

264-765

05-10-2007

1/14



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

MAY 10 2007

Mr. Mike See
Bayer CropScience
P.O. Box 12014
2 T.W. Alexander Drive
Research Triangle Park, NC 27709

Subject: Define DF Herbicide
EPA Registration No. 264-765
Revised labeling submitted March 23, 2007 to add sweet corn use

Dear Mr. See:

The amended labeling referred to above is acceptable provided that you adhere to the following conditions:

1. Make all of the changes specified on in the document "Summary of Comments on Microsoft Word - P Define DF Herb 10-25-04.doc".
2. Submit no later than December 30, 2009, three acceptable bridging studies (side-by-side field trials) that compare the SC formulation (Define TM SC, EPA Reg. No. 264-819) and the DF formulation (Define TM DF Herbicide EPA Reg. No. 264-765) on field corn for the midseason use (i.e., broadcast early postemergence application at the 5th leaf collar stage).
3. Submit no later than December 30, 2009, a special comparative sensitivity study on thyroid hormone levels in neonatal and adult rats. The registrant should consult with the Agency in developing the protocol for the study.
4. Submit a 28-day inhalation toxicity study in rats no later than January 31, 2008.

2/14

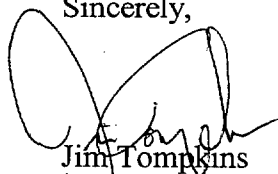
5. Submit a standard for the FOE thioglycolate sulfoxide metabolite to the National Pesticide Standards Repository/Analytical Chemistry Branch/OPP, 701 Mapes Road, Fort George G. Meade, MD 20755-5350.

6. Submit two copies of final printed labeling within 30 days of receipt of this letter.

This labeling supercedes all previously accepted labeling for this product except for supplemental labeling. A stamped copy of the label is enclosed for your records.

If you have any questions about this letter, you may call Tobi Colvin-Snyder at 703-305-7801.

Sincerely,



Jim Tompkins
Product Manager 25
Herbicide Branch
Registration Division (7505P)

DEFINETM DF Herbicide

3/14

For control of certain grass and broadleaf weeds in corn and soybeans.

ACTIVE INGREDIENT:

Flufenacet

N-(4-Fluorophenyl)-N-(1-methylethyl)-2-[[5-(trifluoromethyl)-1,3,4-thiadiazol-2-yl]-oxy]acetamide 60.0%

INERT INGREDIENTS: 40.0%

100.0%

EPA Reg. No. 264-765

EPA Est. No.

STOP - Read the label before use
Keep out of reach of children
WARNING AVISO

PRECAUCION AL USUARIO: Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(TO THE USER: If you do not understand the label, find someone to explain it to you in detail.)

For **MEDICAL** And **TRANSPORTATION** Emergencies **ONLY** Call 24 Hours A Day 1-800-334-7577
For **PRODUCT USE** Information Call 1-866-99BAYER (1-866-992-2937)

FIRST AID

If swallowed	<ul style="list-style-type: none">• 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 a poison control center or doctor.• Do not give anything by mouth to an unconscious person.
If on skin or clothing	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15 to 20 minutes.• Call a poison control center or doctor for treatment advice.
In case of emergency call toll free the Bayer CropScience Emergency Response Telephone No. 1-800-334-7577. Have a DEFINE TM DF Herbicide container or label with you when calling a poison control center or doctor, or going for treatment.	
Note To Physician: No specific antidote is available. Treat the patient symptomatically.	

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING

May be fatal if swallowed. Prolonged or frequently repeated skin contact may cause allergic skin reactions in some individuals. Avoid contact with skin, eyes, or clothing.

Personal Protective Equipment:

Applicators and other handlers must wear:

- long-sleeved shirt and long pants
- waterproof gloves
- shoes plus socks.

Personnel involved in mixing/loading operations must wear:

- coveralls
- waterproof gloves
- shoes plus socks
- a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C) or a NIOSH approved respirator with any N, R, P or HE filter.

ACCEPTED
with COMMENTS
In EPA Letter Dated

MAY 10 2007
Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
264-765

4/14

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

User should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from areas treated. Do not contaminate water when disposing of equipment washwaters.

Do not allow sprays to drift onto adjacent desirable plants.

Ground Water: Flufenacet is known to leach through soil into ground water under certain conditions as a result of use directions. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground-water contamination.

Surface Water: Flufenacet residues can contaminate surface water through spray drift. Under some conditions, they also have high potential for runoff into surface water (primarily via dissolution in runoff water or erosion), 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 ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas overlying tile drainage systems that drain to surface waters.

DIRECTIONS FOR USE

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For 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 following application.

Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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
- Waterproof gloves
- Shoes plus socks

5/14

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Handle and open container in a manner as to prevent spillage. If the container is leaking or material spilled for any reason or cause, carefully sweep material into a pile. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Dispose of pesticide as directed below. In spill or leak incidents, keep unauthorized people away. You may contact the Bayer CropScience Emergency Response Team for decontamination procedures or any other assistance that may be necessary. The Bayer CropScience Emergency Response Telephone No. is 1-800-334-7577.

