine, in conjunction with the soil parameters and pH, the amount of SPARTAN PLUS in soil solution.

Irrigation with highly alkaline water (high pH) following a SPARTAN PLUS soil application can also significantly increase the amount of SPARTAN PLUS available in the soil solution. Irrigation with water having a pH greater than 7.5 could result in adverse crop response. This response will ultimately depend on initial SPARTAN PLUS application rate, timing, amount and pH of irrigation water and sensitivity of the crop and its growth stage when irrigated. The risk of adverse crop response will lessen with the advance in growth stage among most crops.

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

MIXING AND LOADING INSTRUCTIONS (20)

Water or liquid fertilizer solutions may be used as the carrier for SPARTAN PLUS when applied alone or in tank mixtures with other registered herbicides. A jar test is recommended to determine the compatibility of SPARTAN PLUS and the fertilizer solution. When mixing with fertilizer solutions it is important to premix SPARTAN PLUS in clear water. See directions for applying SPARTAN PLUS alone with liquid fertilizer under section 21

A crop oil concentrate, methylated seed oil, nonionic surfactant (NIS) wetting agent labeled, or other equivalent adjuvant labeled for use with herbicides is required for optimum control of emerged weeds. Read and follow all applicable use directions, precautions and restrictions on the surfactant label.

SPARTAN PLUS Applied Alone

Select the proper SPARTAN PLUS 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 SPARTAN PLUS 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 SPARTAN PLUS spray mixture immediately after mixing.

Do not store spray mixture.

Do not prepare spray mixtures in nurse tanks.

SPARTAN PLUS Applied in Tank Mix Combination

Select the proper SPARTAN PLUS 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 (see MIXTURE COMPATIBILITY TESTING chart below). 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 SPARTAN PLUS for the acreage being treated by opening the bottle(s) and measuring directly into the spray tank. Allow the product to fully disperse. 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, SPARTAN PLUS and other liquid suspensions (e.g., flowables) next 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 SPARTAN PLUS tank mixtures immediately after mixing.

Do not store tank mixtures.

Do not prepare spray mixtures in nurse tanks.

SPARTAN PLUS Applied Alone with Liquid Fertilizer

When adding SPARTAN PLUS to a liquid fertilizer carrier, SPARTAN PLUS should be premixed in clear water before adding to fertilizer solution. Adding SPARTAN PLUS to fertilizer mixtures without first mixing with water can result in incompatibility.

Fill the spray tank one-half full with fertilizer solution. With agitator operating, add the SPARTAN PLUS slurry to the spray tank. Use a minimum of one gallon of water for each container of SPARTAN PLUS. 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 SPARTAN PLUS spray mixture immediately after mixing.

Do not store mixture.

Do not prepare spray mixtures in nurse tanks.

Jar Testing Fertilizer Spray Mixtures

Applications of SPARTAN PLUS 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 jar.

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

Herbicide Type	Herbicide Field Use Rate	Amount Herbicide Added Per Pint
Wettable Powder or Dry Flowable	0.5 pound	0.75 teaspoon
	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.

Adjuvant Recommendation

The use of methylated seed oil (MSO) or a crop oil concentrate (COC) adjuvant, labeled for use with herbicides, is required for optimum control of emerged weeds. A nonionic surfactant adjuvant and water conditioning agent is recommended when SPARTAN PLUS is tank-mixed with glyphosate. Read and follow all applicable use directions, precautions and restrictions on the surfactant label.

APPLICATION INFORMATION (21)

Ground Application

Use a boom and nozzle sprayer equipped with the appropriate nozzles and screens and adjusted to provide optimum spray distribution and coverage at the appropriate operating pressures. Use nozzles that that produce minimal amounts of fine spray droplets. Do not exceed 30 psi spray pressure unless otherwise required by the manufacturer of drift reducing nozzles. Apply a minimum of 10 gallons of finished spray per acre. Use higher spray volumes when there is a dense weed population. Thorough coverage is essential for control of susceptible broadleaf weeds. Be aware that overlaps and slower ground speeds while starting, stopping, or turning while spraying may result in excessive application and subsequent crop response.

