

279-3340

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

November 16, 2009

Dr. Callista O. Chukwunenye  
FMC Corporation  
1735 Market Street  
Philadelphia, PA 19103

Dr. Chukwunenye:

RE: ADMINISTRATIVE LETTER DATED AUGUST 17, 2009; LABEL AMENDMENT FOR F6482 45DF HERBICIDE (EPA REG. NO. 279-3340); SULFENTRAZONE PLUS METRIBUZIN A.I.'S

The requested label amendment for the end-use product with EPA Reg. No. 279-3340, F6482 45DF Herbicide, is approved with the following changes:

1. Where-ever "Corn (Field corn, seed corn, Popcorn, silage)" appears on the label (pp. 1, 2, 5, 6, and 11), change to "Field Corn (Field corn, Field corn seed corn and silage)". Popcorn does not have an established tolerance for sulfentrazone (see 40CFR180.498) as a direct use.
2. The statement before the ingredient statement that says "For Use Only By Individuals/Firms Certified as Licensed Pesticide Applicators" implies that this is a or may be a restricted-use pesticide, and is enforceable. This is not a restricted-use pesticide formulation. Remove this statement because it is false and misleading (40CFR156.10). The following statement is not required, but would be more appropriate if desired by the Registrant:  
"The Registrant Intends That This Product Be Used Only By Individuals/Firms Certified As Licensed Pesticide Applicators."
3. On page 4, in the box for the "STORAGE AND DISPOSAL" statement, in the paragraph for "Nonrefillable Container.", change the next to the last sentence to "Then offer for recycling if available, or reconditioning if appropriate, or, if allowed by state and local authorities, puncture and dispose of in a sanitary landfill or incineration, or by burning."
4. On page 4, under "CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY", in the third paragraph, remove "TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, FMC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH

RESPECT TO THE SELECTION, PURCHASE, OR USE OF THIS PRODUCT.", because it is false and misleading under 40CFR152.10(a)(5)(viii).

5. On page 10 in the box for "ROTATIONAL CROP GUIDELINES (19.0)", under "Recropping Interval" for sugar beets, for consistency, add the superscript "3" to "36". The reference for 3 provides information for crops which have rotation intervals greater than 12 months.

6. In Tables 1, 2, 3, and 4, change "Dry Oz" to "Oz. by wt." In Table 5, change "Ounces (wt.)" to "Oz. by wt. (lb ai)".

7. On pp. 12 and 13, and 17, change the font size for "Precautions" and "Restrictions" to the same size as the word "RESTRICTIONS" printed on p. 16.

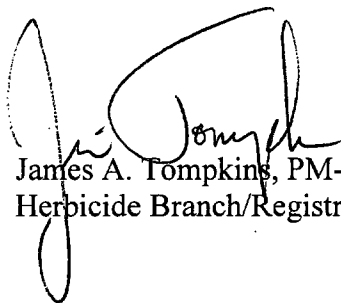
8. On page 13, move the "APPLICATION INFORMATION, SOIL CLASSIFICATION CHART" to a location before the use directions for field corn.

9. On page 14, change "COC" and "MSO" to "crop oil concentrate (COC)" and "methylated seed oil (MSO)", if these are the adjuvants recommended. If these are not the adjuvants recommended, provide the correct name for the abbreviations.

10. On page 16, under "RESTRICTIONS", change "Do not apply within 120 days of harvest." to "Do not apply within 120 days before harvest."

Please contact Phil Errico at 703-305-6663/ [errico.philip@epa.gov](mailto:errico.philip@epa.gov) for additional assistance with this matter.

Regards,



James A. Tompkins, PM-25  
Herbicide Branch/Registration Division 7505P

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ACCEPTED  
with COMMENTS  
In EPA Letter Dated

NOV 16 2009

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

279-3340

# F6482

45DF Herbicide

## Flexi-crop™ Advantage

Maximum Flexibility to plant corn or soybean in the spring

For Use on Asparagus, Corn (Field corn, seed corn, Popcorn, silage), Potato, Soybeans and Sugarcane

For Use Only By Individuals/Firms Certified as Licensed Pesticide Applicators

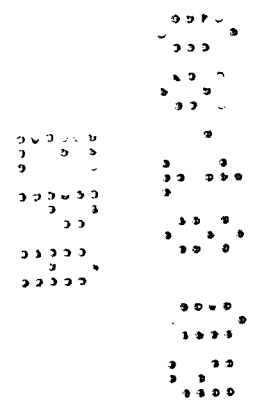
EPA Reg. No. 279-3340	EPA Est. 279 –
Active Ingredient:	By Weight.(1.0)
Sulfentrazone*.....	18%
Metribuzin**.....	27%
Other Ingredients.....	55%
	100%

F6482 45DF Herbicide contains 0.45 pounds active ingredient per pound: 0.18 pounds sulfentrazone and 0.27 pounds metribuzin,

\* N-[2,4 dichloro-5-[4-(difluoromethyl)-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4-triazol-1-yl]phenyl]methanesulfonamide

\*\* 4-amino-6-(1,1-dimethylethyl)-3-(methylthio)-1,2,4-triazin-5(4H)-one

U.S. Patent No. xxxxxxx



## KEEP OUT OF REACH OF CHILDREN CAUTION

Si usted no entiende la 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 (2.0)

**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 further 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 further 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 (3.0)

Have the product container or label with you when calling the poison control center or doctor, or going for treatment.