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.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

GENERAL INFORMATION

DEFINE™ DF Herbicide is a selective herbicide for control of many annual grasses and certain broadleaf weeds in field corn, white corn, corn grown for silage, field corn grown for seed, sweet corn, and soybeans. DEFINE™ may be applied preplant surface, preplant incorporated (mix into the top 1 to 2 inch layer of soil), preemergence and/or early postemergence. DEFINE™ will provide its most effective weed control when applied and subsequently moved into the soil by rainfall, sprinkler irrigation or mechanical tillage prior to weed emergence. DEFINE™ controls weeds by interfering with seed germination and seedling development.

DEFINE™ DF Herbicide may be applied using either water or sprayable fluid fertilizer as a liquid carrier or be impregnated and applied on dry bulk fertilizer.

DEFINE™ DF Herbicide may be applied either alone or in tank mix combination with additional herbicides. **When tank mixing, always observe all precautionary statements and limitations on labeling of all products.**

Dry weather following preemergence application of DEFINE™ or recommended tank mixtures may reduce effectiveness. Cultivate if weeds develop.

GENERAL USE RESTRICTIONS

DEFINE™ DF Herbicide is for use on soybeans, field corn, white corn, corn grown for silage, field corn grown for seed, and sweet corn. Do not use on popcorn.

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

Do not use flood irrigation to apply, activate or incorporate DEFINE™ DF Herbicide.

Do not apply more than 21 ounces DEFINE™ DF Herbicide per acre per use season in corn and 12 ounces per acre per use season in soybeans.

Do not make a postemergence application of DEFINE™ DF Herbicide to corn beyond the 5th leaf collar growth stage (begin count with the 1st leaf-rounded tip).

Do not harvest corn forage (silage) within 75 days after a postemergence application.

Do not apply DEFINE™ DF Herbicide or DEFINE™ DF Herbicide tank mixtures when environmental conditions may favor drift to non-target sites.

Corn and soybean seed should be planted a minimum of 1 to 1-1/2 inches deep.

If any crop treated with DEFINE™ DF Herbicide is lost, corn or soybeans may be replanted immediately. Do not make a second application of DEFINE™.

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.

This 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.

RATE SELECTION/SOIL TEXTURE

The recommended rates of DEFINE™ DF Herbicide are defined by texture and organic matter content of the soil being treated. Unless a specific soil texture is mentioned, rate tables throughout this label refer to the following three soil texture groups: coarse, medium and fine. If you are not sure how to classify your soil, contact your Bayer CropScience representative, the Cooperative Extension Service or other knowledgeable person. The following chart includes a complete listing of soil textures included in each of the soil textures groupings:

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

MIXING INSTRUCTIONS

LIQUID CARRIERS:

DEFINE™ DF Herbicide is a dry flowable herbicide that must be mixed in water or sprayable fluid fertilizer. Compatibility of DEFINE™ or its labeled tank mix products with these liquid carriers should always be predetermined prior to spraying. Refer to the SPRAYABLE FLUID FERTILIZER COMPATIBILITY TEST (Appendix I) of this label to determine product compatibility in fluid fertilizer carriers.

Before mixing DEFINE™ DF Herbicide and its labeled tank mixtures, examine the spray equipment making sure it is completely clean and free of rust or corrosion. Be sure the equipment is free of any residues from previously used pesticides. Flush lines with clean water or recommended detergents after the last application. Use an approved method for disposing of rinsate.

For optimum spray tank mixing and efficacy, DEFINE™ DF Herbicide is recommended to be added to the spray tank via an eductor system.

The proper mixing sequence for DEFINE™ DF Herbicide and recommended tank mixtures with the appropriate liquid carrier is as follows:

1. Fill the spray tank or nurse tank 1/4 full with the appropriate liquid carrier.
2. Start recirculation and agitation system and continue throughout mixing and application.
3. If the compatibility test indicates the need of a compatibility agent, add the recommended amount of compatibility agent to the spray tank.
4. If ammonium sulfate is to be used, add it now.
5. Next add the recommended quantity of DEFINE™ DF Herbicide through the eductor or to the spray tank [slowly add DEFINE™ if water or sprayable grade nitrogen fertilizers (28-0-0, 32-0-0) are the carriers; for other sprayable grade fertilizers first check compatibility and then either mix directly or preslurry in water depending in the results of the compatibility test].
6. If tank mixing with wettable powders or other dry flowable products in water, they may be added now.
If tank mixing these products in a sprayable fertilizer carrier, first make a slurry of the products with water and then add the slurry slowly to the spray tank.
7. If tank mixing with emulsifiable concentrates or soluble products, add the products to the spray tank.
8. If tank mixing with Gramoxone-Extra®, a glyphosate-containing product or Touchdown®, add the products to the spray tank.
9. If mixing spray adjuvants in the mixture, add them after all other products have been mixed.
10. Fill the spray tank to the desired level with the appropriate liquid carrier.
11. Continue agitation during transport and application until the spray tank is empty.