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 SPARTAN PLUS 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 SPARTAN PLUS applications must be drained and thoroughly cleaned with water plus ammonia before being used to apply other products. See Spray Clean-out Section 22 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.

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

Aerial Application

SPARTAN PLUS may be applied by air using properly calibrated nozzle types and arrangements that will provide optimum coverage while producing minimal amounts of fine droplets. Apply sufficient spray volume to achieve adequate coverage. Apply a minimum of five (5) gallons of finished spray per acre. Do not apply when wind speed favors drift beyond the area intended for treatment.

Runoff and Wind Erosion Precautions

Do not apply under conditions which favor runoff or wind erosion of soil containing SPARTAN PLUS to non-target areas.

To prevent off-site movement due to runoff or wind erosion:

- Avoid treating powdery dry or light sandy soils when conditions are favorable for wind erosion. Under these conditions, allow the soil surface to be settled by rainfall or irrigation.
- Do not apply to impervious substrates such as paved or highly compacted surfaces or frozen or snow covered ground.
- · Do not apply to soils when saturated with water.
- Do not use tail water from the first flood or furrow irrigation of treated fields to treat non target crops unless at least 1/2 inch of rainfall has occurred between application and the first irrigation.

SPRAY DRIFT REDUCTION ADVISORY (22)

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR AND THE GROWER.

The interaction of many equipment with weather related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target movement from applications to agricultural field crops.

Where States and local governments have more stringent regulations, they must be observed.

Droplet Size Information

Reduce drift potential by applying large droplets. The optimum 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).

VMD - VMD is the expression of the droplet size of the spray cloud. The VMD value means that 50% of the droplets are larger than the expressed value and 50% of the droplets are smaller than the expressed value. Optimum spray clouds should be 450 microns with fewer than 10% of the droplets being 200 microns or smaller.

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 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.

Application Height – Making applications at the lowest height practical reduces exposure of spray droplets to evaporation and wind movement.

Swath Adjustment – 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. 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 – Do not apply SPARTAN PLUS during temperature inversions because the 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 Moveme, of SPARTAN PLUS - Drift of dilute spray mixtures containing SPARTAN PLUS must be prevented. Observation of the preceding environmental conditions, correct application equipment design, calibration and application practices will significantly diminish the risk of of-target spray drift. SPARTAN PLUS can cause significant symptomology by drift on to sensitive crops and other plants. This symptomology may manifest initially as discreet, localized spots where contact by SPARTAN PLUS drift mixtures. Depending on concentration of the spray solution and droplet size (effectively determining the concentration of SPARTAN PLUS) and also depending on the inherent sensitivity of the plants involved, these spots or lesions may not coalesce. These effects will usually not have lasting effects on plant growth, but will likely reduce the value of affected fruit of 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 SPARTAN PLUS 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 mat result from such misapplication of SPARTAN PLUS.

SPRAY EQUIPMENT CLEAN-OUT (23)

After spraying SPARTAN PLUS 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 SPARTAN PLUS 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 SPARTAN PLUS USE PER ACRE PER 12 MONTH PERIOD* (24)

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

Crop	Ounces SPARTAN PLUS Per Acre	Pounds Active SPARTAN PLUS** Per Acre	
Corn	11.5	0.31	
Dry peas & beans	10.2	0.28	
Fallow	10.2	0.28	
Limas (succulent)	7.6	. 0.21	
Soybeans	8.5	0.23	
Sunflowers	10.2	0.28	

*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-

** Based on total active carfentrazone-ethyl and sulfentrazone

RATE CONVERSION CHART (25)