ACTIVE INGREDIENT MADE IN CHINA AND FORMULATED AND PACKAGED IN USA.



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## PRECAUTIONARY STATEMENTS (4.0)

### Hazards to Humans and Domestic Animals

#### Caution

Causes moderate eye irritation. Harmful if inhaled, swallowed, or absorbed through the skin. Avoid breathing vapor or spray mist. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

#### Personal Protective Equipment (PPE) (4.1)

Applicators and other handlers must wear:

Long-sleeved shirt and long pants.

Chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride.

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 separate from other laundry.

**User Safety Recommendations:**

Users should:

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

**Environmental Hazards (4.2)**

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 1.0% organic matter.**

Surface water advisory: F6482 45DF Herbicide can contaminate surface water through spray drift. Under some conditions, F6482 45DF Herbicide 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 (5.0)**

Do not use or store near heat or open flame.

**DIRECTIONS FOR USE (6.0)**

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

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

Do not apply 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 State or Tribe, consult the Agency responsible for pesticide regulation.

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.

**AGRICULTURAL USE REQUIREMENTS(7.0)**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. These requirements only apply to uses of this product that are covered by the Worker Protection Standard.

**Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours. (7.1)**

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: Coveralls over long-sleeved shirt and long pants, chemical-resistant gloves made of any waterproof material, and shoes plus socks.

**STORAGE AND DISPOSAL (8.0)**

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

**Pesticide Storage**

Store product in original container only, away from fertilizer, food or feed. Store in a cool, dry place and avoid excess heat.

**In Case Of Spill**

In case of spill avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. Call 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**

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

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

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY (9.0)**

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

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

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

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

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

**RESISTANCE MANAGEMENT (10.0)**

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

**GENERAL INFORMATION (11.0)**

F6482 45DF Herbicide is a dry flowable formulation to be mixed with water and sprayed for selective preemergence or preplant incorporated weed control in Asparagus, Corn (Field corn, Seed corn, Popcorn, silage), potato soybeans and sugarcane. When applied according to the instructions on this label, F6482 45DF Herbicide will control listed broadleaf, and sedge weeds, and provide grass suppression

The mode of action of F6482 45DF Herbicide involves uptake by weed roots and shoots. Preemergence and preplant incorporated applications of F6482 45DF Herbicide 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 (1/2" to 1") is not received within 7 to 10 days after the F6482 45DF Herbicide treatment, a shallow cultivation may be needed to obtain desired weed control. When sufficient moisture is received after dry conditions, F6482 45DF Herbicide will provide control of susceptible germinating weeds.

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 pads or properly diked mixing/loading areas. Operations that involve mixing, loading rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or washwater, and rainwater that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity 100% 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 operation containment.

### **GENERAL APPLICATION INFORMATION (12.0)**

**F6482 45DF Herbicide is labeled for use on Asparagus, Corn (field corn, Seed corn, Popcorn, silage), potato soybeans and sugarcane. DO NOT use on any other crops.**

Utilize a boom and nozzle sprayers equipped with the appropriate nozzles, and screens and adjusted to provide optimum spray distribution and coverage at the appropriate operating pressures. Utilize nozzles that produce minimal amounts of fine spray droplets to avoid spray drift or inadequate foliar and soil coverage. 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 excessive application and subsequent response.

Sprayer must be accurately calibrated before application. Check sprayer during application to be sure it is working properly.

Water or liquid fertilizer must be used as the carrier for F6482 45DF Herbicide, when applied alone, or when tank mixed with other soybean or sugarcane herbicides. A jar test for compatibility of liquid fertilizer and F6482 45DF Herbicide tank mix is recommended if the compatibility of the liquid fertilizer and F6482 45DF Herbicide is unknown.

Continuous agitation during application is required. Avoid overlap. Shut off spray booms while turning, slowing, or stopping, as over application may result. Do not store the sprayer overnight or for any extended period of time with the F6482 45DF Herbicide spray mixture remaining in the tank.

Do not premix F6482 45DF Herbicide solutions in nurse tanks.

### **SOYBEAN TOLERANCE (13.0)**

F6482 45DF Herbicide has been tested on a number of soybean cultivars, however, it has not been tested on all soybean varieties. The vast majority of cultivars tested when used according to label guidelines have demonstrated tolerance to F6482 45DF Herbicide. A limited number of soybean cultivars have shown some level of injury when used according to label guidelines and should not be planted when an F6482 45DF Herbicide program is planned.

**F6482 45DF Herbicide is not recommended for use on the following soybean varieties:** Altona, AP55, AP 71, Asgrow 6520, Burlison, Coker 102, Coker 156, Dassel, GL 3202, Govan, Maple Amber, NB 3665, NKS 1884, Paloma 350, Portage, Regal, Semmes, Terra-Vig 505, Terra-Vig 606, Tracy, Vansoy, and Vinton 81. For further information regarding soybean tolerance to an F6482 45DF Herbicide treatment consult University or Extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F6482 45DF Herbicide under specific local conditions prior to applying product.

If cool/cold weather or heavy rainfall occurs immediately following an F6482 45DF Herbicide application, soybean stunting or stand loss could occur. Yields have not been affected where early season stunting has occurred. Injury to soybeans can also occur under the following conditions: (1) excessive rate for soil type, (2) boom overlap, (3) improper sprayer calibration, (4) error in mixing procedures, (5) when soils have a calcareous surface area or pH greater than 7.5, (6) soil incorporation deeper than recommended, (7) when applied with organophosphate pesticides, (8) when heavy rains occur after application, especially in poorly drained areas, (9) when soybeans are planted less than 1 1/2 inches deep, (10) on any soil with less than 0.5% organic matter.