DEFINE™ DF Herbicide and all registered mixtures should be kept agitated once mixed and then sprayed immediately. Do not allow mixtures to stand for prolonged periods of time. Water quality, pH, temperature and/or other components of the mixture may affect how long the mixture may stand before application.

DRY FERTILIZER CARRIERS:

DEFINE™ DF Herbicide may be impregnated or coated on dry bulk fertilizers for application. Refer to Appendix II of this label for details.

APPLICATION INFORMATION

SPRAYER APPLICATION

Ground Broadcast Treatment: Accurately calibrate the sprayer prior to mixing the herbicide treatments. Apply DEFINE™ DF Herbicide and the labeled tank mixtures in a minimum of 10 gallons of total spray volume per acre using broadcast boom equipment. Use a pump with capacity to maintain 30 to 40 psi at the nozzles, maintain adequate in-tank agitation to keep the spray mixture in suspension and provide a minimum of 20% bypass at all times. Application must be made at a sufficient spray pressure and volume to provide accurate and uniform application of spray particles to a given area without causing spray drift to non-target areas. If mixed with other labeled herbicides, the spray volume may be no less than the minimum volume recommended by the tank mix product or 10 gallons, whichever is greater. The use of screens to protect the pump and nozzles is recommended. Screens placed on the suction side of the pump should be 16-mesh or coarser. Do not place a screen in the recirculation line. Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles. Refer to the nozzle manufacturer for additional recommendations. Agitate thoroughly before and during application with either bypass or mechanical agitation. Rinse the sprayer thoroughly with clean water immediately after each use.

Band Treatment: DEFINE™ DF Herbicide and the labeled tank mixtures may be applied as a band treatment. Use the following formula to calculate the amount of herbicide needed for band treatments:

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

DRY FERTILIZER APPLICATION

Apply using a minimum of 200 lb of dry fertilizer per acre. See Appendix II for additional details.

APPLICATION METHODS AND TIMING

DEFINE™ DF Herbicide may be applied either alone or in tank mixtures with or sequentially with certain other registered and recommended herbicides. Applications may be made preplant surface, preplant incorporated or preemergence. DEFINE™ may be used in either a single or split application program. Do not apply when environmental conditions favor drift.

Preplant Surface: For use in conservation, minimum or no-tillage crop production systems, DEFINE™ DF Herbicide alone or as a recommended tank mixture may be applied as a broadcast spray up to 45 days before planting in corn and 14 days before planting in soybeans. A sequential application is recommended for applications made 30 to 45 days prior to planting, where 2/3 of the highest recommended broadcast rate for the crop and soil texture is applied initially and the remaining 1/3 is applied at planting. Treatments made less than 30 days before planting may use either a single or sequential application. If weeds are present at the time of application, apply the DEFINE™ DF Herbicide treatment in tank mixture with a recommended nonselective herbicide such as ~~Gramoxone Extra~~, a glyphosate-containing product or Touchdown. If possible, do not move treated soil out of the row or move untreated soil to the soil surface during planting, as weed control may be reduced.

Preplant Incorporation: Apply DEFINE™ DF Herbicide alone or in combination with recommended tank mixes as a broadcast spray and incorporate into the upper 1 to 2 inches of the soil surface up to 14 days before planting. Avoid deep incorporation since reduced weed control and/or crop injury may result. Incorporate with implements which provide uniform, shallow incorporation (example - finishing disk, harrow, rolling cultivator, etc.)

Preemergence: DEFINE™ DF Herbicide alone and its recommended tank mixes may be applied to the soil surface as a broadcast spray or band application after planting of the crop but prior to weed or crop emergence. If weeds are present at the time of application, apply DEFINE™ with a nonselective herbicide such as ~~Gramoxone Extra~~, a glyphosate-containing product or Touchdown. Rainfall and/or overhead sprinkler irrigation is necessary to move DEFINE™ into the upper soil surface where weed seeds germinate. Dry weather conditions following application may reduce weed control. If adequate moisture is not received within 7 to 10 days after applications and weeds begin to emerge from the soil, a light rotary hoeing or shallow incorporation (no deeper than 1/2 inch deep) will improve performance and minimize crop damage. Excessive rainfall or irrigation after application may reduce weed control.

Early Postemergence: When used as an early postemergence treatment, DEFINE™ DF Herbicide may be applied once per use season alone or in combination with or sequentially with certain herbicides. Use of an adjuvant is recommended in some applications. Refer to crop sections of the label for specific information.