RATE CONTENSION CHART (20)					
SPARTAN	PLUS	CARFENTRAZONE- ETHYL		SULFENTRAZONE	
Product oz/A	lb ai*	Product oz/A**	lb ai	Product oz/A8**	lb ai
3.75	0.10	0.65	0.01	2.9	0.09
5.75	0.15	1.0	0.015	4.5	0.14
8.5	0.23	1.5	0.02	6.7	0.21
10.2	0.28	1.8	0.03	8.0	0.25
15.25	0.41	2.7	0.04	12.0	0.37

^{*} Total pounds active of sulfentrazone + carfentrazone-ethyl

CROP ROTATIONAL INTERVALS (26)

Shown below are the minimum intervals in months from the time of SPARTAN PLUS application until SPARTAN PLUS treated soil may be replanted with the crops listed. When SPARTAN PLUS 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
Cabbage (transplant only)	Anytime
Canola, Crambe	24
Corn, field	Anytime
Corn, pop	18
Corn, sweet	18
Cotton	18 ·
Dry Shell Peas & Beans	Anytime
Horseradish	Anytime
Lima Beans	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
Triticale	4
Turf	Anytime
Wheat	4

^{*} For all other crops not listed, the rotation interval is a minimum of 12 months.

Hybrid Corn Seed Production

Corn inbred lines grown for hybrid seed production may be injured in the growing season following an application of SPARTAN PLUS. Inbred lines should be thoroughly tested for crop tolerance before rotating to produc.... scale acreages. FMC will not accept responsibility for any crop injury on field corn grown for seed following an application of SPARTAN PLUS.

REPLANTING INSTRUCTIONS (27)

If the initial planting of labeled crops fails to produce a uniform stand, only labeled crops for SPARTAN PLUS or the tank mix partner; which ever is most restrictive, may be replanted. Do not retreat fields with a second application of SPARTAN PLUS 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.

GENERAL POSTEMERGENT WEEDS CONTROLLED (28)

(Refer to individual crop sections for preemergent weeds controlled).

When used as directed, SPARTAN PLUS will provide postemergent control of the following weeds (less than 3 inches tall) as specified:

(all) as specified: Weeds Controlled	SPARTAN PLUS use rate fluid
	ounce (lb ai) per acre
Lambsquarters (up to 3 inches tall)	
Morningglory, ivyleaf (up to 3 leaves)	
Morningglory, pitted (up to 3 leaves)	3.75 (0.10)
Nightshade, Eastern black	
Pigweed, redroot	
Velvetleaf	
Waterhemp (up to 2 inches tall)	
Weeds Controlled	SPARTAN PLUS use rate fluid ounce (lb ai) per acre
All the weeds controlled at 3.75 fluid ounces per acre (0.10 lb/acre) plus the weeds listed below:	
Cheeseweed	
Filaree, redstem	
Flixweed	
Lambsquarters, common	
Mallow, common	
Morningglory, entireleaf	
Morningglory, ivyleaf	4.75 (0.13)
Morningglory, pitted	
Morningglory, scarlet	
Nightshade, hairy	
Pennycress, field	
Pigweed, smooth	
Sesbania, hemp	
Smartweed (PA), seedling	
Tansymustard	
Waterhemp	
Weeds Controlled	SPARTAN PLUS use rate fluid ounce (lb ai) per acre
All the weeds controlled at 4.75 fluid ounces per acre (0.13 lb/acre) plus the weeds listed below:	6.0 (0.16)
Amaranth, spiny]
Anoda, spurred	
Bedstraw, catchweed	
Buffalobur]
Carpetweed]
Cocklebur]
Copperleaf, hophornbeam	1

^{**} Based on Aim 2EC formulation

^{***} Based on SPARTAN PLUS formulation

^{** 18} month rotation for rates above 10.2 fluid ounces per acre

uid
uid —
uid —
uid
uid
aid
uid
uid
uid_
ıid_
uid
uid
ıid
ıid

FALLOW SYSTEMS (29) (see Table 2 for recommended application rates).

SPARTAN PLUS may be used in fallow cropping systems only where crops are seeded and harvested on alternate years for soil moisture conservation using rates recommended in Table 2. Follow crop rotational restrictions when replanting following SPARTAN PLUS applications.

