

UPBEET[®]

HERBICIDE

GROUP

2

HERBICIDE

Dry Flowable

For Weed Control in Sugar Beets, Garden Beets, Belgian Endive and Chicory

UPBEET[®] is used for selective postemergence control, or partial control, of broadleaf and grass weeds in sugar beets. This product is a water dispersible granule containing 50% active ingredient by weight.

Active Ingredient

By Weight

Triflurosulfuron methyl:

Methyl 2-[[[[[4-(dimethylamino)-6-(2,2,2-trifluoroethoxy)-1,3,5-triazin-2-yl]-amino]carbonyl]amino]sulfonyl]-3-methylbenzoate

50%

Other Ingredients

50%

TOTAL

100%

EPA Reg. No. 279-9584

EPA Est. No. 352-FRA-003

Nonrefillable Container

Net: Weight 4 oz

OR

Refillable Container

Net: _____

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact (800) 331-3148 for emergency medical treatment information.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION! Avoid contact with skin, eyes and clothing. In case of contact with eyes, immediately flush with plenty of water. Get medical attention if irritation persists.

For medical emergencies involving this product, call toll free (800) 331-3148.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeve shirt and long pants.
- Chemical Resistant Gloves made out of any waterproof material.
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Sold By



FMC Corporation
2929 Walnut Street
Philadelphia, PA 19104

USER SAFETY RECOMMENDATIONS

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

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 contaminate water when disposing of equipment washwater or rinsate.

Triflusalufuron-methyl has properties and characteristics associated with chemicals detected in ground water. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow. This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several days after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of triflusalufuron-methyl from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

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. UPBEET® herbicide must be used only in accordance with the directions on this label, in separately issued labeling or exemptions under FIFRA (Supplemental Labels, Special Local Need Registrations, FIFRA Section 18 exemptions, FIFRA 2(ee) Bulletins), or as otherwise permitted by FIFRA. Always read the entire label, including the Limitation of Warranty and Liability.

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.

USE RESTRICTIONS

- Do not apply UPBEET® through any type of irrigation equipment.
- Do not contaminate any body of water.

Injury to or loss of desirable trees or vegetation may result from failure to observe the following:

- Do not use on lawns, walks, driveways, tennis courts or similar areas.
- Do not apply, drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots.

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 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls.
- Chemical Resistant Gloves made out of any waterproof material.
- Shoes plus socks.

APPLICATION INFORMATION

FOR USE ON SUGAR BEETS (INCLUDING THOSE GROWN FOR SEED)

RATE

BROADCAST APPLICATIONS

The maximum use rate is 2.5 ounces UPBEET® per acre per growing season.

For best results on the broadest spectrum of weeds, use a minimum of 2 sequential applications of UPBEET® tank mixed with "Betamix". "Betanex" or "Betamix" Progress may also be used. Treat small weeds beginning with the first application. Apply UPBEET® at a broadcast rate of 1/2 - 1 ounce per acre in a tank mix with "Betanex", "Betamix", or "Betamix" Progress for control or partial control of the weeds listed. (See Tank Mix Options.) Use higher rates as weed size or population increases.

Make sequential applications 5 to 10 days apart or as weeds germinate. Use a close sequential application if first application was on weeds with 4 leaves.

With an adjuvant, some weeds are controlled with UPBEET® alone (see Weeds Controlled). For best results on these weeds, use a minimum of two sequential applications 5-10 days apart or as weeds germinate.

BAND APPLICATIONS

Dosage Chart for UPBEET® Band Applications

Band width	Band Rates* according to Row Spacing		
	22" rows	30" rows	42" rows
7"	1/6 oz/A	1/8 oz/A	1/12 oz/A
11"	1/4 oz/A	1/5 oz/A	1/7 oz/A

* Equivalent 1/2 oz/Acre Broadcast.

Use proportionately more for higher broadcast rate equivalents.

Wider band widths may result in better overall weed control on fields with high weed populations.

See FMC guide – "Application Accuracy Row Banders."

Refer to the tank mix partner label for any applicable band rate charts.

See the Broadcast Application section of this label for additional application information.