### **SPRAY DRIFT REDUCTION ADVISORY (14.0)**

Avoid spraying in windy conditions with sustained winds above 10 mph which is conducive to spray drift. Do not exceed spray pressures of 40 psi unless specified by the manufacturer of drift reducing spray tips and nozzles.

#### **Spray Drift Management**

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

The interaction of many equipment and 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 aerial applications. These requirements do not apply to forestry applications, public health uses or to applications of dry materials.

1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.



2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.
3. Observe the regulations of the State where applications are made.
4. Applicators must observe and abide by the requirements of the Aerial Drift Reduction Advisory.

#### **Information on Droplet Size**

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

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

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

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

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

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

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

**Nozzle Type** – Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low drift nozzles for both ground and aerial applications. Solid stream nozzles oriented straight back usually produce the largest droplets and the lowest drift potential in aerial applications.

**Boom Length** – For some aerial use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

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

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

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

**Temperature and Humidity** – When making applications in low relative humidity set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

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

**Sensitive Areas** – The pesticide should only be applied when the wind is blowing away from sensitive areas (e.g. residential areas, bodies of

water, known habitat for threatened or endangered species, non-target crops).

**Off-Target Movement of F6482 45DF Herbicide**

Drift of spray mixtures containing F6482 45DF Herbicide must be prevented. Observation of the preceding environmental conditions, correct application equipment design, calibration and application practices will significantly diminish the risk of off-target spray drift. F6482 45DF Herbicide can cause significant symptomology by drift onto sensitive crops and other plants. This symptomology may manifest initially as discreet, localized spots where contacted by F6482 45DF Herbicide drift mixtures. Depending on concentration of the spray solution and droplets size (effectively determining the dosage of sulfentrazone) and also depending on the inherent sensitivity of the plants involved, these spots or lesions may or may not coalesce. These effects will usually not have lasting effects on plant growth, but will likely reduce the value of affected fruit or foliage where grade or quality are 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 F6482 45DF Herbicide onto unintended crops or plants, irrespective of severity, constitutes misapplication of this product. FMC accepts no responsibility or liability for potential crop effects that may result from such misapplication of F6482 45DF Herbicide.

**BAND TREATMENT APPLICATIONS (15.0)**

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

Band Width (Inches)	X	Broadcast Rate Per Acre	=	Band Rate
Row Width (Inches)				
Band Width (Inches)	X	Broadcast Volume Per Acre	=	Band Volume
Row Width (Inches)				

**MIXING & LOADING INSTRUCTIONS (16.0)**

It is important that spray equipment is clean and free of existing pesticide deposits before applying F6482 45DF Herbicide. Follow the spray tank cleanout procedures specified on the label of product previously applied before adding F6482 45DF Herbicide to the tank.

For best results, fill spray tank with one half the volume of clean water or liquid fertilizer solution needed for the field to be treated. Start agitation system. When mixing F6482 45DF Herbicide in a spray tank with anything other than clean water (fertilizer, previous herbicide mixtures, ect.), F6482 45DF Herbicide should be slurried in a separate container with clean water before being added to the spray tank.

Slowly add the slurry to the spray tank. Carefully rinse the slurry container, adding the rinsate to the spray tank. Complete filling the spray tank to the desired level. Continuous spray tank agitation is required at all times to maintain a uniform spray solution. Refer to **RATE TABLE 3** (conventional soybeans) or **RATE TABLE 4** for (reduced rate soybeans) for the proper application rate. Make sure F6482 45DF Herbicide is thoroughly mixed before application or before adding another product to the spray tank.

For tank mixtures with other soybean or sugarcane 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 the spray tank one fourth full with clean water. With agitator operating, add the recommended amounts of ingredients using the following order: dry granules first, liquid suspensions (flowables) second. Add EC products followed by remaining adjuvants and/or carrier to tank as agitation continues and tank is filled with liquid carrier. All applicable directions, restrictions, and precautions for the tank mixture herbicide(s) must be followed.

Apply F6482 45DF Herbicide spray mixtures immediately after mixing. Do not store mixture. Do not store the sprayer overnight or for any extended period for time with F6482 45DF Herbicide spray mixture remaining in the tank. Do not premix F6482 45DF Herbicide spray solutions in nurse tanks. If F6482 45DF Herbicide was tank mixed with

other soybean or sugarcane herbicides, all additional directions, restrictions, and precautions for the additional herbicides must also be followed.

**SPRAYER EQUIPMENT CLEAN-OUT (17.0)**

As soon as possible after spraying F6482 45DF Herbicide and before using sprayer equipment for any other applications, the sprayer must be thoroughly cleaned to avoid potential crop effects using the following procedure. Residues left in mixing equipment, spray tanks, hoses, spray booms and nozzles can cause crop effects if they are not properly cleaned. In addition, users must take appropriate steps to ensure proper equipment clean-out for any other products mixed with F6482 45DF Herbicide as required on the other product labels.

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

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

Do not store the sprayer overnight or for any extended period of time with F6482 45DF Herbicide spray solution remaining in the tank, spray lines, spray boom plumbing, spray nozzles or strainers.

