

SEP 29 2003

Callista O. Chukwunenyne  
FMC Corporation  
1735 Market St.  
Philadelphia, Penn. 19103

Dear Dr. Chukwunenyne:

**SUBJECT:** Add Use on Peanuts, Sugarcane, Sunflower, Mint, Horseradish,  
Cabbage, Potatoes, Succulent Lima Bean, Asparagus, Dry Bean,  
Dry Pea, Field Corn, and Popcorn  
Spartan 4F Herbicide  
EPA Registration No. 279-3220

The amendment referred to above, submitted in connection with registration under section 39c)(7)(A) and (B) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), is acceptable provided that you:

1. Submit/cite all data required for the registration/reregistration review of your product when the Agency requires all registrants of similar products to submit such data.
2. Under the agricultural use requirements box add the following statement: "This pesticide is toxic to vascular plants and should be used strictly in accordance with the drift and run-off precautions on this label in order to minimize off-site exposures."
3. Add the following "Spray Drift Management Statement":

"Do not apply under circumstances where possible drift to unprotected persons or to food, forage, or other plantings that might be damaged or crops thereof rendered unfit for sale, use or consumption can occur.

Use the largest droplet size consistent with acceptable efficacy. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible and by avoiding excessive spray boom pressure. For groundboom and aerial applications, use medium or coarser spray nozzles according to ASAE 572 definition for standard nozzles or a volume mean diameter (VMD) of 300 microns or greater for spinning atomizer nozzles.

7565C								
9/14/03								
9/24/03								

Make aerial or ground applications when the wind velocity favors on-target product deposition. Apply only when the wind speed is less than or equal to 10 mph. For all non-aerial applications, wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application.

Do not make aerial or ground applications into areas of temperature inversions. Inversions are characterized by stable air and increasing temperatures with increasing distance above the ground. Mist or fog may indicate the presence of an inversion in humid areas. Where permissible by local regulations, the applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

Low humidity and high temperatures increase the evaporation rate of spray droplets and therefore the likelihood of increased spray drift. Avoid spraying during conditions of low humidity and/or high temperatures.

All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers.

For ground boom applications, apply with nozzle height no more than 4 feet above the ground or crop canopy."

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

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

Sincerely yours,

*Joanne I. Miller*

Joanne I. Miller  
Product Manger (23)  
Herbicide Branch  
Registration Division (7505C)

Enclosure



# 4F Herbicide

For Agricultural or Commercial Use Only

EPA Reg. No. 279-3220

EPA Est. 279-

<b>Active Ingredient:</b>	<b>By Wt.</b>
Sulfentrazone*	39.6%
<b>Inert Ingredients:</b>	<b>60.4%</b>
	<b>100.0%</b>

\* N-[2,4-dichloro-5-(4-(difluoromethyl)-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4-triazol-1-yl)phenyl]methanesulfonamide  
 Contains 4 pounds of active ingredient per gallon.  
 U.S. Patent No. 4,818,275

**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.

For Emergency Assistance Call (800) 331-3148.

See other panels for additional precautionary information.



FMC Corporation  
 Agricultural Products Group  
 Philadelphia PA 19103

Spartan4F\_3\_9-18-2002\_rev

## PRECAUTIONARY STATEMENTS 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)

Applicators and other handlers must wear: long-sleeved shirt and long pants, waterproof 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, use detergent and hot water. Keep and wash PPE separately from other laundry.

### User Safety Recommendations:

#### Users should:

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

## Environmental Hazards

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

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

## Physical/Chemical Hazards

Do not use or store near heat or open flame.

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Read all of the label prior to use.

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ACCEPTED  
 WITH COMMENTS  
 In EPA Letter Dated

SEP 29 2003

Under the Federal Insecticide,  
 Fungicide, and Rodenticide Act  
 as amended, for the pesticide  
 registered under EPA Reg. No.  
 279-3220

## DIRECTIONS FOR USE

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

Do not apply this product by air or through any type of irrigation system.

Do not apply Spartan 4 F more than once per season.

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.

## 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.

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, waterproof gloves, and shoes plus socks.

## 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.

Do not store below 40° F (4° C).

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

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. Call FMC: (800) 331-3148

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

### Pesticide Disposal

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 at the nearest EPA Regional office for guidance.

### Container Disposal

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Returnable/Refillable Sealed Container: Do not rinse container. Do not empty remaining formulated product. Do not break seals. Return intact to point of purchase.

## GENERAL INFORMATION

Spartan 4F is a selective soil-applied herbicide for the control of certain broadleaf weeds, grasses and sedges in tobacco. When applied according to directions, it will provide control of susceptible species. Spartan 4F is a liquid flowable formulation containing 4 pounds of the active ingredient, sulfentrazone per gallon.

The mode of action of Spartan 4F involves uptake by weed roots and shoots. Preemergence and preplant incorporated applications of Spartan 4F require rainfall or irrigation to activate the herbicide. The amount of rainfall or irrigation required for activation following application depends on existing soil moisture, organic matter content and soil texture. If adequate moisture (¼" to 1") is not received within 7 to 10 days after the Spartan 4F treatment, a shallow cultivation may be needed to obtain desired weed control. When sufficient moisture is received after dry conditions, Spartan 4F will provide control of susceptible germinating weeds.

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 4F.

**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 washwater, and rainwater that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above specific minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment.