Table 2

SPARTAN PLUS Use Rate Table Fallow Applications					
Broadcast Rate Fluid Ounces SPARTAN PLUS per acre Soil Texture					
% Organic Matter	Coarse	Medium	Fine		
<1.5	3.75 - 5.0	3.75 - 5.75	5.0 - 6.5		
1.5-3.0	3.75 - 5.75	5.0 - 7.75	5.75 - 8.5		
>3	5.0 - 7.75	5.75 - 8.5	6.5 - 10.2		

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.

Adjuvant recommercation

For optimum control of emerged weeds a nonionic surfactant, crop oil concentrate, methylated seed oil, or equivalent adjuvant is required. Use a nonionic surfactant (NIS) at 0.25% v/v (2 pints/100 gallons of spray solution) having at least 80% active ingredient or a petroleum or oil seed based crop oil concentrate (COC) at 1.5 to 2.0% v/v (1.5 to 2.0 gallons per 100 gallons of spray solution) or a methylated seed oil (MSO). A high quality sprayable liquid nitrogen fertilizer at 2.0 to 4.0% v/v (2 to 4 gallons per 100 gallons) or ammonium sulfate at 2 to 4 pounds per acre may be used in addition to the selected NIS, COC, or MSO

Optimum broad-spectrum control of annual and perennial weeds requires a tank mix with a broad-spectrum burndown herbicide such as glyphosate, glufosinate, or paraquat. When tank mixing SPARTAN PLUS with other products be sure the SPARTAN PLUS is added to the spray tank water first. For specific mixing instructions refer to the Mixing and Loading instructions section of this label.

For all products used in tank mixes refer to the specific product labels for all restrictions on tank mixing and observe all label precautions, instructions, and rotational cropping restrictions.

Precautions

These Crop Specific Use directions are based upon the interactive effects of SPARTAN PLUS 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 General Application Instructions. General SPARTAN PLUS 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 SPARTAN PLUS. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on SPARTAN PLUS under specific local conditions. Thorough coverage is essential for control of small susceptible broadleaf weeds. If thorough coverage is not achieved, postemergent weed control will be poor.

When used as directed, SPARTAN PLUS will provide preemergent control of the following weeds (refer to section 27 for postemergent weeds controlled):

posternergent weeds condens	<i>ω</i> γ.
Kochia (ALS and Triazine Resistant)	Pigweed, redroot
Lambsquarters, common	Pigweed, smooth
Morningglory, ivyleaf	Thistle, Russian
Morningglory, tall	Waterhemp, common
Nightshade, Eastern Black	Waterhemp, tall

Restrictions

Do not apply more than 10.2 fluid ounces per twelve-month period. The twelve-month period is considered to begin upon the initial SPARTAN PLUS 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 SPARTAN PLUS runoff from rain or snowmelt that may occur following application.

CORN (Field Corn, Seed Corn, Popcorn) (30)

Preplant Burndown, Early Preplant, and Preemergence Applications (see Table 3 for recommended application rates). Apply SPARTAN PLUS alone or with other herbicides or liquid fertilizers as a burndown or preemergence treatment prior to planting or within 24 hours after planting corn to control or suppress weeds. Properly closed seed furrows are required when applying at planting time or before seed germination. When planting into soil treated preplant with SPARTAN PLUS, minimize soil disturbance to maintain

For 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 3. Optimum broad-spectrum control of annual and perennial weeds requires a tank mix with a broad-spectrum burndown herbicide such as glyphosate, glufosinate, or paraquat. When tank mixing SPARTAN PLUS with other products be sure the SPARTAN PLUS is added to the spray tank water first. For specific mixing instructions refer to the Mixing and Loading instructions section of this label

Table 2

Table 3			
		Rate Table (Colant, and Preeme	
Broadcast Rate	Fluid Ounce	s SPARTAN PLU	IS per acre
	Soil Texture		
% Organic Matter	Coarse	Medium	Fine
<1.5	3.75 - 5.75	3.75 - 5.75	5.0 - 6.0
1.5 – 3.0	3.75 - 5.75	5.0 - 6.0	5.75 - 6.0
>3.0	5.0 - 6.0	5.75 - 6.0	6.0
4D () ()			AL- COADCE

*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.