Special Applications: Fall Application (for use only in IA, MN, ND, SD, WI, north of Route 20 in NE, north of Route 136 in IL, and north of Interstate 70 in OH):

Following harvest of crops in the fall, DEFINE™ DF Herbicide may be applied to crop stubble after October 15, when the sustained soil temperature at the four-inch soil depth is less than 50 °F, but before the ground is frozen. This application is limited to only medium- and fine-textured soils with an organic matter of 2.5% or greater and which will be planted to corn the following spring. The soil may be tilled before or after application with incorporation depth no more than two to three inches following herbicide application. If a spring application of DEFINE™ DF Herbicide follows the fall application, the total DEFINE™ rate for both applications must not exceed 21 ounces.

CORN (Field, Seed, and Sweet Corn)

DEFINE™ dry flowable herbicide is a selective herbicide for control of most annual grasses and selected annual broadleaf weeds in corn. A single or split application program may be used and the product may be applied alone or in tank-mix combination with certain registered herbicides. The following types of applications are allowed: preplant surface, preplant incorporated, preemergence and early postemergence. Most effective weed control will occur when the applied product is moved into the soil by rainfall, sprinkler irrigation or mechanical tillage prior to weed emergence from the soil.

Special Precautions (Field Seed Corn Inbreds): Field seed corn inbred lines and sweet corn varieties may vary in their response to DEFINE™ DF Herbicide. Do not apply DEFINE™ to inbreds without first verifying with your local seed corn company (supplier) the DEFINE™ selectivity on your inbred line.

WEED SPECIES CONTROLLED BY DEFINE™ DF HERBICIDE

DEFINE™ DF Herbicide applied at recommended dosages and application timings will control many important annual grasses and broadleaf weeds.

8/14

WEEDS CONTROLLED**ANNUAL GRASS WEEDS**

Barnyardgrass (<i>Echinochloa crusgalli</i>)	Foxtail, giant (<i>Setaria faberi</i>)	Johnsongrass (seedling) (<i>Sorghum halepense</i>)	Panicum, fall (<i>Panicum dichotomiflorum</i>)
Crabgrass, large (<i>Digitaria sanguinalis</i>)	Foxtail, green (<i>Setaria viridis</i>)	Lovegrass, India (<i>Eragrostis</i> sp)	Signalgrass, broadleaf (<i>Brachiaria platyphylla</i>)
Crabgrass, smooth (<i>Digitaria ischaemum</i>)	Foxtail, yellow (<i>Setaria glauca</i>)	Panicum, browntop (<i>Panicum fasciculatum</i>)	Witchgrass (<i>Panicum capillare</i>)
	Goosegrass (<i>Eleusine indica</i>)		

ANNUAL BROADLEAF WEEDS

Carpetweed (<i>Mullugo verticillata</i>)	Purslane, common (<i>Portulaca oleracea</i>)	Pusley, Florida (<i>Richardia scabra</i>)	Spurge, spotted (<i>Euphorbia maculata</i>)
---	---	--	--

WEED SPECIES PARTIALLY CONTROLLED BY DEFINE™ DF HERBICIDE

DEFINE™ DF Herbicide will provide partial control or reduced competition for many additional grass and broadleaf weeds. Reduced competition weeds will be stunted in growth and/or be of reduced populations as compared to non-treated areas but control will generally not be commercially acceptable.

WEED SPECIES PARTIALLY CONTROLLED**ANNUAL GRASS/SEDGE WEEDS**

Cupgrass, woolly (<i>Eriochloa villosa</i>)	Nutsedge, yellow (<i>Cyperus esculentus</i>)	Sandbur, field (<i>Cenchrus incertus</i>)	Shattercane (<i>Sorghum bicolor</i>)
Millet, wild-proso (<i>Panicum miliaceum</i>)	Panicum, Texas (<i>Panicum texanum</i>)		

ANNUAL BROADLEAF WEEDS

Beggarweed, Florida (<i>Desmodium tortuosum</i>)	Nightshade, eastern black (<i>Solanum ptycanthum</i>)	Ragweed, common (<i>Ambrosia artemisiifolia</i>)	Waterhemp, common (<i>Amaranthus rudis</i>)
Lambsquarters, spp. (<i>Chenopodium</i> spp.)	Pigweed spp. (<i>Amaranthus</i> spp.)	Sida, prickly (<i>Sida spinosa</i>)	Waterhemp, tall (<i>Amaranthus tuberculatus</i>)
Mustard spp. (<i>Brassica</i> spp.)			

DEFINE™ DF HERBICIDE USE RATES IN PREPLANT SURFACE, PREPLANT INCORPORATED, PREEMERGENCE AND EARLY POSTEMERGENCE APPLICATIONS

For FALL Application (For use only in IA, MN, ND, SD, WI, north of Route 20 in NE, north of Route 136 in IL, and north of Interstate 70 in OH):

After October 15, when the sustained soil temperature at the four inch soil depth is less than 50 oF, DEFINE™ DF Herbicide may be applied to remaining crop stubble following harvest. In conservation, minimum and no-tillage systems on soils having 2.5% organic matter or greater, apply DEFINE™ at 19 to 21 oz/A on *medium textured soils* and 21 oz/A on *fine textured soils*. Apply before the ground is frozen. The soil may be tilled before or after application with an incorporation depth no more than two to three inches following the fall application. Minimize furrow and ridge formation in the tillage operations after application of DEFINE™. If a spring application is made, the total rate of both fall and spring must not exceed the maximum total rate for corn, or illegal residues may occur.