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

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

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

## GENERAL APPLICATION INFORMATION

For Use on Tobacco (Burley, Flue-Cured and Dark)

Do Not Use On Shade Grown Tobacco

Ground application only

Utilize a boom and nozzle sprayer equipped with the appropriate nozzles, spray tips and screens and adjusted to provide optimum spray distribution and coverage at the appropriate operating pressures. Utilize nozzles which 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. Be aware that overlaps and slower ground speeds while starting, stopping or turning while spraying may result in crop response.

Water must be used as the carrier for Spartan 4F when applied alone, or when tank mixed with other tobacco herbicides.

Continuous agitation during application is required. Avoid overlap. Shut off spray booms while turning, slowing or stopping, as over application may result. Avoid letting Spartan 4F sit overnight as settling of product and difficulty of resuspending may occur.

To avoid injury to sensitive crops, spray equipment used for Spartan 4F applications must be drained and thoroughly cleaned with water plus ammonia before being used to apply other products.

Do not allow spray to drift onto adjacent crops or plants as injury to other plants may occur. To avoid drift, applicators must observe the following precautions:

### Spray Drift Precautions

Do not spray when wind speeds exceed 10 mph.

### Band Treatment Applications

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

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast Rate Per Acre} = \text{Band rate per acre}$$

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast Volume Per Acre} = \text{Band volume per acre}$$

## SPRAY TANK PREPARATION

It is important that spray equipment is clean and free of existing pesticide deposits before using Spartan 4F. Follow the spray tank clean out procedures specified on the label of product previously applied before adding Spartan 4F to the tank.

## MIXING INSTRUCTIONS

Spartan 4F herbicide may be tank mixed with Command 3ME herbicide for the control of additional weed species. Mixtures with some other tobacco pesticides have not been tested. Conduct an appropriate compatibility test prior to tank mixing with products other than Command herbicide, see below. Follow all precautions and restrictions on the tank mix partner label.

For best results fill spray tank with one fourth of the volume of clean water needed for the field to be treated. Start agitation system, add Spartan 4F per directions under APPLICATION INFORMATION. Continuous spray tank agitation is required at all times to keep the product in suspension. Make sure Spartan 4F is thoroughly mixed before application or before adding another product to the spray tank. For best mixing and application, the preparation of a slurry with water is required before adding Spartan 4F to the spray tank.

For tank mixtures with other tobacco herbicide(s), a jar test should be conducted to ensure product compatibility before full-scale mixing. Provided the jar test indicates the mixture to be compatible, prepare the tank mixture as follows: Fill spray tank one fourth full with water. With agitator operating, add the recommended amounts of ingredients in the following order: dry granules first, liquid suspensions (flowables) second. Add EC products followed by water soluble products to tank as agitator continues and tank is filled with water. All applicable directions, restrictions and precautions for the tank mixture herbicide(s) must be followed.

Use Spartan 4F spray mixture immediately after mixing. Do not store mixture. If Spartan 4F was tank mixed with other tobacco herbicides, all additional directions, restrictions and precautions for the additional herbicides must also be followed.

## Sprayer Equipment Clean-Out:

After spraying Spartan 4F 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. In addition, 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. Drain the sprayer system. Rinse the tank with clean water and flush through the hoses, boom, and nozzles. Remove and clean spray tips and screens separately.
4. 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.

## APPLICATION INSTRUCTIONS

Spartan 4F Rate Table		
Fluid Ounces of Product per Acre*		
Soil Texture**	% Organic Matter***	
	0-2	2-4
Coarse	8.0	10.1
Medium	10.1	12.0
Fine	12.0	12.0

\* One gallon of Spartan 4F contains 4 pounds of active ingredient.  
 \*\* Refer to the information on soil types under the COARSE, MEDIUM and FINE categories in the lists below.  
 \*\*\* Do not apply Spartan 4F to soils classified as sand with less than 1% Organic Matter.

<b>COARSE</b>	<b>MEDIUM</b>	<b>FINE</b>
Sand	Loams	Silty clay loams
Loamy sands	Silt loams	Sandy clay loams
Sandy loams	Silts	Silty clays
		Sandy clays
		Clay loams
		Clays

Spartan 4F may be surface applied or preplant incorporated (to a depth no greater than 2 inches) from 12 hours to 14 days prior to transplanting tobacco. Incorporating Spartan 4F deeper than 2 inches can result in inconsistent weed control.

Research has demonstrated that two passes across the field with a disc/cultivator after application results in sufficient and uniform incorporation of Spartan. Incorporation of Spartan too deeply in the soil may result in reduced weed control.

For best performance a tankmix of Spartan 4F plus Command Herbicide is recommended.

Broadcast apply the appropriate Spartan 4F rate from the table above, in a minimum of 10 gallons per acre of water, to the soil prior to setting transplants as follows:

**Non-Bedded** - Fields where raised beds are **NOT** formed prior to transplanting:

Perform all accepted cultural practices for land preparation, fertilizer/fungicide incorporation, etc. prior to the application of Spartan 4F. Once the field has been prepared for planting, Spartan 4F may be surface applied or lightly preplant incorporated from 12 hours to 14 days prior to transplanting.

If Spartan 4F is surface applied and it is necessary to remove equipment tracks from the field after application but prior to transplanting, any light finishing equipment may be used providing the soil is not disturbed to a depth greater than 2 inches.

**Bedded** - Fields where raised beds **ARE** formed prior to transplanting:

Apply Spartan 4F 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 Spartan 4F application.

When incorporating prior to bedding, Spartan 4F must be thoroughly and uniformly incorporated to a depth no greater than 2 inches to avoid concentrating Spartan 4F 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 Spartan 4F, and **DO NOT** re-bed. Re-transplant into previously formed, treated beds.