Adjuvant recommendation

For optimum control of emerged weeds a nonionic surfactant, crop oil concentrate, methylated seed oil, or equivalent adjuvant is required. Use a nonionic surfactant (NIS) at 0.25% v/v (2 pints/100 gallons of spray solution) having at least 80% active ingredient or a petroleum or oil seed based crop oil concentrate (COC) at 1.5 to 2.0% v/v (1.5 to 2.0 gallons per 100 gallons of spray solution) or a methylated seed oil (MSO). A high quality sprayable liquid nitrogen fertilizer at 2.0 to 4.0% v/v (2 to 4 gallons per 100 gallons) or ammonium sulfate at 2 to 4 pounds per acre may be used in addition to the selected NIS, COC, or MSO

For all products used in tank mixes refer to the specific product labels for all restrictions on tank mixing and observe all label precautions, instructions, and rotational cropping restrictions.

Precautions

These Crop Specific Use directions are based upon the interactive effects of SPARTAN PLUS 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 General Application Instructions, General SPARTAN PLUS 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 SPARTAN PLUS. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on SPARTAN PLUS under specific local conditions. Thorough coverage is essential for control of small susceptible broadleaf weeds. If thorough coverage is not achieved, postemergent weed control will be poor.

When used as directed, SPARTAN PLUS will provide preemergent control of the following weeds (refer to section 27 for postemergent weeds controlled):

y•
Amaranthus palmeri
Amaranthus, spinosus
Amaranthus dubius
Datura stramonium
Kochia scoparia
Chenopodium album
Ipomea hederacea integriusc
Ipomea hederacea hederacea
Ipomea Wrightii

Morningglory, puris	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	
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.		

Restrictions

Do not apply SPARTAN PLUS Herbicide after crop emergence, or if the seedling is close to the soil surface, as undesirable crop response may occur.

Do not apply more than 6.0 fluid ounces per twelve-month period. The twelve-month period is considered to begin upon the initial SPARTAN PLUS 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 SPARTAN PLUS runoff from rain or snowmelt that may occur following application.

SOYBEANS (31)

Preplant Burndown, Early Preplant, and Preemergence Applications (see Table 4 for recommended application rates). Apply SPARTAN PLUS alone or with other herbicides or liquid fertilizers as a burndown or preemergence treatment prior to planting or within 24 hours after planting soybeans to control or suppress weeds using rates recommended in Table 4. Properly closed seed furrows are required when applying at planting time or before seed germination. When planting into soil treated preplant with SPARTAN PLUS, minimize soil disturbance to maintain the herbicide barrier on the soil surface to achieve maximum weed control.

Optimum broad-spectrum control of annual and perennial weeds requires a tank mix with a broad-spectrum burndown herbicide such as glyphosate, glufosinate, or paraquat. When tank mixing SPARTAN PLUS with other products be sure the SPARTAN PLUS is added to the spray tank water first. For specific mixing instructions refer to the Mixing and Loading instructions section of this label.

Table 4

ubic 4			
		ate Table (Some	
Broadcast Rate	Fluid Ounc	es SPARTAN PLU	JS per acre
	Soil Texture		
% Organic Matter	Coarse	Medium	Fine
<1.5	5.75 - 7.75	7.75 - 8.5	8.5
1.5-3	7.75 – 8:5	8.5	8.5
>3	8.5	8.5	8.5

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.

Precautions

When applying SPARTAN PLUS with other registered herbicides, refer to specific label information on precautions, instructions, limitations, application methods and timings, and weeds controlled.