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

Should small quantities of F6482 45DF Herbicide remain in inadequately cleaned mixing, loading and/or spray equipment, they may be released during subsequent applications potentially causing effects to certain crops and other vegetation. FMC accepts no liability for any effects due to inadequately cleaned equipment.

Do not drain 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.

**WEEDS CONTROLLED (18.0)**

When applied in accordance with the General Application information and the specific crop use directions, F6482 45DF Herbicide applied alone or in recommended tank mixtures will provide control of the following weeds. Refer to the specific crop section.

BROADLEAVES	
Common Name	Scientific Name
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>
Copperleaf, hophornbeam	<i>Acalypha ostryifolia</i>
Croton, tropic	<i>Croton glandulosus</i>
Daisy, American	<i>Eclipta alba</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>
Ladysthumb	<i>Polygonum persicaria</i>
Lambsquarters, common	<i>Chenopodium album</i>
Morningglory, entireleaf	<i>Ipomoea integruscula</i>
Morningglory, ivyleaf	<i>Ipomoea hederacea</i>
Morningglory, palmleaf	<i>Ipomoea wrightii</i>
Morningglory, purple	<i>Ipomoea turbinata</i>
Morningglory, red	<i>Ipomoea coccinea</i>
Morningglory, smallflower	<i>Jacquemontia tamnifolia</i>
Morningglory, tall	<i>Ipomoea purpurea</i>
Nightshade, eastern black	<i>Solanum ptycanthum</i>
Nightshade, hairy	<i>Solanum sarrachoides</i>

Nightshade, silverleaf	<i>Solanum elaeagnifolium</i>
Pigweed, redroot	<i>Amaranthus retroflexus</i>
Pigweed, smooth	<i>Amaranthus hybridus</i>
Poorjoe	<i>Diodia teres</i>
Purslane, common	<i>Portulaca oleracea</i>
Senna, coffee	<i>Cassia occidentalis</i>
Sida, prickly (Teaweed)	<i>Sida spinosa</i>
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>
Smellmellon	<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>

**GRASSES (Suppression Only)**

Common Name	Scientific Name
Broadleaf signalgrass	<i>Brachiaria platyphylla</i>
Crabgrass, large	<i>Digitaria sanguinalis</i>
Crabgrass, smooth	<i>Digitaria ischaemum</i>
Goosegrass	<i>Eleusine indica</i>
Johnsongrass, seedling	<i>Sorghum halepense</i>
Orchardgrass	<i>Dactylis glomerata</i>
Panicum, fall	<i>Panicum dichotomiflorum</i>
Panicum, Texas	<i>Panicum texanum</i>

**SEDGES\***

Common Name	Scientific Name
Nutsedge, purple	<i>Cyperus rotundus</i>
Nutsedge, yellow	<i>Cyperus esculentus</i>
Sedge, annual	<i>Cyperus compressus</i>

Use rates from Table 2 will provide suppression only

**For winter annual weeds, such as those listed below, and/or other emerged weeds, add the appropriate rate of Rage™, Rage D-tech™, 2,4-D, or glyphosate-based product to F6482 45DF Herbicide applications.**

Chickweed, common	<i>Stellaria media</i>
Deadnettle, purple	<i>Lamium purpureum</i>
Field Pennycress	<i>Thlaspi arvense</i>
Henbit	<i>Lamium amplexicaule</i>
Marestail	<i>Hippuris vulgaris</i>
Mustard spp.	<i>Brassica spp.</i>
Prickly Lettuce	<i>Lactuca serriola</i>
Sheperdspurse	<i>Capsella bursa pastoris</i>
Speedwell spp.	<i>Veronica spp.</i>
Virginia Pepperweed	<i>Lepidium virginicum</i>

**ROTATIONAL CROP GUIDELINES (19.0)**

Crop	Recropping Interval (Months)
Alfalfa	12
Asparagus	12
Barley	4
Canola	24 <sup>(3)</sup>
Cotton	18 <sup>(3)</sup>
Dry Beans	12
Field Corn <sup>1</sup>	0
Peanuts	12
Potatoes	12
Rice	10
Sorghum	18, 12 <sup>(2)</sup>
Soybean	Anytime
Sugar Beets	36
Sugarcane	Anytime
Sunflower	12
Sweet Corn	18 <sup>(3)</sup>
Tobacco	12
Wheat	4
Any crop not listed	18 <sup>(1)</sup>

<sup>1</sup> Field Corn includes corn grown for grain or silage, popcorn and seed corn.

<sup>2</sup> Sorghum may be planted after 12 months where F6482 45DF Herbicide was applied at 20 oz/acre or less.

<sup>3</sup> Crops that have rotational intervals greater than 12 months after an F6482 45DF Herbicide application are the result of crop injury concerns.

**CORN (Field Corn, Seed Corn, Popcorn and silage) (For Use Only with GMO Varieties Tolerant to PPO Herbicides) (20.0)**

**Table 1**

<b>F6482 45DF Herbicide Use Rate Table (Corn)</b> Fall, Spring Early Preplant, Preemergence, and Preplant Incorporated Applications			
<b>Broadcast Rate</b>	<b>F6482 45DF Herbicide Dry Oz (lb ai) per acre</b>		
<b>Soil Texture</b>			
<b>% Organic Matter</b>	<b>Coarse</b>	<b>Medium</b>	<b>Fine</b>
<1.5	8.3(0.23)- 12.5(0.35)	8.3(0.23)- 12.5(0.35)	10.4(0.29)- 14.6(0.41)
1.5-3.0	8.3(0.23)- 12.5(0.35)	10.4(0.29)- 16.7(0.47)	12.5(0.35)- 18.8(0.53)
>3	10.4(0.29)- 14.6(0.41)	12.5(0.35)- 18.8(0.53)	16.7(0.47)- 22.2(0.63)
Refer to the previous information on soil types under the COARSE, MEDIUM, and FINE categories			
Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.			