### APPLICATION WITH DRY BULK FERTILIZERS

Spartan 4F may be impregnated on dry bulk fertilizers. When applied as directed, Spartan 4F/dry bulk fertilizer mixtures provide weed control equal to that provided by the same rates of Spartan 4F applied in water.

Follow all Spartan 4F label recommendations regarding rates per acre, registered crops, incorporation, special instructions and precautions. Apply Spartan 4F/dry bulk fertilizer mixtures only with ground equipment.

All individual state regulations relating to dry bulk fertilizer blending, registration, labeling, and application are the responsibility of the individual and/or company selling the Spartan 4F/dry fertilizer mixture.

A minimum of 200 pounds of dry bulk fertilizer impregnated with the recommended amount of Spartan 4F must be applied per acre.

DO NOT impregnate Spartan 4F onto coated ammonium nitrate or limestone because these materials will not absorb the herbicide. Dry fertilizer blends containing mixtures of 200 pounds of impregnated dry bulk fertilizer, excluding the weight of ammonium nitrate or limestone, must be applied per acre.

Refer to the appropriate crop section in Spartan 4F label to determine the rate of Spartan 4F per acre. Use the following table to determine the amount of Spartan 4F to be impregnated on a ton of dry bulk fertilizer based on the rate of fertilizer which will be applied per acre.

For those rates not listed in the following table, calculate the fluid ounces of Spartan 4F to be impregnated on a ton of dry bulk fertilizer using the following formula:

$$\begin{array}{r}
 2000 \\
 \text{pounds dry} \\
 \text{fertilizer} \\
 \text{per acre}
 \end{array}
 \times
 \begin{array}{r}
 \text{Rate in} \\
 \text{FL. OZ. of Spartan} \\
 \text{per acre}
 \end{array}
 =
 \begin{array}{r}
 \text{FL. OZ. of} \\
 \text{Spartan 4F per ton} \\
 \text{of fertilizer}
 \end{array}$$

### RATE CHART FOR IMPREGNATION OF DRY BULK FERTILIZERS WITH SPARTAN 4F HERBICIDE

FLUID OUNCES OF SPARTAN 4F PER TON OF FERTILIZER

Fertilizer Rate Lbs./Acre	Spartan 4F Rate Per Acre		
	8.0 Fl. Oz./acre	10.1 Fl. Oz./acre	12.0 Fl. Oz./acre
200	80*	101	120
250	64	80.8	96
300	53.3	67.3	80
350	45.7	57.7	68.6
400	40	50.5	60
450	35.6	44.9	53.3

#### \*FLUID OUNCES OF SPARTAN 4F PER TON OF FERTILIZER

To impregnate Spartan 4F on bulk fertilizer, use a closed rotary-drum mixer or other commonly used dry bulk fertilizer blender equipped with suitable spray equipment. Spray nozzles must be placed to provide uniform coverage of Spartan 4F onto the fertilizer during mixing.

Apply the Spartan 4F/dry bulk fertilizer mixture with an accurately calibrated dry fertilizer spreader. The Spartan 4F /dry bulk fertilizer mixture must be spread uniformly on the soil surface. Uneven spreading can cause poor weed control and crop injury.

Refer to incorporation instructions for incorporation directions.

Faint, illegible text or stamp.

Faint, illegible text or stamp.

**SUGARCANE**

**Application Instructions**

Apply Spartan 4F as a broadcast or banded preemerge soil applied treatment for the control of broadleaf weeds, grasses and sedges in sugarcane.

**Planting Applications**

Apply Spartan 4F preemerge at 0.313 to 0.375 lbs ai/a to newly planted or ratoon 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. Spartan 4F may be applied with other preemerge herbicides registered for use in sugarcane.

**Lay-by Applications**

Apply Spartan 4F at 0.313 to 0.375 lbs ai/a as a directed spray to sugarcane at lay-by timing for control of broadleaf weeds. Use the higher rate on clay soils and/or soils with organic matter content higher than 2 percent. Apply with ground equipment in a minimum of 15 gallons of spray per acre. Spartan 4F may be applied with other herbicides registered for use in sugarcane.

**Tank Mixture Precautions**

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

**Mixing Instructions**

Spartan 4F herbicide may be tank mixed with other herbicides to provide control of additional weeds. To insure mixture compatibility a jar test prior to tank mixing should be conducted. Follow all instructions and restrictions of the tank mix partner label or labels.

Fill the spray tank to one fourth of the volume with clean water. Start the tank agitation system. Add Spartan 4F per the instructions under Application Information. Continuous spray tank agitation is required at all times to keep the product in suspension. Make sure Spartan 4F is thoroughly mixed before application or before adding other products to the spray tank.

For tank mixtures, be sure the tank agitator operating. Then add the recommended amounts of ingredients using the following order: dry granules first, liquid suspensions (flowables) second. Add EC products followed by water-soluble products to tank as agitation continues and tank is filled with water.

**Restrictions**

- Do not apply within 120 days of harvest.
- Do not apply more than 0.375 lbs ai of Spartan 4F per acre per crop year.
- Do not use treated foliage for feed or forage.

