

GROUP	15	HERBICIDE
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DEFINE DF™ HERBICIDE

FOR SALE FOR USE IN EASTERN CANADA ONLY

AGRICULTURAL

GUARANTEE: flufenacet 60 %

Warning, contains the allergen sulfite

REGISTRATION NO. 28526 PEST CONTROL PRODUCTS ACT

**READ THE LABEL AND BOOKLET BEFORE USING
KEEP OUT OF REACH OF CHILDREN**



DANGER POISON

POTENTIAL SKIN SENSITIZER

Product Information: 1-888-283-6847

Bayer CropScience Inc.
Suite 100, 3131 114th Avenue S.E.
Calgary, Alberta T2Z 3X2

In case of spills, poisoning or fire, telephone emergency response number 1-800-334-7577
(24 hours a day).

NOTICE TO USER

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the Pest Control Products Act to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

GENERAL INFORMATION

DEFINE DF Herbicide is a selective herbicide for use in field corn (grain and silage). DEFINE DF Herbicide may be applied early-post-emergence to the crop. DEFINE DF Herbicide alone will only control and/or suppress weeds prior to emergence and provide residual control for new flushes of weeds. However, DEFINE DF Herbicide may be tank mixed with products that will control emerged weeds at the time of application. DEFINE DF Herbicide will provide effective weed control when applied and subsequently moved into the soil by rainfall, sprinkler irrigation or mechanical tillage prior to weed emergence. When tank mixing, always observe all precautionary statements and limitations on labelling of all products.

PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN. Fatal or poisonous if swallowed. Harmful if inhaled or absorbed through skin. Potential skin sensitizer. Prolonged or frequently repeated skin contact may cause allergic skin reactions in some individuals. Avoid contact with skin, eyes, or clothing. Avoid breathing dust. Wash thoroughly with soap and water after handling. Do not contaminate food or feed. Personnel involved in mixing/loading operation must wear: coveralls, chemical-resistant gloves, shoes plus socks, a dust/mist filtering respirator. Applicators and other handlers must wear: long-sleeved shirt, long pants, shoes plus socks and chemical-resistant gloves.

Follow manufacturer's instructions for cleaning/maintaining Personal Protective Equipment (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. Obtain prompt medical aid if poisoning should occur.

Note: If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife Canada's website at: www.croplife.ca.

FIRST AID

If swallowed, call a poison control centre 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 centre or doctor. Do not give anything by mouth to an unconscious person.

If on skin or on clothing, take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

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 centre 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 centre or doctor for treatment advice.

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

TOXICOLOGICAL INFORMATION

TO PHYSICIAN: No specific antidote is available. Treat the patient symptomatically.

ENVIRONMENTAL HAZARDS

DO NOT use on other crops grown for food or forage. Avoid spray drift on to adjacent desirable plants. Do not apply directly to water, or to areas where surface water is present. DO NOT contaminate aquatic habitats when cleaning and rinsing spray equipment and containers or disposal of waste.

This product is toxic to aquatic organisms and non-target terrestrial plants. DO NOT overspray sensitive habitats. Avoid spray drift to sensitive habitats. Observe buffer zones specified under “DIRECTIONS FOR USE”.

Flufenacet has properties that may result in ground water contamination. Application in areas where soils are permeable or coarse and ground water is near the surface could result in ground water contamination.

Following application and during rainfall events that cause runoff, this chemical may reach surface water bodies including streams and reservoirs.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in cool, dry, well ventilated place and in such a manner as to prevent cross contamination with other pesticides, seed, fertilizers, food and feed. Store in original container and

out of reach of children, preferably in a locked storage area. Heated storage is not required for DEFINE DF Herbicide.

PESTICIDE DISPOSAL: For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

DISPOSAL

For RECYCLABLE CONTAINER

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

DIRECTIONS FOR USE

GENERAL USE RESTRICTIONS

DEFINE DF Herbicide is for use on grain corn and corn grown for silage. Do not use on popcorn, sweet corn, white corn or corn grown for seed.