CROP STAGE AT APPLICATION

UPBEET® can be safely applied to sugar beets any time after planting.

Chlorosis (yellowing) may be observed following an application of UPBEET®. This effect is temporary.

Applications of UPBEET® to crops under stress (such as stress due to lack of moisture, hail damage, flooding, herbicide injury, mechanical injury, or widely fluctuating temperatures) may result in crop injury. Before making applications of UPBEET® to crops previously under stress, or injured from other pesticide applications, the crop needs to be fully recovered and growing vigorously.

Apply no later than 60 days before harvest. Tank mix partners have different preharvest intervals. Always use the most restrictive interval when tank mixing.

WEED STAGE AT APPLICATION

The growth stage of weeds at application is very important for satisfactory control. For best results, apply to small, emerged weeds between the cotyledon and two true leaf stage.

Weeds should be actively growing and not under stress. Applications made to larger weeds or to weeds under stress may result in unsatisfactory control. See Environmental Conditions and Biological Activity.

Since UPBEET® has little to no soil activity, only weeds that have emerged above the soil surface will be controlled. Use sequential tank mix applications to control new weed flushes.

WEEDS CONTROLLED

with the tankmix of UPBEET® and “Betamix”

Buckwheat, wild	<i>Polygonum convolvulus</i>
Burclover, California (a)	<i>Medicago polymorpha</i>
Chickweed, common	<i>Stellaria media</i>
Dock, curly	<i>Rumex crispus</i>
Fiddleneck, coast	<i>Amsinckia intermedia</i>
Goosefoot, nettleleaf (a)	<i>Chenopodium murale</i>
Groundcherry, Wright (a)	<i>Physalis wrightii</i>
Knotweed, silversheath (b)	<i>Polygonum argyrocoleon</i>
Kochia (c)	<i>Kochia scoparia</i>
Lambsquarters, common	<i>Chenopodium album</i>
London rocket (a)	<i>Sisymbrium irio</i>
Mallow, common	<i>Malva neglecta</i>
Mallow, little (a)	<i>Malva parviflora</i>
Mustard, black (a)	<i>Brassica nigra</i>
Mustard, wild (a)	<i>Brassica kaber</i>
Nightshade, black	<i>Solanum nigrum</i>
Nightshade, hairy (seedling only)	<i>Solanum sarrachoides</i>
Radish, wild	<i>Raphanus sativus</i>
Pigweed, prostrate (b)	<i>Amaranthus blitoides</i>
Pigweed, redroot (b)	<i>Amaranthus retroflexus</i>
Ragweed, common	<i>Ambrosia artemisiifolia</i>
Shepherd’s purse (a)	<i>Capsella bursa-pastoris</i>
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>
Sowthistle, annual (a)	<i>Sonchus oleraceus</i>
Velvetleaf (a) (b)	<i>Abutilon theophrasti</i>

(a) In California, UPBEET® + adjuvant will control these weeds, see Spray Additives.

(b) Minimum of 2 applications at higher rates needed for acceptable control in CA.

(c) See “Information on Resistant Weeds”.

PARTIAL CONTROL**

with the tankmix of UPBEET® and “Betamix”

Foxtail, green	<i>Setaria viridis</i>
Foxtail, yellow	<i>Setaria lutescens</i>
Junglerice	<i>Echinochloa colonum</i>
Purslane, common	<i>Portulaca oleracea</i>
Smartweed, ladysthumb	<i>Polygonum persicaria</i>

**Partial control: A visual reduction of weed competition (reduced population or size) as well as a significant loss of vigor for individual weed plants.

SPECIFIC WEED PROBLEMS

Wild buckwheat- Apply to cotyledon to 2 leaf stage.

Mallow species- Apply to cotyledon to 1 leaf stage. Three applications may be required to control multiple flushes. Larger sizes may only be suppressed.

Velvetleaf- Apply to cotyledon to 1 leaf stage. Using UPBEET® + adjuvant may give best control. Three applications may be required to control multiple flushes. Larger sizes may only be suppressed.

SPRAY ADDITIVES

Non-ionic Surfactant

Apply at the rate (concentration) of 0.25 % v/v (2 pts per 100 gal of spray solution).