**WEEDS CONTROLLED:**

When uses as directed, a soil applied treatment of Spartan 4F will provide control or suppression of the following weeds:

- BROADLEAVES**
- Amaranth, Palmer
  - Amaranth, spiny
  - Anoda, spurred
  - Beggarweed, Florida
  - Carpetweed
  - Cocklebur, common
  - Copperleaf, Hophornbeam
  - Croton, tropic
  - Daisy, American
  - Dayflower, common
  - Galinsoga, hairy
  - Groundcherry, clammy
  - Groundcherry, culleaf
  - Jimsonweed
  - Kochia
  - Ladysthumb
  - Lambsquarter, common

- GRASSES**
- Barnyardgrass\*
  - Broadleaf signalgrass
  - Crabgrass, large
  - Crabgrass, smooth
  - Crabgrass, southern
  - Crowfootgrass\*
  - Foxtail, giant\*
  - Foxtail, green\*
  - Foxtail, yellow\*
  - Goosegrass
  - Itchgrass\*
  - Johnsongrass, seedling\*
  - Orchardgrass
  - Panicum, fall
  - Panicum, Texas

**SUNFLOWER**

**Directions for use:**

Apply Spartan 4F on conventional tillage or conservation tillage (reduced tillage or no-tillage) cropping systems using rates recommended in the use rate chart below for control or partial control of the following weeds:

**Weeds controlled:**

- Kochia (ALS resistant and susceptible biotypes)
- Pigweed species
- Waterhemp species
- Eastern Black Nightshade
- Common Lambsquarter
- Russian Thistle
- Palmer Amaranth
- Tumble Pigweed
- Witchgrass

**Weeds partially controlled:**

- Wild Buckwheat
- Cocklebur
- Wild Mustard and other Mustard species
- Foxtail species
- Hairy Nightshade
- Fall Panicum
- Velvetleaf
- Common Ragweed
- Biennial Wormwood
- Crabgrass
- Stinkgrass

	<b>COARSE*</b> (sand, loamy sand, sandy loam)	<b>MEDIUM</b> (loam, silt loam, silt)	<b>FINE</b> (silty clay loam, sandy clay loam, silty clay, sandy clay, clay loam, clay)
<b>ORGANIC MATTER</b>	<b>lbs ai/a</b>	<b>lbs ai/a</b>	<b>lbs ai/a</b>
Less than 1.5%	.094-.125	.125-.141	.125-.141
1.5-3.0%	.125-.141	.141-.188	.141-.188
Greater than 3.0%	.141-.188	.188-.25	.188-.25

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

Some adverse crop response may occur on coarse textured soils with low organic matter (less than 1.5 percent) and pH of 7.8 or higher, or on highly eroded (as defined by National Resources Conservation Service) areas, particularly exposed calcareous outcroppings, within fields of medium or fine-textured soils. Risk of adverse crop response may be lessened by reducing Spartan 4F use rate on those areas.

Inadequate furrow closure will result in exposure to the herbicide, and may result in an undesirable crop response.

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 ingredient in Spartan 4F herbicide, like other soil applied herbicides, can injure sunflowers. However, these early injury symptoms most often are short lived and do not result in yield reduction.

**Application guidelines**

Preemerge application (PRE) on the soil surface is the recommended application method. However, if incorporating Spartan 4F in the soil (PPI), use light, thorough incorporation with the tillage implement set no deeper than four inches.

Spartan 4F can be applied in the fall preceding the use season prior to soil freeze up, or anytime prior to planting, but no later than 3 days after planting. Higher rates in the soil type range may be needed for fall application programs. Early preplant application 30-45 days prior to planting may need a burndown herbicide tank mix companion product for control of emerged vegetation. It is recommended that fall and early preplant (EPP) application be made on the soil surface. Avoid soil disturbance at planting if a Spartan 4F application was made on the soil surface prior to planting. If the planting implement does result in considerable soil disturbance, apply Spartan 4F on the soil surface immediately after planting.

Spartan 4F can be used in combination with all other labeled herbicides. Follow application guidelines for other labeled herbicides. When mixing Spartan 4F with Roundup, use full labeled rates of Roundup.

When mixing Spartan 4F, always mix in the tank first before other adjuvants or herbicides. Allow 10 minutes of agitation before adding other products to the spray tank.

**PEANUTS**

**Application Instructions**

Spartan 4F may be preplant incorporated (to a depth no greater than 2 inches) up to 14 days prior to planting or Spartan 4F may be applied to the soil surface at or within 12 hours after planting. Incorporation of Spartan 4F deeper than 2 inches can result in adverse crop response and / or inconsistent weed control.

Do not use Spartan 4F for 'at-crack' type applications or apply to exposed peanut tissue. Such use can result in significant adverse crop response.

For best performance, a combination of Spartan 4F plus a grass herbicide labeled for peanuts is recommended. Under conditions of exceptionally high weed populations or when weeds not controlled by Spartan 4F are anticipated, suitable post-emergent peanut herbicides are recommended.

Broadcast apply the correct Spartan 4F use rate from the appropriate Tables below, in a minimum of 10 gallons per acre of water. Banded applications must reduce the Spartan 4F use rate in proportion to the broadcast rate.