**Preplant (Fall Applications) (20.1)**

F6482 45DF Herbicide may be applied in the fall as a preplant treatment prior to corn planting the following spring.

F6482 45DF Herbicide can be used alone or in a tank mixture with other herbicides to control susceptible broadleaves, sedges and grasses in corn. Apply F6482 45DF Herbicide in conventional tillage or conservation tillage (reduced tillage or no-tillage) cropping systems using rates recommended in the Table 1. F6482 45DF Herbicide should be applied to the stubble or soil surface and allow moisture from rainfall or snow to move the product into the soil. Do not mechanically incorporate in the fall or spring as this operation can destroy the herbicide barrier allowing weed escapes to occur. Do not apply to frozen soils or existing snow cover to prevent F6482 45DF Herbicide runoff from rain or snowmelt that may occur following application. F6482 45DF Herbicide may be tankmixed with other burndown herbicides to control emerged weeds in the fall or residual soil herbicides that are labeled for fall use on corn. Select the correct F6482 45DF Herbicide use rate for corn from the Table 1 for your soil type and organic matter. Due to the extended period of time between the fall application and corn planting, the use rate of F6482 45 DF Herbicide should be the mid to high rate within the rate range for the appropriate soil type and organic matter.

**Early Preplant and Preemergence (Spring Applications) (20.2)**

F6482 45DF Herbicide may be applied preplant on the soil surface in the spring to control weeds in conventional and conservation tillage systems. F6482 45DF Herbicide can be applied from 45 days prior to planting until 3 days after planting as a preemergence broadcast or banded soil application if corn seedlings have not broken the soil surface and if the seed furrow is completely closed. For preemergence applications 14 to 45 days prior to planting, use the mid to high rate in the appropriate rate range for the soil and organic matter type listed in Table 1. F6482 45DF Herbicide can be tank mixed with other herbicides labeled for use in corn. To control insect pests such as cutworm or armyworm that may be present, F6482 45DF Herbicide may be tankmixed with insecticides including Mustang Max or Capture 2EC. If dry conditions persist following preemergence application of F6482 45DF Herbicide, a shallow incorporation may be needed to activate the herbicide. If weeds are emerged at the time of F6482 45DF Herbicide application, use a burndown herbicide in conjunction with F6482 45DF Herbicide as needed. When planting into soil treated preplant with F6482 45DF Herbicide, minimize soil disturbance to maintain the herbicide barrier on the soil surface to achieve maximum weed control. Observe all precautions, instructions, and rotational cropping guidelines of each product's label when tank mixing, including all references to potential carryover and crop injury warnings or restrictions.

**Preplant Incorporated (20.3)**

F6482 45DF Herbicide may be applied as a Preplant Incorporated treatment in the spring prior to planting in reduced and conventional tillage corn. F6482 45DF Herbicide should be shallowly incorporated or mixed thoroughly into the soil to a maximum depth of 2 inches using a correctly adjusted implement such as a field cultivator, field finisher or disk harrow. Incorporating F6482 45DF Herbicide deeper than 2 inches may result in inconsistent weed control. Use the appropriate rate from Table 1 for the soil texture, organic matter, and pH level of the soil. F6482 45DF Herbicide can be tankmixed with other soil-applied

herbicides and insecticides labeled for preplant incorporation in corn. Observe all precautions, instructions, and rotational cropping guidelines of each product's label when tank mixing, including all references to potential carryover and crop injury warnings or restrictions.

F6482 45DF Herbicide may be applied more than once to the same crop in split or sequential applications to provide season-long control of difficult-to-control existing or late emerging weeds.

**Aerial application (20.4)**

Use nozzle types and arrangements that will provide optimum coverage while producing a minimal amount of fine droplets. Apply sufficient spray volume to achieve adequate coverage. Apply a minimum of 5 gallons of finished spray per acre.

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

**Precautions**

These Crop Specific Use directions are based upon the interactive effects of F6482 45DF Herbicide (sulfentrazone and metribuzin) 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 F6482 45DF Herbicide Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with F6482 45 DF Herbicide. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F6482 45DF Herbicide under specific local conditions.

**Restrictions**

Do not apply more than 33.3 dry ounces of F6482 45DF per twelve-month period. The twelve-month period is considered to begin upon the initial F6482 45DF 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 F6482 45DF runoff from rain or snowmelt that may occur following application.