SPARTAN PLUS is especially effective against a wide range of economic broadleaf weeds. The same processes that SPARTAN

PLUS affects in these weeds can, under certain conditions, be affected in sovbeans. 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. Thorough coverage is essential for control of small susceptible broadleaf weeds. If thorough coverage is not achieved, postemergent weed control will be poor. Optimum broad-spectrum control of annual and perennial weeds requires a tankmix of with a broad-spectrum burndown herbicide such as glyphosate, glufosinate, or paraguat.

When used as directed, SPARTAN PLUS will provide preemergent control of the following weeds (refer to section 27 for postemergent weeds controlled):

BROADLEAVES		
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, 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	
Smartweed, PA (seedling)	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.	

Restrictions

Do not apply SPARTAN PLUS Herbicide after crop emergence, or if the seedling is close to the soil surface, as undesirable crop response may occur."

Do not apply more than 8.5 fluid ounces per acre of SPARTAN PLUS per twelve-month period. The twelve-month period is considered to begin upon the initial SPARTAN PLUS 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 SPARTAN PLUS runoff from rain or snowmelt that may occur following application. Do not apply after crop seed germination.

SUNFLOWERS (32)

Fail (MN, ND, SD, MT, CO, NE, WY, ID, WA, OR, WI, MI), Preplant Burndown, Early Preplant, and Preemergence Applications (see Table 5 for recommended application rates).

SPARTAN PLUS may be applied in the fall following crop harvest or in existing fallow fields to control or suppress weeds the following season. The SPARTAN PLUS Rotational Crop Guidelines in Section 25 must be followed if crops are planted the next season. SPARTAN PLUS 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 SPARTAN PLUS herbicide 11.07.07

spring after application, because this activity may destroy the herbicide barrier and weed escapes can occur. Do not apply to frozen soils to prevent SPARTAN PLUS runoff from rain or snow that may occur following application. SPARTAN PLUS may be tank mixed with herbicides to control emerged weeds. Sequential applications may be needed depending on weed size. In situations where weed size may interfere with SPARTAN PLUS reaching the soil surface, a separate burndown application prior to the application of SPARTAN PLUS will be required. Use full, recommended rates of burndown herbicides in combination with SPARTAN PLUS, or sequential applications as needed. Higher aerial spray volumes are required when there is a dense weed population or canopy.

SPARTAN PLUS 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.

Apply SPARTAN PLUS alone or with other herbicides or liquid fertilizers as a burndown or preemergence treatment prior to planting sunflower to control or suppress weeds. Properly closed seed furrows are required when applying at planting time or before seed germination. When planting into soil treated preplant with SPARTAN PLUS, minimize soil disturbance to maintain the herbicide barrier on the soil surface to achieve maximum weed control.

Optimum broad-spectrum control of annual and perennial weeds requires a tank mix with a broad-spectrum burndown herbicide such as glyphosate, glufosinate, or paraquat. When tank mixing SPARTAN PLUS with other products be sure the SPARTAN PLUS is added to the spray tank water first. For specific mixing instructions refer to the Mixing and Loading instructions section of this label.

SPARTAN PLUS Use Rate Table (Sunflowers) Fall, Preplant Burndown, Early Preplant, and Preemergence Broadcast Fluid Ounces SPARTAN PLUS per acre Rate Soil Texture % Organic Coarse Medium Fine Matter 3.75 - 5.0<1.5 3.75 - 5.75 5.0 - 6.53.75 - 5.75 5.0 - 7.75 5.0 - 7.75 1.5-3.0 5.75 - 8.5

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

5.75 - 8.5

7.75 - 10.2

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

Precautions

>3

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. SPARTAN PLUS use rates should be reduced or SPARTAN PLUS 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 SPARTAN PLUS 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 General Application Instructions, General SPARTAN PLUS 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 SPARTAN PLUS. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on SPARTAN PLUS under specific local conditions.