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

**Spartan - Southeast (AL, FL, GA, NC, SC, VA)**

**Use Rates and Weeds Controlled<sup>1</sup>**

**Spartan - Applied Alone**

4.8 fl.oz. (0.15 lb.ai)	6.4 fl.oz. (0.2 lb.ai)	8.0 fl.oz. (0.25 lb.ai)
Amaranth Spleen	Amaranth Palmer	Anoda, Spurred Beggarweed, Florida
Copperleaf, Hophornbeam	Eclipta	Cocklebur, Common
Croton, Tropic	Morningglories	Nutsedges
Crownbeard, Golden	Pitted	Yellow Purple
Lambsquarters, Common	Redweed	Purslane, Common
Morningglories	Senna, Coffee	Sida, Pricky
Entireleaf	Smartweed, Pennsylvania	Starbur, Bristly
Ivyleaf	Crabgrass <sup>2</sup>	Crabgrass
Pigweeds	Large Small	Large Small Southern
Red (Scarlet)	Goosegrass <sup>2</sup>	Goosegrass
Redroot	Signalgrass, Broadleaf <sup>2</sup>	Panicum, Texas <sup>2</sup>
Smooth		Signalgrass, Broadleaf
Spurges		
Prostrate		
Spotted		
Waterhemp, Common		

<sup>1</sup> Use rates are fluid ounces (lbs. active ingredient) per acre. Specified weeds are controlled in light (sandy, loamy sand) soils. Heavy soils (sandy loam, clay loam) or soils with organic matter greater than 1.5% should use the next higher rate in the table above. The next higher rate for 8.0 fl.oz. (0.25 lb ai) should not exceed 9.6 fl.oz. (0.3 lb ai).

<sup>2</sup> Partial control or suppression.

**Spartan - Southeast (NM, OK, TX)**

**Use Rates and Weeds Controlled<sup>1</sup>**

**Spartan - Applied Alone**

Due to increased solubility of Spartan 4F with increasing soil pH, in southwestern peanut areas, less product should be applied. Selection of the appropriate use rate, from the table below, is dependent on an accurate, representative determination of soil pH in the field to be treated.

When used as directed, a soil applied treatment of Spartan 4F will provide control or suppression of the following weeds:

	<6	Soil pH 6-7	>7.0
Spartan 4F <sup>1</sup>	4.0 fl.oz. (0.125 lb.ai)	3.2 fl.oz. (0.1 lb.ai)	2.4 fl.oz. (0.075 lb.ai)

<sup>1</sup> Fluid ounces (lbs. active ingredient) per acre.

**Broadleaf Weeds**

- Anoda, Spurred
- Amaranth
  - Spleen
  - Palmer
- Cocklebur, Common
- Copperleaf, Hophornbeam
- Croton, Tropic
- Crownbeard, Golden
- Eclipta
- Lambsquarters, Common
- Morningglories
  - Entireleaf
  - Ivyleaf
  - Red (Scarlet)
  - Pitted
- Pigweeds
  - Redroot
  - Smooth
- Purslane, Common
- Redweed
- Senna, Coffee
- Sida, Pricky
- Smartweed, PA
- Spurges
  - Prostrate
  - Spotted
  - Starbur, Bristly
  - Waterhemp, Common

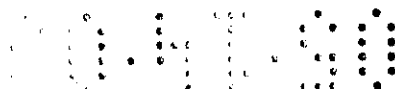
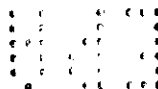
**Sedges**

- Nutsedges
  - Yellow
  - Purple

**Grasses**

- Crabgrass
  - Large
  - Small
  - Southern
- Goosegrass
- Signalgrass, Broadleaf
- Panicum, Texas

Spartan 4F suppresses many other broadleaf weeds and annual grasses. Tank mixing with an appropriate peanut herbicide partner will increase overall weed and / or grass control.





**Cabbage**

Rate of Application	Method of Application
0.375 lbs ai/acre	Make one ground broadcast application no later than 72 hours prior to transplanting or no later than the 2-4 leaf stage for direct seeded cabbage. Spartan 4F may be applied for preemergence control of most broadleaf weeds in cabbage production. Make uniform applications in a minimum of 10-30 gallons of water per acre.
Do not apply less than 72 hours prior to transplanting or after the 2-4 leaf stage for direct seeded cabbage.	

**Potatoes**

Rate of Application	Method of Application
0.375 lbs ai/acre	Make one broadcast, preemergence application after planting but prior to crop emergence. Spartan 4F may be applied for preemergence control of most broadleaf weeds in potato production. Make uniform applications in a minimum of 15-40 gallons of water per acre.

**Mint**

Rate of Application	Method of Application
0.375 lbs ai/acre	Make one ground broadcast during the dormancy stage only. Spartan 4F may be applied for preemergence control of most broadleaf weeds in mint production. Make uniform applications in a minimum of 10-40 gallons of water per acre.
Do not apply after the mint has broken out of dormancy.	

**Horseradish**

Rate of Application	Method of Application
0.375 lbs ai/acre	Make one broadcast, preemergence application after planting but prior to crop emergence. Spartan 4F may be applied for preemergence control of most broadleaf weeds in horseradish production. Make uniform applications in a minimum of 10-40 gallons of water per acre.
Do not apply after crop emergence	

**Succulent Lima Bean**

Rate of Application	Method of Application
0.1875 lbs ai/acre	Make one broadcast application pre-emergence to the soil; after planting but prior to crop emergence. Use a minimum of ten (10) gallons of water per broadcast acre with sprayers equipped with suitable nozzles and screens no finer than 50 mesh.

**Asparagus**

Rate of Application	Method of Application
0.25 lbs ai/acre	Make one broadcast application at a minimum of 14 days prior to harvest. Optimum weed control is obtained when applied to moist soil and followed with approximately one inch of irrigation water or rainfall before weeds germinate.

**DRY BEAN, DRY PEA**

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, mung bean, rice bean, southern pea, urd bean); broad bean (dry); chickpea; guar; lablab bean; lentil; pea (*Pisum*) (includes field pea); pigeon pea.