Crop Oils

Apply at the rate (concentration) of 1 % v/v (1 gal in 100 gal of spray solution).

TANK MIX OPTIONS

UPBEET® may be tank mixed with other suitable registered herbicides to control weeds in addition to those listed. UPBEET® can also be mixed with other suitable registered fungicides, and insecticides labeled for use on sugar beets.

Read all label precautions for tank mix partners prior to use. Follow all manufacturer's label instructions for the companion product. If these instructions conflict with this label, do not tank mix with UPBEET®.

“Betamix”, “Betanex” or “Betamix” Progress- Use with UPBEET® in a minimum of two sequential applications. Local recommendations for product choice, sequence and rate should be followed.

Velvetleaf and Wild radish control may be reduced when UPBEET® is mixed with “Betamix”.

“Stinger”- UPBEET® may be mixed in a two way tank mix with “Stinger” for additional broadleaf weed control. Use of an adjuvant is required in this tank mix and crop oil is the preferred adjuvant. (See Spray Additives). Using an UPBEET® + “Betamix” + “Stinger” tank mix does not require an adjuvant.

Postemergence Grass herbicides- Tank mixes of UPBEET® with postemergence grass herbicides may result in reduced grass control. If grass control is reduced, an additional application of the grass herbicide may be required. For optimum grass control, apply grass herbicides 24 hours prior to or 5 days after UPBEET® mixtures.

MICRO-RATE BROADCAST APPLICATIONS IN SUGAR BEETS

USE INFORMATION

Multiple applications of UPBEET® in tank mixture with reduced rates of “Betamix”, “Betanex”, “Progress”, “Stinger”, a grass herbicide such as ASSURE® II, and methylated seed oil may be applied by air or ground equipment to sugar beets to control early germinating weeds.

SPECIFIC USE DIRECTIONS

For best results, apply UPBEET® at a minimum rate of 1/8 ounce per acre in a tank mixture with “Betamix”, “Betanex” or “Progress”, plus 1.5% v/v methylated or modified seed oil adjuvant (1.5 gals of product per 100 gal of spray solution). ASSURE® II or “Stinger” herbicide may be added as needed. ASANA® XL Insecticide may also be added to the mixture as needed.

Make a minimum of three sequential applications, generally at 5-7 day intervals (or as directed by local recommendations). Accurate timing is essential; make initial application immediately after weeds emerge. Broadcast applications are the preferred application method. If weed control is not adequate due to climatic conditions, spray coverage, or other factors, return to conventional application rates.

PRECAUTIONS

- Not all weeds will be adequately controlled, even with favorable climatic conditions. Conventional rates of UPBEET® and/or hand labor may be required if multiple micro-rate applications do not adequately control weeds.
- Plugging of spray nozzles may be encountered due to the potential for formation of a precipitate in the spray solution that is often associated with micro rate applications.

To minimize this precipitate:

- Allow spray water to warm before mixing products.
- Adjust spray tank solution to a pH of 8-9.
- Add a grass control product. Assure II is the preferred product.
- Slurry the UPBEET® in clean, warm water prior to adding to the spray tank. Add UPBEET® first, followed by “Betamix”/“Betanex”/“Progress”, then “Stinger”, then grass product (such as ASSURE® II), and/or then methylated seed oil.
- Gently agitate the spray solution. Vigorous agitation tends to increase precipitate formation.
- Apply the spray solution as quickly as possible. Start with a clean sprayer, spray until the tank is dry, flush tank and lines between loads with fresh water, especially if any precipitate formation is seen in the tank or on spray tip screens. At the end of the day thoroughly flush tank and lines with fresh water. Don't leave any undiluted spray solution in the tank overnight. Clean tank screens and spray tip screens to remove any precipitate.

RESTRICTIONS

- The addition of methylated seed oils could increase the possibility of crop injury. Refer to the EPA approved “Betamix”, “Betanex” or “Progress” label, and any supplemental labeling, for specific rate directions and restrictions. If those directions conflict with this label, do not follow this micro-rate labeling. Methylated seed oils must not be added if the “Betamix”, “Betanex” or “Progress” rate exceeds that specified for each product and specific sugar beet leaf stage.
- Read and follow all manufacturer's label instructions (EPA registered labels and supplemental labels) for “Stinger”, ASSURE® II, ASANA® XL, “Betamix”, “Betanex”, “Progress”, any other pesticides, and adjuvants. If those instructions conflict with this label, do not follow this micro-rate labeling.