For CONVENTIONAL Tillage Systems With Applications Made TWO WEEKS OR LESS Preplant Surface, Preplant Incorporated or Preemergence:

Recommended DEFINE™ DF Herbicide use rates are located in Table 1.

Rates are based on soil texture and organic matter and are for applications made within two weeks of planting and until corn emergence.

9/14

TABLE 1

DEFINE™ DF HERBICIDE USE RATES IN CONVENTIONAL TILLAGE APPLICATIONS MADE TWO WEEKS OR LESS PREPLANT SURFACE, PREPLANT INCORPORATED OR PREEMERGENCE.		
DEFINE™ DF HERBICIDE RATE (OUNCES PER ACRE) ^{1,2}		
SOIL TEXTURAL GROUP ³	SOIL ORGANIC MATTER CONTENT	
	Less than 3%	3% or More
COARSE	12 oz	14 oz
MEDIUM	14 to 16 oz	16 to 18 oz
FINE	18 to 20 oz	18 to 21 oz

¹ Use the higher rate of DEFINE™ DF Herbicide within the applicable rate range under any of the following conditions: heavy surface plant residues, heavy weed pressure and/or when soil organic matter is at the upper end of the range.

² ~~Not recommended for~~ use on peat or muck soils (soils with 20% or more organic matter).

³ For more information, refer to the "Rate Selection/Soil Texture" section of this label.

For CONSERVATION, MINIMUM, and NO-TILLAGE Systems; or CONVENTIONAL Tillage Systems With Applications GREATER THAN TWO WEEKS Preplant:

~~Recommended~~ DEFINE™ DF Herbicide use rates are located in Table 2. Rates are higher for these types of tillage systems and application timings than in Table 1 due to the extended period of weed control needed and the increased crop residue present. Refer to the "Application Methods and Timing" section of the label for details. Weed control will generally be greater the closer the applications are made to planting but prior to weed emergence. If weeds are present at application, a nonselective herbicide such as or ~~Gramoxone Extra~~, a glyphosate-containing product or Touchdown used at ~~recommended~~ rates may be mixed with DEFINE™ DF Herbicide treatments.

TABLE 2

DEFINE™ DF HERBICIDE USE RATES IN CONSERVATION, MINIMUM, AND NO-TILLAGE SYSTEMS; OR CONVENTIONAL TILLAGE SYSTEMS WITH APPLICATIONS GREATER THAN TWO WEEKS PREPLANT SURFACE AND EARLY POSTEMERGENCE.		
DEFINE™ DF HERBICIDE RATES (OUNCES PER ACRE) ^{1,2}		
SOIL TEXTURAL GROUP ³	SOIL ORGANIC MATTER CONTENT	
	Less than 3%	3% or More
COARSE	13 oz	15 oz
MEDIUM	16 to 18 oz	18 to 20 oz
FINE	20 to 21 oz	20 to 21 oz

¹ Use the higher rate of DEFINE™ DF Herbicide within the applicable rate range under any of the following conditions: heavy surface plant residues, heavy weed pressure an/or when soil organic matter is at the upper end of the range.

² ~~Not recommended for~~ use on peat or muck soils (soils with 20% or more organic matter).

³ For more information, refer to the "Rate Selection/Soil Texture" section of this label.

FOR EARLY POSTEMERGENCE APPLICATIONS:

~~Recommended~~ DEFINE™ DF Herbicide use rates are located in Table 1.

DEFINE™ DF Herbicide alone and/or certain DEFINE™ tank mixtures may be applied to corn from emergence through the 5th leaf collar growth stage. Begin leaf count with the first leaf (rounded tip). DEFINE™ alone will not provide control of emerged weeds. For control of emerged weeds, DEFINE™ may be tank mixed with approved postemergence herbicides. Read and follow all precautions/restrictions and directions on tank mix partner labels.

Corn treated with DEFINE™ DF Herbicide early postemergence may be harvested for forage (silage) 75 days or more after treatment.

Adjuvants for early postemergence:

The adjuvant types listed below may be utilized with DEFINE™ DF Herbicide.

UAN (urea ammonium nitrate) is commonly referred to as 28, 30, or 32%N. UAN can be used as an adjuvant in certain herbicide tank mixtures with DEFINE™, or as a spray carrier for DEFINE™. Fluid fertilizers applied after crop emergence can result in crop tissue "burn" symptoms. Using fluid fertilizer as a postemergence spray carrier to apply DEFINE™ is not recommended if fluid fertilizer burn is not considered acceptable.