Directions for use:

Apply Spartan 4F herbicide on conventional tillage or conservation tillage (reduced tillage or no-tillage) cropping systems using rates recommended in the use rate chart below for control or partial control of the following weeds:

Weeds controlled:

- Kochia (ALS resistant and susceptible biotypes)
- Pigweed species
- Waterhemp species
- Eastern Black Nightshade
- Common Lambsquarter
- Russian Thistle
- Palmer Amaranth
- Tumble Pigweed
- Witchgrass

Weeds partially controlled:

- Wild Buckwheat
- Cocklebur
- Wild Mustard and other Mustard species
- Foxtail species
- Hairy Nightshade
- Fall Panicum
- Velvetleaf
- Common Ragweed
- Biennial Wormwood
- Crabgrass
- Stinkgrass

	COARSE*	MEDIUM	FINE
	(sand, loamy sand, sandy loam)	(loam, silt loam, silt)	(silty clay loam, sandy clay loam, silty clay, sandy clay, clay loam, clay)
ORGANIC MATTER	lbs ai/a	lbs ai/a	lbs ai/a
Less than 1.5%	0.094-0.125	0.125-0.141	0.125-0.141
1.5-3.0%	0.125-0.141	0.141-0.188	0.141-0.188
Greater than 3.0%	0.141-0.188	0.188-0.25	0.188-0.25

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

Some adverse crop response may occur on coarse textured soils with low organic matter (less than 1.5 percent) and pH of 7.8 or higher, or on highly eroded (as defined by National Resources Conservation Service) areas, particularly exposed calcareous outcroppings, within fields of medium or fine-textured soils. Risk of adverse crop response may be lessened by reducing Spartan use rate on those areas.

Inadequate furrow closure will result in exposure to the herbicide, and may result in an undesirable crop response.

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 ingredient in Spartan 4F herbicide, like other soil applied herbicides, can injure dry bean/dry pea. However, these early injury symptoms most often are short lived and do not result in yield reduction.

**Application guidelines**

Preemerg application (PRE) on the soil surface is the recommended application method. However, if incorporating Spartan 4F in the soil (PPI), use light, thorough incorporation with the tillage implement set no deeper than four inches.

Spartan 4F can be applied in the fall preceding the use season prior to soil freeze up, or anytime prior to planting, but no later than 3 days after planting. Higher rates in the soil type range may be needed for fall application programs. Early preplant application 30-45 days prior to planting may need a burndown herbicide tank mix companion product for control of emerged vegetation. It is recommended that fall and early preplant (EPP) application be made on the soil surface. Avoid soil disturbance at planting if a Spartan 4F application was made on the soil surface prior to planting. If the planting implement does result in considerable soil disturbance, apply Spartan 4F on the soil surface immediately after planting.

Spartan 4F can be used in combination with all other labeled herbicides. Follow application guidelines for other labeled herbicides. When mixing Spartan 4F with Roundup, use full labeled rates of Roundup.

When mixing Spartan 4F, always mix Spartan in the tank first before other adjuvants or herbicides. Allow 10 minutes of agitation before adding other products to the spray tank.

**FIELD CORN (GRAIN, SILAGE, OR SEED), POPCORN PREPLANT SURFACE, PREEMERGENCE, PREPLANT INCORPORATED, NO-TILL AND MINIMUM TILL**

*Weeds Controlled:*

**BROADLEAVES**

- Amaranth, Palmer
- Amaranth, spiny
- Anoda, spurred
- Beggarweed, Florida
- Carpetweed
- Cocklebur, common\*
- Copperleaf, Hophornbeam
- Croton, tropic
- Daisy, American
- Dayflower, common
- Galinsoga, hairy
- Groundcherry, clammy (seedling)
- Groundcherry, cutleaf
- Jimsonweed
- Kochia
- Ladythumb
- Lambquarters, common
- Mexicanweed
- Morningglory:
- Entireleaf
- Ivyleaf
- Palmleaf
- Pitted\*
- Purple
- Red
- Smallflower
- Tail
- Mustard, wild\*
- Nightshade, eastern black
- Nightshade, hairy
- Nightshade, silverleaf
- Pigweed:
- Redroot
- Smooth
- Tumble
- Poorjoe
- Purslane, common
- Pusley, Florida
- Senna, coffee\*
- Sida, prickly (Teaweed)
- Smartweed, Pennsylvania
- Smellmellon\*
- Spurge, spotted
- Starbur, bristly
- Velvetleaf\*
- Waterhemp, common
- Waterhemp, tall

**SEDGES**

- Nutsedge, purple
- Nutsedge, yellow
- Sedge, annual

**GRASSES**

- Barnyardgrass\*
- Broadleaf signalgrass
- Crabgrass, large
- Crabgrass, smooth\*
- Crabgrass, southern\*
- Crowfootgrass\*
- Foxtail, giant\*
- Foxtail, green\*
- Foxtail, yellow\*
- Foxtail, bristly\*
- Goosegrass
- Johnsongrass, seedling\*
- Orchardgrass
- Panicum, fall
- Panicum, Texas\*
- Witchgrass

	COARSE*	MEDIUM	FINE
	(sand, loamy sand, sandy loam)	(loam, silt loam, silt)	(silty clay loam, sandy clay loam, silty clay, sandy clay, clay loam, clay)
<b>ORGANIC MATTER</b>	lbs ai/a	lbs ai/a	lbs ai/a
Less than 1.0%	0.084-0.125	0.125-0.141	0.125-0.141
1.0-3.0%	0.125-0.141	0.141-0.188	0.141-0.188
Greater than 3.0%	0.141-0.188	0.188-0.25	0.188-0.25

**METHOD OF APPLICATION**

Apply Spartan 4F herbicide on conventional tillage or conservation tillage (reduced tillage or no-tillage) cropping systems using rates recommended in the Corn Rate Chart above. Spartan 4F can be used alone or in tank mixture with other herbicides to control susceptible broadleaf, sedge, and grass species in corn.