Apply DEFINE DF Herbicide only with ground equipment. Do not apply via chemigation or with aerial equipment.

Field sprayer application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) medium classification.

DO NOT apply by air.

Buffer zones:

The buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, rangelands, riparian areas and shrublands), sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, Prairie potholes, creeks, marshes, streams, reservoirs and wetlands).

Method of application	Crop	Buffer Zones (metres) Required for the Protection of:			
		Freshwater Habitat of Depths:			Terrestrial Habitat
		Less than 1 m	1 - 3 m	Greater than 3 m	
Field sprayer*	Corn	15	5	2	3

*For field sprayer application, buffer zones can be reduced by 70% with the use of shroud spray shields, or 30% with the use of cone spray shields on booms.

When a tank mixture is used, consult the labels of the tank-mix partners and observe the largest (most restrictive) buffer zone of the products involved in the tank mixture.

Do not apply more than 1.25 Kg/ha of DEFINE DF Herbicide per season.

Do not apply more than once per season.

If the crop treated with DEFINE DF Herbicide is lost, field corn and soybean may be replanted immediately. **Do not** make a second application of DEFINE DF Herbicide. Winter wheat may be planted 4 months after a DEFINE DF Herbicide application.

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

Cool, wet soil conditions which occur shortly after planting and application of DEFINE DF Herbicide may cause slight, temporary stunting of the crop. However, under good growing conditions, the plants recover quickly and yields are not affected.

Weed control may not be adequate under severe drought conditions.

PRE-GRAZING AND PRE-HARVEST INTERVALS

Do not graze or feed DEFINE DF Herbicide-treated corn to livestock within 60 days of application. Do not harvest corn forage (silage) within 75 days after a postemergence application.

MIXING INSTRUCTIONS

DEFINE DF Herbicide is a dry flowable herbicide that must be mixed with water for application.

Before mixing DEFINE DF Herbicide and its labelled tank mixtures, examine the spray equipment making sure it is completely clean and free of rust or corrosion. To ensure the equipment is free of any residues from previously used pesticides, flush lines with clean water or recommended detergents. Use an approved method for disposing of rinse water.

The proper mixing sequence for DEFINE DF Herbicide and recommended tank mixtures is as follows:

1. Fill the spray tank or nurse tank 1/4 full with water.
2. Start recirculation and agitation system and continue throughout mixing and application.
3. Next, add the recommended quantity of DEFINE DF Herbicide slowly to the spray tank.
4. If tank mixing with wettable powders or other dry flowable products, make a slurry of these products with water, then add slowly to the spray tank.
5. If tank mixing with emulsifiable concentrates or soluble products, add these products to the spray tank.
6. As the tank is filling and agitation is continuing, add the liquid nitrogen fertilizer (28% UAN).
7. Fill the spray tank with water to the desired level.
8. 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 out 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 can stand before application.

SPRAYER CLEANUP

Spray equipment must be thoroughly cleaned to remove remaining traces of herbicide that might injure other crops. Before and after using DEFINE DF Herbicide, always complete a thorough cleaning of the spray tank, lines and filters. The following procedures are recommended:

1. Drain any remaining spray solution of DEFINE DF Herbicide from the spray tank and flush tank, boom and all hoses for several minutes with clean water containing a household detergent. Do not clean or empty the sprayer near desirable vegetation, wells or other water sources.
2. Fill the sprayer tank with clean water and add one litre of household ammonia (containing 3% ammonia) per 100 litres of water. Allow the solution to agitate for 15 minutes prior to flushing the solution through the boom and nozzles. Drain the system completely.
3. Remove the nozzles and screens and wash separately in a bucket containing the ammonia solution.
4. Thoroughly rinse the tank, hoses, booms, nozzles and screens with clean water for a minimum of 5 minutes to remove all traces of ammonia.
5. Inspect tank for visible residues. If present, repeat step 2.
6. Wash away any spray mixture from the outside of the spray tank, nozzles or spray rig.
7. Dispose of rinsings in accordance with provincial regulations.