Thorough coverage is essential for control of small susceptible broadleaf weeds. If thorough coverage is not achieved, postemergent weed control will be poor. Optimum broad-spectrum control of annual and perennial weeds requires a tank-mix of with a broad-spectrum burndown herbicide such as glyphosate, glufosinate, or paraguat.

When used as directed, SPARTAN PLUS will provide preemergent control of the following weeds (refer to section 27 for

postemergent week	le controlled)
postemergent week	io continuncia

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

Restrictions

Do not apply SPARTAN PLUS Herbicide after crop emergence, or if the seedling is close to the soil surface as undesirable crop response may occur.

Do not apply more than 10.2 fluid ounces per acre of SPARTAN PLUS per twelve-month period. The twelve-month period is considered to begin upon the initial SPARTAN PLUS 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 SPARTAN PLUS runoff from rain or snowmelt that may occur following application.

DRY SHELLED BEANS AND PEAS (33)

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 (see Table 6 for recommended application rates).

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

SPARTAN PLUS may be applied in the fall as a preplant treatment to control or suppress weeds prior to planting the following spring. SPARTAN PLUS 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 SPARTAN PLUS runoff from rain or snow melt that may occur following application. SPARTAN PLUS may be tank mixed with other residual soil herbicides that_are labeled for fall use on dry bean and dry peas. If weeds are emerged at the time of SPARTAN PLUS application, use a burndown herbicide such as glyphosate or paraquat at the full-labeled rate in combination with SPARTAN PLUS or split application as needed. Select the appropriate rate from the table below within the correct soil type and organic matter range. When applying SPARTAN PLUS in the fall, use a mid to high rate within the rate range for the appropriate soil type and organic matter.

Preplant Burndown, Early Preplant, and Preemergence Applications

Apply SPARTAN PLUS alone or with other herbicides or liquid fertilizers as a burndown or preemergence treatment prior to planting dry shelled peas and beans to control or suppress weeds. Properly closed seed furrows are required when applying at planting time or before seed germination. When planting into soil treated preplant with SPARTAN PLUS, minimize soil disturbance to maintain the herbicide barrier on the soil surface to achieve maximum weed control.

Optimum broad-spectrum control of annual and perennial weeds requires a tank mix with a broad-spectrum burndown herbicide such as glyphosate, glufosinate, or paraquat. When tank mixing SPARTAN

PLUS with other producets be sure the SPARTAN PLUS is added to the spray tank water first. For specific mixing instructions refer to the Mixing and Loading instructions section of this label.

Table 6

SPARTAN PLUS Use Rate Table (Dry Shelled Beans and Peas)			
Fall, Preplan	t Burndown, Early	Preplant, and Pre	emergence
Broadcast Fluid Ounces SPARTAN PLUS per acre*			
Rate			
	Soil Texture		
% Organic Matter	Coarse	Medium	Fine
<1.5%	3.0 - 3.75	3.75 - 5.75	3.75 - 5.75
1.5-3.0 %	3.75 - 5.75	5.0 - 7.75	5.75 - 7.75
>3.0 %	5.0 - 7.75	5.75 - 7.75	6.5 - 10.2

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.

Precautions

Read Crop Liability Disclaimer (section 12) before using SPARTAN PLUS in dry peas and beans. Best results are achieved with SPARTAN PLUS 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. SPARTAN PLUS use rates should be reduced or SPARTAN PLUS 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 SPARTAN PLUS 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 General Application Instructions, General SPARTAN PLUS 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 SPARTAN PLUS. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on SPARTAN PLUS under specific local conditions.

Thorough coverage is essential for control of small susceptible broadleaf weeds. If thorough coverage is not achieved, postemergent weed control will be poor. Optimum broad-spectrum control of annual and perennial weeds requires a tank-mix of with a broad-spectrum burndown herbicide such as glyphosate, glufosinate, or paraquat.