FOR AERIAL APPLICATION TO SUGAR BEETS IN THE IMPERIAL VALLEY OF CALIFORNIA

SPECIFIC USE DIRECTIONS

UPBEET® herbicide may be applied by air for weed control in sugar beets grown in Imperial Valley of California, only by aerial applicators certified by FMC to be in compliance with conditions of the “UPBEET® Aerial Stewardship Program”.

UPBEET® herbicide may be applied by air for weed control in sugar beets grown in Imperial Valley of California, in accordance with the restrictions described on the label. Refer to SPRAY DRIFT MANAGEMENT section.

Before using UPBEET® herbicide by air, be sure that the aircraft spray tank, and all mixing tanks and delivery systems equipment is clean. Apply UPBEET® herbicide at 1/2 to 1 ounce per acre. Add a nonionic surfactant containing at least 80% active ingredient.

Apply in a minimum of 5 gallons of water per acre when weeds are small and actively growing. Weeds that are sheltered from spray by sugar beet foliage or other larger weeds may not be controlled. UPBEET® can be tank mixed with other suitable sugar beet herbicides registered for use by air.

If UPBEET® is to be applied alone or in a tank mix with “Stinger”, an adjuvant must be included. Use a FMC recommended non-ionic surfactant or crop oil. More information on adjuvant selection may be found in the bulletin “Approved Adjuvants for Use With FMC Row Crop and Cereal Herbicides”.

Sufficient adjuvant is available for UPBEET® if a minimum of 1.5 pts of “Betanex”, “Betamix”, or “Betamix” Progress is included in the spray mixture.

A spray adjuvant may be added to the tank mixture of UPBEET® plus “Betamix” or “Betamix” Progress in Michigan and Ohio, after the sugar beets have 4 true leaves (2 leaf pairs).

POSTEMERGENCE WEED CONTROL IN BELGIAN ENDIVE/CHICORY

UPBEET® herbicide is recommended for selective postemergence control of redroot pigweed, kochia, sheperd's purse and, velvetleaf and partial control of prostrate pigweed in Belgian Endive/Chicory.

SPECIFIC USE DIRECTIONS

Apply UPBEET® at a broadcast rate of 1/2 ounce per acre, starting when 80% of the Belgian Endive/Chicory plants have at least 1 true leaf developed (2 cotyledons + 1 leaf). For best results on the broadest spectrum of weeds, use a minimum of 2 sequential applications of UPBEET®.

Applications should be made 5 to 10 days apart or as weeds germinate. Use a close sequential application if first application is on larger weeds (3-4 leaves).

In some cases, discoloration and even slowed growth may be observed. These symptoms are temporary and have no significant effect on yield.

For best results apply UPBEET® to small actively growing weeds when the temperature is between 40°F and 75°F. Do not treat when frost is expected in the hours following application.

If high temperatures are expected during the day, treatment should be applied early in the morning or in the evening, so that a period of moderate temperatures (lower than 75°F) will follow the application.

Apply no later than 60 days before harvest. The total amount of UPBEET® applied must not exceed 1.5 ounces per acre per growing season.

WEEDS CONTROLLED with UPBEET®

Redroot Pigweed	<i>Amaranthus retroflexus</i>
Kochia	<i>Kochia scoparia</i> (L.) Schrad
Shepherdspurse	<i>Capsella bursa-pastoris</i> (L.) Medicus
Velvetleaf	<i>Abutilon theophrasti</i> Medicus

PARTIAL CONTROL* with UPBEET®

Prostrate Pigweed	<i>Amaranthus blitoides</i>
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* Partially controlled weeds exhibit a visual reduction in numbers as well as a significant loss of vigor.

WEED STAGE AT APPLICATION

Weeds should be actively growing and not under stress. Applications made to larger weeds or to weeds under stress may result in unsatisfactory control.