Spartan 4F may be applied in the fall or spring as a pre-plant surface application. It may also be applied in the spring as a preplant incorporated or preemergence application in water or fluid fertilizers. Higher rates in the soil type range may be needed for fall application or early preplant (greater than 15 days before planting) programs. Early preplant or preemergence applications may need a burndown herbicide tank mix companion product for control of emerged vegetation. It is recommended that fall and early preplant (EPP) application be made to the soil surface. When planting into soil treated preplant with Spartan 4F, try to minimize soil disturbance to maintain the herbicide barrier in the soil and achieve maximum weed control.

To increase the spectrum of weeds controlled, Spartan 4F may be tank mixed with other soil-applied herbicides for corn such as Atrazine, Bicep II Magnum, Dual II Magnum, Harness, and Harness Xtra.

Spartan 4F does provide burndown of selected emerged weeds in a conservation tillage systems. Through coverage is essential to control susceptible weeds. To broaden the spectrum of weeds controlled in a burndown scenario, Spartan 4F may be tankmixed with other herbicides such as 2,4-D, Roundup, or Gramoxone.

Spartan 4F may be applied more than once to the same crop in split or sequential applications during the season.

When Spartan 4F is applied in a tank mix with other herbicide(s), follow applicable use instructions including rates, precautions, replant, and rotational crop restrictions of each product used in the tank mixture.

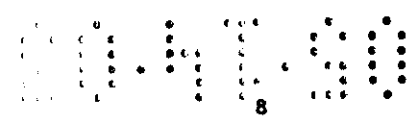
**PRECAUTIONS:**

Poor agronomic practices, unfavorable pH soils, diseases, cold weather, excessive moisture, drought, or other conditions unfavorable to normal plant growth may adversely effect the growth of soybeans. Weakened plants may be more susceptible to herbicide injury particularly under poor drainage, compacted conditions, or when the soil is saturated for long periods of time.

The total amount of sulfentrazone from all applications to the same crop must not total more than 0.375 lb ai per acre per season.

Do not apply Spartan 4F to soils classified as sand with less than 1% organic matter.

\* Partial control or suppression.



### WEEDS CONTROLLED:

#### Preemergence:

When used as directed, a soil applied treatment of Spartan 4F will provide control or suppression of the following weeds:

#### BROADLEAVES

- Amaranth, Palmer
- Amaranth, spiny
- Anoda, spurred
- Beggarweed, Florida
- Carpetweed
- Cocklebur, common\*
- Copperleaf, Hophornbeam
- Croton, tropic
- Daisy, American
- Dayflower, common
- Galinsoga, hairy
- Groundcherry, clammy
- Groundcherry, cutleaf
- Jimsonweed
- Kochia
- Ladysthumb
- Lambsquarters, common
- Mexicanweed
- Morningglory:
  - Entireleaf
  - Ivyleaf
  - Palmleaf
  - Pitted\*
  - Purple

#### Morningglory: (continued)

- Red
- Smallflower
- Tall
- Mustard, wild
- Nightshade, eastern black
- Nightshade, hairy
- Nightshade, silverleaf
- Pigweed:
  - Redroot
  - Smooth
  - Tumble
- Poorjoe
- Purslane, common
- Pusley, Florida
- Senna, coffee
- Sida, prickly (Teaweed)
- Smartweed, Pennsylvania
- Smellmellon
- Spurge, spotted
- Starbur, bristly
- Velvetleaf
- Waterhemp, common
- Waterhemp, tall

#### SEDGES

- Nutsedge, purple
- Nutsedge, yellow
- Sedge, annual

#### GRASSES

- Broadleaf signalgrass
- Crabgrass, large
- Crabgrass, smooth

- Goosegrass
- Orchardgrass
- Panicum, fall

\* Indicates suppression or partial control only.

Spartan 4F suppresses many other annual grasses. Tank mixing with an herbicide partner such as Command 3ME or mechanical cultivation will be required for grass management.

### REPLANTING INSTRUCTIONS

Tobacco may be replanted into a field that has been treated with Spartan 4F alone, or Spartan 4F tank mixed with Command. Do not retreat fields with a second application of Spartan 4F. When a field has been treated with another labeled product, consult the product label for specific replanting instructions. If the field must be reworked prior to replanting, do not disturb soil to a depth of more than 2 inches, or weed control may be reduced or temporary crop injury may occur.

### ROTATIONAL GUIDELINES

This table shows the minimum interval in months from the time of Spartan 4F application until Spartan 4F treated soil can be replanted to the crops listed. When Spartan 4F is tank mixed with another herbicide, refer to the partner label for recropping instructions, following the directions that are most restrictive.

#### ROTATIONAL CROP GUIDELINE

Crop	Recropping Interval in Months
Soybeans	Anytime
Wheat, Barley, Rye, Oats, Triticale	4
Rice	10
Sorghum	10
Other Cereal Grains (Buckwheat; Millet, pear; Millet, proso; Teosinta; Wild rice)	12
Sweet Potatoes	12
Cotton	18 <sup>1</sup>
Sweet Corn	18 <sup>1</sup>
Canola	24 <sup>1</sup>
Sugar Beets	24 <sup>1</sup>
All other crops	18 <sup>1</sup>

<sup>1</sup> Crops that have rotational intervals greater than 12 months after a Spartan 4F application are the result of crop injury concerns.