When used as directed, SPARTAN PLUS will provide preemergent control of the following weeds (refer to section 27 for postemergent weeds controlled):

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

Restrictions

Do not apply SPARTAN PLUS Herbicide after crop emergence, or if the seedling is close to the soil surface, as undesirable crop response may occur. Do not apply more than 10.2 fluid ounces per acre per twelve-month been evaluated unital treatment with SPARTAN PLUS. Consul university or extension weed management specialists for additional

period. The twelve-month period is considered to begin upon the initial SPARTAN PLUS application.

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

Do not apply to frozen soils or to existing snow cover to prevent SPARTAN PLUS runoff from rain or snow melt that may occur following application.

LIMA BEANS, SUCCULENT (Tennessee Only) (34)

Preplant Burndown, Early Preplant, and Preemergence Applications (see Table 7 for recommended application rates). Apply SPARTAN PLUS alone or with other herbicides, or liquid fertilizers as a burndown or preemergence treatment prior to planting lima beans to control or suppress weeds. Properly closed seed furrows are required when applying at planting time or before seed germination. When planting into soil treated preplant with SPARTAN PLUS, minimize soil disturbance to maintain the herbicide barrier on the soil surface to achieve maximum weed control.

For 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 in Table 8. Optimum broad-spectrum control of annual and perennial weeds requires a tank mix with a broad-spectrum burndown herbicide such as glyphosate, glufosinate, or paraquat. When tank mixing SPARTAN PLUS with other products be sure the SPARTAN PLUS is added to the spray tank water first. For specific mixing instructions refer to the Mixing and Loading instructions section of this label (section 20).

Table 7

SPARTAN PLUS Use Rate Table (Lima Beans, Succulent) Preplant Burndown, Early Preplant, and Preemergence				
Broadcast Fluid Ounces SPARTAN PLUS per acre*				
Rate	·			
	Soil Texture			
% Organic Matter	Coarse	Medium	Fine	
<1.5%	3.0 ~ 5.0	3.75 – 7.75	3.75 - 7.75	
1.5 – 3.0 %	3.75 - 5.75 5.0 - 7.75 5.75 - 7.75			
>3.0 %	5.0 - 7.75	5.75 – 7.75	6.5 – 7.75	

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.

Precautions

When applying SPARTAN PLUS to coarse textured soils, it is recommended that growers allow a minimum of 7-14 days from application to planting. Best results are achieved with SPARTAN PLUS 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. PLUS 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 SPARTAN PLUS 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 quidance previously presented under General Application Instructions, General SPARTAN PLUS 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 SPARTAN PLUS herbicide 11.07.07

information on specific local varieties or cultivars and any other pertinent information on SPARTAN PLUS under specific local conditions.

Thorough coverage is essential for control of small susceptible broadleaf weeds. If thorough coverage is not achieved, postemergent weed control will be poor. Optimum broad-spectrum control of annual and perennial weeds requires a tank-mix of with a broad-spectrum burndown herbicide such as glyphosate, glufosinate, or paraquat.

When used as directed, SPARTAN PLUS will provide preemergent control of the following weeds (refer to section 27 for postemergent weeds controlled):

processing general actions of the contract of	
Copperleaf, hophornbeam	Pigweed, redroot
Morningglory, entireleaf	Pigweed, smooth
Morningglory, ivyleaf	

Do not apply SPARTAN PLUS Herbicide after crop emergence, or if the seedling is close to the soil surface, as undesirable crop response may occur.

Do not apply more than 7.75 fluid ounces per twelve-month period. The twelve-month period is considered to begin upon the initial SPARTAN PLUS application.

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

Do not apply to frozen soils or to existing snow cover to prevent SPARTAN PLUS runoff from rain or snow melt that may occur following application.

LABEL TRACKING INFORMATION (35)

Label Code:

Replaces Label Code: New Product Label

EPA Approval Date:

Philadelphia, PA 19103 USA FMC Corporation Agricultural Products Group 1735 Market Street Philadelphia PA 19103 215-299-6000

SPARTAN PLUS and FMC — Trademarks of FMC Corporation, Philadelphia, PA 19103 USA

©2007 FMC Corporation All Rights Reserved