Consult the label of the tank-mix partners for any additional sprayer clean-up instructions.

APPLICATION INFORMATION

Ground Broadcast Treatment:

Accurately calibrate the sprayer prior to mixing the herbicide treatments. Apply DEFINE DF Herbicide in a minimum of 150 L/ha of total volume and at a spray pressure of 175 - 275 kPa. Apply DEFINE DF Herbicide and the labelled tank mixtures in no less than the minimum volume recommended by the tank mix product or DEFINE DF Herbicide recommendation, whichever is highest. Use nozzle screens and in-line strainers no finer than 0.3 mm (50 mesh). 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 recommended tank mixtures may be applied as a band treatment. Use the following formula to calculate the amount of herbicide needed for band treatments:

$$\frac{\text{Band width in centimetres}}{\text{Row width in centimetres}} \times \text{Broadcast rate / ha} = \text{Band rate / ha}$$

APPLICATION METHODS AND TIMING

Early post-emergence to the crop

DEFINE DF Herbicide alone, or in the recommended tank mixes, may be applied to corn from the spike up to and including the 3-leaf stage as a broadcast spray. DEFINE DF Herbicide will not control emerged weeds but provide residual control for new flushes of weeds. However, DEFINE DF Herbicide may be tank mixed with products that will control emerged weeds at the time of application. Refer to tank mix section in this label for further information.

CORN

- Applications of DEFINE DF Herbicide made at rates above those recommended may result in stunting of the crop. If heavy rains occur soon after application, plant injury may result, especially in poorly drained areas where water may stand for several days.
- Corn seeds must be planted at least 4 cm below the soil surface.
- **DO NOT USE DEFINE DF HERBICIDE ON SANDY SOILS OR ON COARSE SOILS WITH LESS THAN 2% ORGANIC MATTER**

Tank-Mixes:

Refer to the other product labels for pertinent recommendations, directions for use, restrictions, and precautions not specified on this label. Consult the labels of the tank-mix partners and observe the largest (most restrictive) buffer zone of the products involved in the tank mixture. Unless prohibited on this or other product labels, apply as a broadcast or band application.

FIELD CORN – postemergence (up to and including 3-leaf corn)

WEEDS CONTROLLED		Products	Rates per hectare	Comments
Annual broadleaf weeds	Lamb's quarters Redroot Pigweed Common Ragweed Velvetleaf Wild Buckwheat Lady's-Thumb Wild Mustard Eastern black nightshade Annual sow-thistle	DEFINE DF HERBICIDE + OPTION 2.25 OD + liquid nitrogen fertilizer (28% UAN) + AAtrex Nine-0 or AAtrex Liquid 480	750 g 0.67 L 2.5 L/ha 933 g 1.75 L	This tank-mix controls emerged annual weeds and provides residual control of annual grass and broadleaf weeds
Annual grasses	Green Foxtail Yellow Foxtail Witch grass Barnyard Grass Fall panicum Proso millet* Large crabgrass**			

*Control up to mid-season only

** Early-season control only

RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, please note that DEFINE DF Herbicide is a Group 15 herbicide. Any weed population may contain or develop plants naturally resistant to DEFINE DF Herbicide and other Group 15 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field.

Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay herbicide resistance:

- Where possible, rotate the use of DEFINE DF Herbicide or other Group 15 herbicides with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group when such use is permitted.
- Herbicide use should be based on an IPM program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical), cultural, biological and other chemical control practices.
- Monitor treated weed populations for resistance development.
- Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment and planting clean seed.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact Bayer CropScience Inc. via internet at www.bayercropscience.ca or phone 1-888-283-6847.

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