**POTATOES (21.0)**

Table 2

F6482 45DF Herbicide Use Rate Table (Potatoes)			
Preemergence Application			
Broadcast Rate	F6482 45DF Herbicide		
	Dry oz (lb ai) per acre		
% Organic Matter	Soil Texture		
	Coarse	Medium	Fine
<1.5	8.3(0.23)-	8.3(0.23)-	10.4(0.29)-
	12.5(0.35)	12.5(0.35)	14.6(0.41)
1.5-3.0	8.3(0.23)-	10.4(0.29)-	12.5(0.35)-
	12.5(0.35)	16.7(0.47)	16.7(0.47)
>3	12.5(0.35)-	14.6(0.41)-	16.7(0.47)-
	16.7(0.47)	18.8(0.53)	22.2(0.63)

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

**Ground and Aerial Applications (21.1)**

Apply F6482 45DF Herbicide by aerial application as a preemergence treatment following planting and after dragoff, but prior to potato emergence. Optimum performance can be achieved if F6482 45DF Herbicide is applied to the soil surface and either rainfall or overhead irrigation is used to activate the product. If no moisture is received within 7 days following application in areas without irrigation, a shallow incorporation (less than 2 inches) may be needed prior to weed and potato emergence to activate the product. Select the appropriate use rate based on soil texture and organic matter as shown in Table 2 above. For control of emerged weeds at the time of the F6482 45DF

Herbicide application, an appropriate burndown herbicide and adjuvants labeled for potatoes may be tankmixed with to control these weeds. Do not apply F6482 45DF Herbicide if the potatoes have emerged from the soil as undesirable crop response may occur. F6482 45DF Herbicide may be tankmixed with other soil-applied herbicides labeled for use in potatoes to improve weed management and increase weed control spectrum.

Apply F6482 45DF Herbicide in a minimum of 10 gallons of spray by ground application and 5 gallons of spray by air.

**Chemigation Applications (21.2)**

F6482 45DF Herbicide may be applied to potatoes through sprinkler irrigation systems including center pivot, lateral move, end tow, solid set or hand move irrigation systems. Apply F6482 45DF Herbicide prior to potato emergence using sufficient water (0.25 to 0.5 inch per acre) to provide thorough soil surface coverage, but to avoid runoff of irrigation water. F6482 45DF Herbicide may be applied with other products labeled for chemigation use in potatoes.

It is important to note that irrigation with highly alkaline water (high pH) following a F6482 45DF Herbicide soil application may significantly increase the amount of sulfentrazone available in soil solution. Irrigation with water having a pH greater than 7.5 could result in adverse crop response. This response will ultimately depend on initial F6482 45DF Herbicide application rate, application timing, amount and pH of irrigation water; the sensitivity of the crop and the crop growth stage when irrigated. The risk of adverse crop response will lessen with advances in the crop growth stage.

**Weeds Controlled**

When applied according to directions, F6482 45DF Herbicide will provide control of:

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

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

**Precautions**

Potato varieties may vary in their response to herbicide applications. When using F6482 45DF Herbicide on an untested variety, always determine the crop tolerance before planting. Some potato varieties, including Sangre, Shepody and Snowden, have shown sensitivity to F6482 45DF Herbicide. Caution should be used when planting these varieties on marginal coarse soils.

These Crop Specific Use directions are based upon the interactive effects of F6482 45DF Herbicide (sulfentrazone) and the primary soil and environmental factors, which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under General Application Instructions, General F6482 45DF Herbicide Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with F6482 45DF Herbicide. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F6482 45DF Herbicide under specific local conditions.

**Restrictions**

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

Do not apply F6482 45DF Herbicide after potato emergence from the soil as undesirable crop response may occur.

Do not apply more than 22.2 dry ounces per acre per twelve-month period. The twelve-month period is considered to begin upon the initial F6482 45DF application.

**SOYBEANS (22.0) (Except in CA)**

F6482 45DF Herbicide may be applied as a preemergence or preplant incorporated treatment for the control of weeds in soybeans as described in the following.

**APPLICATION INFORMATION**

**SOIL CLASSIFICATION CHART**

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

**Ground Application (22.1)**

Utilize a boom and nozzle ground sprayer equipped with the appropriate nozzles, spray tips and screens and adjusted to provide optimum spray distribution and coverage at the appropriate operating pressures. Utilize nozzles that produce minimal amounts of fine spray droplets to avoid spray drift or inadequate foliar and/or soil coverage. Apply a minimum of 10 gallons of finished spray per acre by ground. Be aware that overlaps and slower ground speeds while starting, stopping or turning while spraying may result in excessive application and subsequent crop response.

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

**Aerial Application (22.2)**

Use nozzle types and arrangements that will provide optimum coverage while producing a minimal amount of fine droplets. Apply sufficient spray volume to achieve adequate coverage. Apply a minimum of 5 gallons of finished spray per acre.

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

**FALL APPLICATIONS (22.3)**

F6482 45DF Herbicide may be applied as a fall treatment to the stubble of harvested crops for the burndown of existing vegetation and preemergence control of labeled weeds the following spring in no-till and conservation tillage production systems. F6482 45DF Herbicide can be applied to the stubble of a harvested crop in no-till or to the soil surface of conservation tillage fields after harvest when the sustained soil temperature is 55 degrees F and falling at a soil depth of 4 inches. Apply after September 30 in those areas North of Interstate 90 and after October 15 in those areas North of Interstate 40. To obtain adequate weed control in all areas soils must have sustained temperature of 55 degrees F or lower. Applications to ridge till production systems must be made after the formation of ridges or beds.