Ammonium sulfate (spray grade) is recommended as an alternative to UAN as a spray solution adjuvant with certain tank mixture partners.

When tank mixing DEFINE™ DF Herbicide with other herbicides be certain to select adjuvants recommended and compatible for use with all herbicides included in the tank mixture.

DEFINE™ DF HERBICIDE TANK MIXTURES

DEFINE™ DF Herbicide may be applied in tank mixture with certain herbicides to improve control of broadleaf weeds such as velvetleaf, common cocklebur and morningglory species. Mixtures may be used in either conventional, conservation, minimum and no-tillage systems. They may be applied with similar timings and methods as DEFINE™ DF Herbicide alone unless specifically prohibited in the mix partner's product label. Three-way or multiple tank mixtures are permitted unless restricted by the product label. **Refer to the individual product labels for recommended use rates, precautions and/or restrictions.**

Herbicides recommended for tank mixtures with DEFINE™ DF Herbicide include:

Atrazine	Extra azine II®	Python®	Roundup Ultra®
Balance®	Glyphosate	Marksman®	2,4-D
Bladex ®	Hornet®	Eradicane®	Sencor®
Banvel®	Pentagon ®	Gramoxone Extra®	Touchdown®
Clarity®	Prowl®	Roundup®	

DEFINE™ DF HERBICIDE SEQUENTIAL APPLICATIONS

Sequential herbicide applications either before or following DEFINE™ treatments may be used to control additional weeds. Herbicides recommended for sequential applications include:

Atrazine	Bromoxynil	Gramoxone Extra®	Python®
Accent®	Bromoxynil + Atrazine	Hornet®	Resolve®
Aim®	Buctril®	Laddok S-12®	Resource®
Balance®	Buctril + Atrazine®	Liberty®	Roundup®
Banvel®	Buctril Gel®	Lightning®	Roundup Ultra®
Basagran®	Clarity®	Marksman®	Scorpion III®
Basis®	Contour ®	Permit®	Sencor®
Battalion®	Exceed®	Poast®	Touchdown®
Beacon®	Extra azine II®	Prowl®	Tough ®
Bladex ®	Glyphosate	Pursuit®	2,4-D

SOYBEAN

DEFINE™ DF Herbicide is a selective herbicide for control/suppression of most annual grasses in soybeans. DEFINE™ DF Herbicide may be applied once per use season either alone, in tank mix combination with or sequentially with certain registered herbicides. The following types of application are allowed: preplant surface, preplant incorporated and preemergence. The preplant surface and preplant incorporated treatments may be applied up to 14 days before planting. The most effective weed control will occur when the applied product is moved into the soil by rainfall, sprinkler irrigation or mechanical tillage prior to weed emergence from the soil.

Do not graze or feed forage, hay or straw to livestock.

WEED SPECIES CONTROLLED BY DEFINE™ DF HERBICIDE

DEFINE™ DF Herbicide applied alone at the recommended dosages and application timings will provide control of certain annual grasses.

WEEDS CONTROLLED ¹			
ANNUAL GRASS WEEDS			
Barnyardgrass (<i>Echinochloa crusgalli</i>)	Foxtail, giant (<i>Setaria faberi</i>)	Foxtail, yellow (<i>Setaria glauca</i>)	Lovegrass, India (<i>Eragrostis</i> sp)
Crabgrass, large (<i>Digitaria sanguinalis</i>)	Foxtail, green (<i>Setaria viridis</i>)	Goosegrass (<i>Eleusine indica</i>)	Panicum, fall (<i>Panicum dichotomiflorum</i>)
Crabgrass, smooth (<i>Digitaria ischaemum</i>)			

¹ Full season weed control will be achieved only on coarse textured soils using the maximum 12 ounce use rate. Use rates of 7 to 12 ounces will provide **only** early season weed control on all other soil textures. To complement early season weed control, DEFINE™ is recommended for use in tank-mixture with or sequentially with other herbicides that provide additional control of these weed species.

11/14

WEED SPECIES PARTIALLY CONTROLLED BY DEFINE™ DF HERBICIDE

DEFINE™ DF Herbicide will provide partial control or reduced competition for additional annual grasses. Reduced competition weeds will be stunted in growth and/or be of reduced populations as compared to non-treated areas but control will generally not be commercially acceptable.