### PRECAUTIONS

Do not apply Spartan 4F to soils classified as sands containing less than 1% organic matter.

Do not use Spartan 4F in Tobacco seeding beds or greenhouses.

Apply Spartan 4F as previously noted in the Application Section on page 3. Do not apply Spartan 4F post-transplant or unacceptable injury may occur. Do not perform tillage practices that concentrate Spartan 4F into the bed or crop injury may occur.

Poor agronomic practices, unfavorable pH soils, diseases, cold weather, excessive moisture, drought or other conditions unfavorable to normal plant growth may adversely affect the growth of tobacco transplants. Weakened transplants may be more susceptible to herbicide injury particularly under poor drainage or compacted conditions or when the soil is saturated for long periods of time. Contact your State Agricultural Extension Service Specialist for consultation as to the agronomic recommendations suited for your tobacco varieties and local conditions.

Temporary stunting of tobacco may occur if transplants are set too shallow, or if heavy rainfall occurs immediately following transplanting.

Splashing of treated soil onto tobacco leaves may cause some localized, inconsequential burning. Use sound transplanting practices that insure treated soil will not wash or crust over tobacco plants.

Thoroughly clean Spartan 4F from application equipment immediately after use and prior to spraying crops other than tobacco. Failure to remove even small amounts of Spartan 4F from application equipment may result in injury to subsequent sprayed crops, including tobacco.

### WEED SCIENTIFIC NAMES

#### BROADLEAVES

Amaranth, Palmer	( <i>Amaranthus palmeri</i> )
Amaranth, spiny	( <i>Amaranthus spinosus</i> )
Anoda, spurred	( <i>Anoda cristata</i> )
Beggarweed, Florida	( <i>Desmodium tortuosum</i> )
Carpetweed	( <i>Mollugo verticillata</i> )
Cocklebur, common*	( <i>Xanthium strumarium</i> )
Copperleaf, Hophornbeam	( <i>Acalypha ostryifolia</i> )
Croton, tropic	( <i>Croton glandulosus</i> )
Daisy, American	( <i>Eclipta alba</i> )
Dayflower, common	( <i>Commelina communis</i> )
Galinsoga, hairy	( <i>Galinsoga ciliata</i> )
Groundcherry, clammy	( <i>Physalis heterophylla</i> )
Groundcherry, cutleaf	( <i>Physalis angulata</i> )
Jimsonweed	( <i>Datura stramonium</i> )
Kochia	( <i>Kochia scoparia</i> )
Ladythumb	( <i>Polygonum persicaria</i> )
Lambequarters, common	( <i>Chenopodium album</i> )
Mexicanweed	( <i>Caperonia castaneefolia</i> )
Morningglory:	
Entireleaf	( <i>Ipomoea integruscula</i> )
Ivyleaf	( <i>Ipomoea hederacea</i> )
Palmleaf	( <i>Ipomoea wrightii</i> )
Pitted*	( <i>Ipomoea lacunosa</i> )
Purple	( <i>Ipomoea turbinata</i> )
Red	( <i>Ipomoea coccinea</i> )
Smallflower	( <i>Jacquemontia tamnifolia</i> )
Tail	( <i>Ipomoea purpurea</i> )
Mustard, wild	( <i>Sinapis arvensis</i> )
Nightshade:	
Eastern Black	( <i>Solanum ptycanthum</i> )
Hairy	( <i>Solanum sarachoides</i> )
Silverleaf	( <i>Solanum elaeagnifolium</i> )
Pigweed:	
Redroot	( <i>Amaranthus retroflexus</i> )
Smooth	( <i>Amaranthus hybridus</i> )
Tumble	( <i>Amaranthus albus</i> )
Poorjoe	( <i>Diodia teres</i> )
Purslane, common	( <i>Portulaca oleracea</i> )
Pusley, Florida	( <i>Richardia scabra</i> )
Senna, coffee	( <i>Cassia occidentalis</i> )
Sida, prickly (Teaweed)	( <i>Sida spinosa</i> )
Smartweed, Pennsylvania	( <i>Polygonum pennsylvanicum</i> )
Sneezemelon	( <i>Cucumis melo</i> )
Spurge, spotted	( <i>Euphorbia maculata</i> )
Starbur, bristly	( <i>Acanthospermum hispidum</i> )
Velvetleaf	( <i>Abutilon theophrasti</i> )
Waterhemp, common	( <i>Amaranthus rudis</i> )
Waterhemp, Tall	( <i>Amaranthus tuberculatos</i> )

#### SEDGES

Nutsedge, purple	( <i>Cyperus rotundus</i> )
Nutsedge, yellow	( <i>Cyperus esculentus</i> )
Sedge, annual	( <i>Cyperus compressus</i> )

#### GRASSES

Broadleaf signalgrass	( <i>Brachiaria platyphylla</i> )
Crabgrass, large	( <i>Digitaria sanguinalis</i> )
Crabgrass, smooth	( <i>Digitaria ischaemum</i> )
Goosegrass	( <i>Eleusine indica</i> )
Orchardgrass	( <i>Dactylis glomerata</i> )
Panicum, fall	( <i>Panicum dichotomiflorum</i> )

\* Indicates suppression or partial control only.

### Dealers Should Sell in Original Packages Only.

#### 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. 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 of FMC or Seller. All such risks shall be assumed by Buyer and User, and 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. 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 contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to (or beyond the control of) seller or FMC, and buyer assumes the risk of any such use.

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