Since UPBEET® has little to no soil activity, only weeds that have emerged above the soil surface will be controlled. Use sequential applications to control new weed flushes. The growth stage of weeds at application is very important for satisfactory control. For best results, apply to small, emerged weeds between the cotyledon and two true leaf stage.

TANK MIX OPTIONS

When applied to Belgian Endive/Chicory, UPBEET® may not be tank mixed with any other herbicide, insecticide, or fungicide unless specified in other labeling.

SPRAY ADDITIVES

Nonionic Surfactant (NIS)

- A tankmix with 0.25 % volume/volume (2 pt per 100 gal of spray solution) of non-ionic surfactant may be added. Addition of surfactant may increase crop response. First time users should limit the use of surfactant to a small test area to determine if crop response is acceptable.
- Surfactant products must contain at least 60% nonionic surfactant with a hydrophilic/lipophilic balance (HLB) greater than 12.

Crop Oils and Other Surfactants

- Use of petroleum crop oil concentrate (COC), methylated seed oils (MSO), silicon surfactants or other wetting agents with UPBEET® used on Belgian Endive/Chicory may result in severe crop injury and are therefore not recommended for use with UPBEET®.

FOR POSTEMERGENCE WEED CONTROL IN GARDEN BEETS

UPBEET® herbicide may be used in Garden Beets for selective postemergence control of broadleaf weeds including wild mustard, sheperd's purse and velvetleaf.

SPECIFIC USE DIRECTIONS

Apply UPBEET® at a broadcast rate of 0.5 ounces per acre, starting when garden beets are at the 2 to 4 leaf stage. Additional applications may be made at the 4 to 6 leaf stage and at the 6 to 8 leaf stage.

The total amount of UPBEET® applied must not exceed 1.5 ounces per acre per growing season.

For best results apply UPBEET® to small actively growing weeds when the temperature is between 40F and 75F. Do not treat when frost is expected in the hours following application.

If high temperatures are expected during the day, treatment should be applied early in the morning or in the evening, so that a period of moderate temperatures (lower than 75F) will follow the application.

In some cases, discoloration and even slowed growth may be observed. These symptoms are usually temporary.

Apply no later than 30 days before harvest.

WEED STAGE AT APPLICATION

Weeds should be actively growing and not under stress. Applications made to larger weeds or to weeds under stress may result in unsatisfactory control.

Since UPBEET® has little to no soil activity, only weeds that have emerged above the soil surface will be controlled.

Use sequential applications to control new weed flushes. The growth stage of weeds at application is very important for satisfactory control. For best results, apply to small, emerged weeds between the cotyledon and two true leaf stage.

TANK MIX OPTIONS

UPBEET® may be tank mixed with other suitable registered herbicides to broaden the weed control. FMC recommends that you first consult your state experiment station, university, or extension agent, Agricultural dealer, or FMC representative as to the potential for crop injury before using the mixture. If no information is available, limit the initial use of UPBEET® and the tank mix herbicide to a small area.

UPBEET® may also be mixed with other suitable registered fungicides or insecticides labelled for use on garden beets.

Read all label precautions for tank mix partners prior to use. Follow all manufacturer's label directions for the companion product. If those directions conflict with this label, do not tank mix with UPBEET®.

SPRAY ADDITIVES

Nonionic Surfactant (NIS) and Crop Oil Concentrate (COC)

- A tankmix with 0.25 % volume/volume (2 pt per 100 gal of spray solution) of non-ionic surfactant or crop oil concentrate may be added. Addition of surfactant may increase crop response. First time users should limit the use of surfactant to a small test area to determine if crop response is acceptable.
- Surfactant products must contain at least 60% nonionic surfactant with a hydrophilic/lipophilic balance (HLB) greater than 12.

MIXING INSTRUCTIONS

SPRAY CARRIER

UPBEET® is to be mixed only in water.

SPRAY PREPARATION

Apply UPBEET® spray preparation within 24 hours to avoid product degradation. When using tank mix partners, follow the most restrictive label.