WEED SPECIES PARTIALLY CONTROLLED

ANNUAL GRASS WEEDS

Johnsongrass, seedling (<i>Sorghum halepense</i>)	Sandbur, field (<i>Cenchrus incertus</i>)	Shattercane (<i>Sorghum bicolor</i>)	Witchgrass (<i>Panicum capillare</i>)
Panicum, browntop (<i>Panicum fasciculatum</i>)	Signalgrass, broadleaf (<i>Brachiaria platyphylla</i>)		

DEFINE™ DF HERBICIDE USE RATES

The ~~recommended~~ use rates for DEFINE™ applied alone, in tank mix combination with and/or sequentially with other herbicides for all application methods and timings is **7 to 12 ounces** per acre. The 12 ounce rate of DEFINE™ will provide full season control of annual grasses in coarse textured soils but will provide only early season weed control on medium and fine textured soils. Rates lower than 12 ounces will provide **only** early season weed control on all soil textures. To complement this early season weed control, DEFINE™ should be used in tank-mixture or sequentially with other herbicides that provide additional control of these weed species.

DEFINE™ DF HERBICIDE TANK MIXTURES

DEFINE™ DF Herbicide may be applied in tank mixture with certain herbicides to improve control of annual grasses and/or broadleaf weeds such as velvetleaf, common cocklebur and morningglory species. Mixtures may be used in either conventional, conservation, minimum and no-tillage systems. They may be applied with similar timings and methods as DEFINE™ alone unless specifically prohibited in the mix partner product label. Three-way or multiple tank mixtures are permitted unless restricted by the mix partner product labels. Refer to the individual product labels for ~~recommended~~ use rates, precautions and/or restrictions. Herbicides recommended for tank mixtures with DEFINE™ include:

Authority Broadleaf®	Glyphosate	Pursuit®	Sonolan HFP®
Canopy®	Gramoxone Extra®	Roundup®	Touchdown®
Canopy XL®	Linuron (Lorox® and others)	Roundup Ultra®	Trifluralin
Chlorimuron-ethyl DF	Pentagon ®	Scepter®	Turbo ®
Command®	Prowl®	Sencor® (Metribuzin)	2,4-D LVE
FirstRate®			

DEFINE™ DF HERBICIDE SEQUENTIAL APPLICATIONS

Sequential herbicide applications may be used in a DEFINE™ weed control program to control additional weeds. Herbicides recommended for use either before or following DEFINE™ treatments include:

Assure II®	Fusilade®	Poast®	Scepter®
Basagran®	Fusion®	Poast Plus®	Select®
Blazer ®	Galaxy®	Prowl®	Sencor®
Canopy®	Glyphosate	Pursuit®	Sonolan HFP®
Classic®	Gramoxone Extra®	Raptor®	Storm®
Cobra®	Liberty®	Reflex®	Synchrony STS®
Command®	Linuron	Reliance STS®	Tornado ®
Concert®	Option II®	Resource®	Touchdown®
FirstRate®	Pentagon ®	Roundup®	Trifluralin
Flexstar®	Pinnacle®	Roundup Ultra®	2,4-D

Refer to the above information and the individual product labels for use directions, use rates and special precautions/restrictions.

12/14

CORN AND SOYBEAN CROP ROTATION RECOMMENDATIONS

In the event of a crop failure any crop on this label can be replanted immediately. Do not make a second application of DEFINE™ DF Herbicide. Do not graze or feed to livestock the forage or fodder of cotton planted 5 months after an DEFINE™ application.

Waiting period after DEFINE™ DF Herbicide application before the following crops can be planted.

Immediately			
Corn	Soybean		
1 month			
Potato			
4 months			
Cabbage	Cotton	Peppers	Sugar beets
Carrots	Lettuce	Radish	All other leafy vegetables
12 months			
Alfalfa	Buckwheat	Oats	Teosinte
Barley	Clover	Popcorn	Triticale
Bermudagrass	Fescue	Rice	Wheat
Bluegrass	Millet, pearl	Rye	Wild Rice
Bromegrass	Millet, prose	Sorghum	All other crops

APPENDIX I

SPRAYABLE FLUID FERTILIZER COMPATIBILITY TEST

A compatibility test is highly recommended for all applications with liquid fertilizers. Prior to mixing products in the spray tank, small quantities of each product can be mixed in proportionate quantities to evaluate compatibilities. The following test assumes a spray volume of 25 gallons per acre. If other spray volumes are to be used, adjust the appropriate amounts of ingredients. To check for compatibility, use the following procedure:

1. Add two inches of the liquid carrier (water or liquid fertilizer) to a one-quart jar fitted with a tight lid.
2. Add the appropriate amount of herbicide. If more than one product is used, the recommended mix sequence is the dry herbicide first, flowables next and emulsified concentrates last. For dry herbicides, add 1-1/2 level teaspoons/pound/acre use rate and for liquids add 1/2 teaspoon/pint/acre use rate.
3. Add one pint of the liquid carrier (water or liquid fertilizer) to the jar. Place the lid on the jar and gently shake the jar for one minute. Place the jar on a level surface and let it stand for 30 minutes.
4. Reagitate the mixture and observe the mixture for signs of phase separation, flakes, particles, gels, precipitates, etc. If none of these conditions occur, the mix is compatible.
5. If incompatible, use of a compatibility agent is recommended. Rerun the above test but first add a compatibility agent (1/4 teaspoon is equal to a use rate of 2 pints/100 gallons spray mix) and gently shake the jar prior to adding herbicides.
6. If the mixture is now compatible, a compatibility agent should be used in the spray mixture at its recommended rate.
7. If the components of the solution are still incompatible, the mixture should not be attempted for use in the spray tank.
8. Contact your Bayer CropScience representative for further recommendations on testing spray solution compatibilities.