If weeds are emerged at the time of application, utilize a tank mixture with a suitable burndown herbicide at labeled rates. Fall applied burndown treatments should be made with a minimum of 15 gallons per acre to achieve adequate coverage of the weeds being treated. Gallonage should be increased where weed density is high or heavy crop residue levels are present. When making burndown applications to emerged weeds, the addition of adjuvants such as COC or MSO to the spray mixture can be used to enhance the burndown activity of the application. If weeds are present at time of F6482 45DF Herbicide application apply with appropriate burndown herbicides for improved control of existing weeds. Refer to product labels for use rates and instructions. For F6482 45DF Herbicide application rates refer to **RATE TABLE 3** for standard rate programs and **RATE TABLE 4** for reduced rate programs in glyphosate tolerant soybean systems.

**SPRING APPLICATIONS (22.4)**

**EARLY PRE-PLANT (22.4.1)**

F6482 45DF Herbicide may be applied up to 30-45 days prior to planting (Early Preplant) in no-till or minimum till cropping systems. For applications earlier than 30 days prior to planting, the high rate in the rate range may be needed for extended residual. F6482 45DF Herbicide provides limited burndown of small weeds. For complete burndown, a companion burndown herbicide labeled for use in soybeans should be used at labeled rates. The addition of crop oil concentrate at 1 quart per acre or non-ionic surfactant at 0.25% will increase the burndown effectiveness of F6482 45DF Herbicide. For F6482 45DF Herbicide application rates refer to **RATE TABLE 3** for standard rate programs and **RATE TABLE 4** for reduced rate programs in glyphosate tolerant soybean systems.

**PREPLANT INCORPORATED (22.4.2)**

F6482 45DF Herbicide may be applied preplant incorporated prior to planting soybeans. F6482 45DF Herbicide may be applied alone or in combination with other preplant incorporated herbicides labeled for soybeans. Do not incorporate deeper than 2 inches. Improper soil incorporation may result in erratic weed control and/or crop injury. F6482 45DF Herbicide may be followed by labeled postemergence soybean herbicides for increased control of grass and broadleaf weeds. Always follow the most restrictive label when tank mixing. For



F6482 45DF Herbicide application rates refer to **RATE TABLE 3** for standard rate programs and **RATE TABLE 4** for reduced rate programs in glyphosate tolerant soybean systems.

**PREEMERGENCE (22.4.3)**

F6482 45DF Herbicide can be applied from 30 days before planting and up to 3 days after planting, but before the crop seed germinate to prevent injury to emerging crop seedlings. F6482 45DF Herbicide applied after crop emergence will cause severe injury to the crop. Please refer to section 13 for more information regarding soybean tolerance. F6482 45DF Herbicide can be applied alone or in combination with other labeled soybean herbicides for preemergence grass control. F6482 45DF Herbicide can be applied preemergence following the use of a preplant incorporated grass herbicide labeled for use on soybeans. If weeds are present at time of F6482 45DF Herbicide application apply with appropriate burndown herbicides for improved control of existing weeds. Refer to product labels for use rates and instructions. Properly closed planter seed furrows are required before F6482 45DF Herbicide application to avoid crop injury. For F6482 45DF Herbicide application rates refer to **RATE TABLE 3** for standard rate programs and **RATE TABLE 4** for reduced rate programs in glyphosate tolerant soybean systems.

F6482 45DF Herbicide may be tank mixed with other products containing metribuzin as long as the total seasonal amount of metribuzin is not exceeded.

**Rate Table 3**

<b>Standard Rate Programs (Soybeans)</b>			
Fall, Early Pre-Plant, Pre-plant Incorporated, Preemergence Conservation or Conventional Tillage			
Broadcast Rate	Dry oz (lb ai) F6482 45DF Herbicide per acre *		
	Soil Texture **		
% Organic Matter ***	Coarse	Medium	Fine
1.0 – 2.0%	12(0.34)-14(0.39)	14(0.39)-16(0.45)	16(0.45)-18(0.51)
2.0 – 4.0	14(0.39)-16(0.45)	16(0.45)-18(0.51)	18(0.51)-20(0.56)

\* Use the higher rate for suppression of grasses and sedges.  
 \*\* Refer to the previous information on soil types under the SOIL CLASSIFICATION CHART.  
 \*\*\* Do not apply to soils with less than 1% organic matter.  
**Adverse crop response can occur on soils with pH greater than 7.5. To reduce adverse crop response, use a maximum of 12 oz of F6482 45DF Herbicide on soils with pH greater than 7.5.**

**Rate Table 4**

<b>Reduced Rate Programs (Soybeans)</b>			
Fall, Early Pre-Plant, Pre-plant Incorporated, Preemergence Conservation or Conventional Tillage			
(Reduced Rates for the Suppression of Weeds Listed to Reduce Early Season Weed Competition in Glyphosate Tolerant Soybean Systems)			
Broadcast Rate	Dry oz (lb ai) F6482 45DF Herbicide per acre *		
	Soil Texture **		
% Organic Matter ***	Coarse	Medium	Fine
1.0 – 2.0	8(0.23)	8(0.23)-10(0.28)	10(0.28) – 12(0.34)
2.0 – 4.0	8(0.23) – 10(0.28)	10(0.28) – 12(0.34)	12(0.34) – 14(0.39)

\* For fall applications use the higher rate for the appropriate soil texture and organic matter. Use the higher rate for suppression of grasses and sedges.  
 \*\* Refer to the previous information on soil types under the SOIL CLASSIFICATION CHART.  
 \*\*\* Do not apply to soils with less than 1% organic matter.  
**Adverse crop response can occur on soils with pH greater than 7.5. To reduce adverse crop response, use the minimum rate for the appropriate % organic matter and soil texture on soils with pH greater than 7.5.**

**REDUCED RATE F6482 45DF Herbicide PROGRAMS FOLLOWED BY POSTEMERGENCE HERBICIDE TREATMENTS (RATE TABLE 4)**

F6482 45DF Herbicide may be applied as an early preplant, preplant incorporated or preemergence treatment followed by labeled postemergence soybean herbicides for increased control of grass and broadleaf weeds. F6482 45DF Herbicide may also be followed by a postemergence application of a glyphosate product to glyphosate tolerant soybeans. Apply the recommended application rate of F6482

45DF Herbicide for suppression of weeds in glyphosate tolerant soybeans, maintaining control with sequential applications of registered postemergence herbicides. Refer to the partner product labels for specific use directions, weed control claims, precautionary statements, and restrictions.