1. Fill the tank 1/4 to 1/3 full of water.
2. Add UPBEET® with the agitator running. Continue agitation until UPBEET® is fully dispersed, at least 5 minutes. UPBEET® should be thoroughly mixed with water before adding any other material.
3. As the tank is filling, add partners. Add adjuvants last, if needed.
4. Triple rinse all empty containers at this time and add rinsate to spray tank
5. If the mixture is not continuously agitated, settling will occur. If settling occurs, thoroughly re-agitate before using.
6. If UPBEET® and a tank mix partner are to be applied in multiple loads, pre-slurry UPBEET® in clean water prior to adding to the tank. This will prevent the tank mix partner from interfering with the dissolution of UPBEET®.

APPLICATION EQUIPMENT

Some crops are sensitive to UPBEET®. All direct and indirect contact (e.g. spray drift) with crops other than sugar beets should be avoided. See Spray Drift Management section.

Since foliar absorption is the primary means of UPBEET® uptake by plants, thorough spray coverage of weeds is essential. Select a spray volume and delivery system that will ensure thorough coverage and a uniform spray pattern. Weeds shielded from spray by other weeds or crop leaves may not be controlled.

Use 50 mesh or finer strainer and nozzle screens.

Make sure screens are clean prior to using UPBEET®.

Continuous agitation is required to keep UPBEET® in suspension.

GROUND APPLICATION (see *SPRAY DRIFT MANAGEMENT section*)

Use a minimum of 10 gallons water per acre. Under heavy weed pressure, dense crop foliage, or moisture stress conditions, increase volume an additional 5 gallons per acre. Change nozzle size to increase gallonage.

Broadcast or band applications are recommended. For proper spray coverage, adjust the boom and nozzle height according to equipment manufacturer's specifications. For additional information on row banders, see FMC's bulletin, "Application Accuracy Row Banders".

Injection systems can be used with UPBEET®. More information is included in the bulletin "Using (liquid) Chemical Injection Systems with UPBEET® herbicide".

AERIAL APPLICATION (see *SPRAY DRIFT MANAGEMENT section*)

Use a minimum of 5 gallons water per acre. For applications to sugar beets in California, refer to the FOR AERIAL APPLICATION TO SUGARBEETS IN THE IMPERIAL VALLEY OF CALIFORNIA section for specific instructions.

CULTIVATION

Timely cultivation(s) can be used in addition to UPBEET® tank mixes for optimum weed control in a sugar beet, garden beet and belgian endive/chicory management program.

ENVIRONMENTAL CONDITIONS AND BIOLOGICAL ACTIVITY

UPBEET® provides the best postemergence results when applied to small, actively, growing weeds. UPBEET® rapidly stops growth of susceptible weeds. Weeds turn yellow 7-21 days after postemergence application, followed by death of the growing point.

Conditions that promote the activity of UPBEET® are warm temperatures and adequate soil moisture before, during and immediately after application. Treating large or stressed weeds may result in poor weed control. Delay application until stress passes and weeds begin to grow again. Best results are obtained when applications avoid: injury from previous herbicide applications, cold, dry conditions, stress conditions due to frost, drought or water-saturated soil, disease or insect damage.

Dry, dusty field conditions may reduce weed control in wheel track areas. Higher volumes and wider band widths may improve control in these conditions.

A vigorously growing crop will aid weed control by shading and providing competition for weeds. In areas of thin stand or seeding skips, additional flushes of weeds may occur.

Rainfall within 6 hours may reduce weed control.

INFORMATION ON RESISTANT WEEDS

Naturally occurring weed biotypes* that are resistant to HARMONY® EXTRA herbicide or EXPRESS® herbicide will also be resistant to UPBEET®.

If resistant weed biotypes, such as kochia, are suspected or known to be present, spray UPBEET® in tank mixtures with other broadleaf herbicides having a different mode of action**. Adjust the use rate of the tank mix partner so that it alone will control the resistant biotypes.

Several strategies can delay the development of resistant weed biotypes:

1. Use preplant incorporated or preemergence herbicides for weed control prior to postemergence use of UPBEET®.
2. Application of UPBEET® in a tank mix with another mode of action herbicide, such as "Betamix".
3. The use of cultivation and/or hand weeding to control escapes.
4. Improve control of these species in rotational crops.