APPENDIX II

IMPREGNATION AND APPLICATION ON DRY FERTILIZER

Dry bulk fertilizer may be impregnated or coated with DEFINE™ DF Herbicide for applications to corn and soybeans. Follow all DEFINE™ label ~~recommendations~~, special instructions and precautions. All state regulations relating to dry bulk fertilizer blending, impregnating and labeling must also be followed.

Rates: Select the ~~recommended~~ DEFINE™ DF Herbicide use rate per acre from the crop section of this label and determine the quantity of dry bulk fertilizer to be applied per acre (use a minimum of 200 pounds and a maximum of 450 pounds per acre). Use the equation below to determine the amount of DEFINE™ needed per ton of fertilizer applied.

$$\frac{\text{Oz. DEFINE™ per acre} \times 2000}{\text{Pounds fertilizer per acre}} = \frac{\text{Oz. DEFINE™}}{\text{per ton fertilizer}}$$

Impregnation: DEFINE™ DF Herbicide may be impregnated on many commonly used dry fertilizers but should not be impregnated on ammonium nitrate, fertilizers containing ammonium nitrate, potassium nitrate, sodium nitrate or powder limestone.

To impregnate DEFINE™ DF Herbicide on bulk fertilizer, use a closed rotary-drum mixer or other commonly used dry bulk fertilizer blender equipped with suitable spray equipment. Mix DEFINE™ with sufficient water to form a sprayable slurry mixture. Spray nozzles must be directed to provide uniform fertilizer coverage while avoiding spray contact with mixing equipment. Nonuniform impregnation can cause crop injury or unsatisfactory performance.

Spray the herbicide mixture onto the fertilizer after blending has started. If necessary, include a suitable drying agent to ensure a spreadable herbicide impregnated fertilizer. If the fertilizer materials are excessively dusty, use diesel fuel or other suitable additive to reduce dust prior to impregnation. Apply the treated fertilizer immediately after impregnation to avoid lump formation and spreading difficulties.

Application. Accurate calibration of fertilizer application equipment and uniform fertilizer distribution is essential for satisfactory weed control. Air flow or auger metered application equipment is preferred (one pass application). If other equipment is used, the recommended application method is to apply one-half the ~~recommended~~ rate and overlap 50 percent or to double apply by splitting the middles to obtain the best distribution pattern.

14/14

IMPORTANT: READ BEFORE USE

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

CONDITIONS: The directions for use of this product are believed to be adequate and should be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Bayer CropScience. All such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: BAYER CROPSCIENCE MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, THAT EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. No agent of Bayer CropScience is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. BAYER CROPSCIENCE DISCLAIMS ANY LIABILITY WHATSOEVER FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

LIMITATIONS OF LIABILITY: THE EXCLUSIVE REMEDY OF THE USER OR BUYER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE PAID, OR AT BAYER CROPSCIENCE'S ELECTION, THE REPLACEMENT OF PRODUCT.

Net Weight:

Axiom, Balance, Buctril, Liberty, Sencor and Option are registered trademarks and Define is a trademark of Bayer.
Banvel, Basagran, ~~Blazer~~, Clarity, ~~Contour~~, Galaxy, Laddok, Lightning, Marksman, Poast, Poast Plus, Prowl, Pursuit, Raptor, Scepter and Storm and are registered trademarks of BASF Corporation. Passport, ~~Pentagon~~ and Resolve are trademarks of BASF Corporation.
FirstRate, Hornet, Python and Scorpion III are registered trademarks of Dow Agro Sciences. Sonalan is a trademark of Dow Agro Sciences.
Accent, Assure II, Basis, ~~Bladex~~, Canopy, Canopy XL, Classic, Concert, ~~Extrazine II~~, Lorox, Pinnacle, Reliance STS and Synchrony STS are registered trademarks of DuPont Company.
Aim, Authority Broadleaf and Command are trademarks of FMC Corporation.
Battalion, Permit, Roundup and Roundup Ultra are trademarks of Monsanto.
Beacon, Eradicane, Exceed, Flexstar, Fusilade, Fusion, ~~Gramoxone Extra~~, Reflex, ~~Tornado~~, Touchdown and ~~Tough~~ are registered trademarks of Syngenta Group Company.
Cobra, Resource and Select are registered trademarks of Valent.



Bayer CropScience

**Bayer CropScience LP
P.O. Box 12014, 2 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709
1-866-99BAYER (1-866-992-2937)**

Define DF Herbicide (PENDING) Submitted 10/25/04.