**REPLANTING INSTRUCTIONS (22.4.4)**

If initial planting of soybeans fails to produce a stand due to adverse environmental conditions, only soybeans may be replanted in fields treated with F6482 45DF Herbicide. Do not retreat field with a second application of F6482 45DF Herbicide or crop injury may occur. Do not replant treated fields with any crop at intervals that are inconsistent with the Rotational Crop Guidelines found on this label for F6482 45DF Herbicide. When recommended tank mix combinations are used, consult the product label for replanting and recropping instructions and observe the directions that are the most restrictive.

**PRECAUTIONS**

Do not apply F6482 45DF Herbicide after soybeans have emerged. Severe injury will occur when F6482 45DF Herbicide applications are made after soybean emergence.

**RESTRICTIONS**

Do not apply more than 20 dry ounces per acre of F6482 45DF Herbicide per twelve month season. The twelve-month period is considered to begin upon the initial F6482 45DF Herbicide application. Do not apply to soils classified as Sand, which have less than 1% organic matter. Do not apply F6482 45DF Herbicide to frozen soil. Do not incorporate deeper than 2 inches. Do not graze treated soybean or harvest for forage or hay.

**SUGARCANE (23.0)**

F6482 45DF Herbicide may be applied to sugarcane as a preemergence treatment at planting or lay-by timing.

Table 5

F6482 45DF Herbicide Use Rates (Sugarcane) Planting Time and Lay-by Applications			
Broadcast Rate	Ounces (wt.) F6482 45DF Herbicide per acre*		
Soil Texture **			
% Organic Matter	Coarse	Medium	Fine
1.0 -2.0	16(0.45) – 20(0.56)	20(0.56) – 26(0.73)	26(0.73) – 30(0.84)
2.0 – 4.0	20(0.56) – 26(0.73)	26(0.73) – 30(0.84)	30(0.84) – 33(0.93)
* Use the higher rates for soils of pH less than 7.0. Use the lower rates for pH greater than 7.0 within the rate range.			
* Refer to the previous information on soil types under the SOIL CLASSIFICATION CHART.			
Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.			

**Planting Time Application**

F6482 45DF Herbicide can be applied to newly planted or ratoon sugarcane as a broadcast or banded preemergent soil applied treatment for the control of broadleaf weeds, grasses and sedges in 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 10 gallons of spray per acre. F6482 45DF Herbicide may be applied with other herbicides registered for use in sugarcane.

**RESTRICTIONS**

Do not apply within 120 days of harvest. Do not apply more than 33 ounces (0.928 lbs active) per acre of F6482 45DF Herbicide per twelve month season. The twelve month period is considered to begin upon the initial F6482 45DF Herbicide application. Do not graze treated sugarcane or harvest for forage or hay.

## ASPARAGUS (24.0)

Rate Table 6

F6482 45DF Herbicide Use Rate Table (Asparagus) Spring Preemergence Applications			
Broadcast Rate	Ounces (wt.) per acre		
% Organic Matter	Soil Texture		
	Coarse	Medium	Fine
<1.5	12.5(0.35)-	16.7(0.47)-	22.2(0.63)
	16.7(0.47)	22.2(0.63)	
1.5-3	16.7(0.47)-	22.2(0.63)-	28.1(0.79)
	22.2(0.63)	28.1(0.79)	
>3.0	22.2(0.63)-	28.1(0.79)-	33.3(0.94)
	28.1(0.79)	33.3(0.94)	

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

Apply F6482 45DF Herbicide as a broadcast treatment to crowns established for one or more years.

Apply in the spring before the crop and weeds emerge. F6482 45DF Herbicide should be applied at 12.5 to 33.3 dry ounces per acre in 10 to 40 gallons of finished spray per acre. F6482 45DF Herbicide may be applied with other pesticides registered for use with asparagus.

### Weeds Controlled

When Applied according to directions, F6482 45DF Herbicide will provide control of:

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

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

### Precautions

These Crop Specific Use directions are based upon the interactive effects of F6482 45DF Herbicide (sulfentrazone and metribuzin) 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 F6482 45DF Herbicide Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with F6482 45DF Herbicide. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on F6482 45DF Herbicide under specific local conditions.

### Restrictions

Do not apply within 14 days prior to harvest.

Do not apply more than 33.3 dry ounces per acre per 12-month period.

Do not make more than one F6482 45DF Herbicide application per acre per 12-month period. The twelve-month period is considered to begin upon the initial Spartan application.

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

## LABEL TRACKING INFORMATION (25.0)

Label Code: 08-06-09

EPA Approval Date:

**FMC Corporation**  
Agricultural Products Group  
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