* Biotypes are naturally-occurring individuals of the species which have a slightly different genetic makeup. Resistant biotypes may look exactly the same as susceptible biotypes. Herbicide-resistant biotypes are able to survive a use rate several times higher than needed to control susceptible biotypes.

** Mode of action is the chemical interaction that disrupts plant growth and development.

FMC recommends the use of Integrated Pest Management (IPM) programs to control pests. This product may be used as part of an Integrated Pest Management (IPM) program which can include biological, cultural, and genetic practices aimed at preventing economic pest damage. Application of this product should be based on IPM principles and practices including field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop or site systems in your area.

CROP ROTATION

Sugar beets may be replanted anytime after application of UPBEET®.

Any other crop, except corn, may be planted 14 days after the last application of UPBEET®. Corn can be planted 21 days after using UPBEET®.

GRAZING

UPBEET® has no restriction on grazing or feeding of crop residue to livestock. Tank mix partners may have grazing or feeding restrictions, therefore always refer to the label of the tank mix partner and follow the most restrictive label.

SPRAYER PREPARATION AND CLEANUP

It is important that spray equipment is cleaned and free of existing pesticide deposits before using UPBEET®. Follow the cleanup procedures specified on the label of the product previously sprayed. If no cleanout procedure is provided, use the one that follows.

To avoid subsequent injury to other crops, thoroughly clean all mixing and spray equipment immediately following applications of UPBEET®.

AT THE END OF THE DAY

It is recommended when UPBEET® will be applied over several days, at the end of each day, rinse the interior of the tank with fresh water, then partially fill the tank and flush the boom and hoses. This will prevent the buildup of dried pesticide deposits which are difficult to remove from application equipment.

CLEANUP PROCEDURE

1. Drain tank and thoroughly hose down the interior surfaces. Flush the tanks, boom, and hoses with clean water. Loosen and physically remove any visible deposits.
2. Partially fill the tank with clean water and one gallon household ammonia* (contains 3% active ingredient) for every 100 gallons of water. Flush the hoses, boom, and nozzles with the cleaning solution, then add more water to completely fill the tank. Circulate, with agitation, the cleaning solution through the tank and hoses for at least 15 minutes. Flush the hoses, boom, and nozzles again with the cleaning solution and drain the tank.
3. Remove the nozzles and screens and clean separately in a bucket containing cleaning agent and water.
4. Repeat step 2
5. Rinse the tank, boom, and hoses with clean water.
6. The rinsate may be disposed of on site or at an approved waste disposal facility.

* Equivalent amounts of an alternate strength ammonia solutions may be used, or a tank cleaner recommended in the FMC bulletin- A Guide to Application Equipment Cleanout.

Notes:

1. When UPBEET® is tank mixed with other pesticides, all cleanout procedures should be examined and the most rigorous procedure should be followed.
2. In addition to this cleanout procedure, any pre-cleanout procedures for the next product to be sprayed should be examined and the most rigorous procedure should be followed.
3. Where routine spraying practices include shared equipment frequently being switched between applications of UPBEET® and applications to crops other than sugar beets during the same spray season, it is recommended a sprayer be dedicated to UPBEET® to further reduce the chance of crop injury.

SPRAY DRIFT MANAGEMENT

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions.

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

IMPORTANCE OF DROPLET SIZE

The most effective way to reduce drift potential is to apply coarse or larger spray droplets as defined by the ASABE standard ANSI/ASAE S572.1 (March 2009). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. **APPLYING LARGER DROPLETS REDUCES DRIFT POTENTIAL, BUT WILL NOT PREVENT DRIFT IF APPLICATIONS ARE MADE IMPROPERLY OR UNDER UNFAVORABLE ENVIRONMENTAL CONDITIONS!** See **Wind, Temperature and Humidity**, and **Temperature Inversions** sections of this label.

Controlling Droplet Size - General Techniques

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. **WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.**
- **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.

Controlling Droplet Size - Aircraft

- **Number of Nozzles** - Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is emitted backwards, parallel to the airstream will produce larger droplets than other orientations.
- **Nozzle Type** - Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.
- **Boom Length** - The boom length should not exceed 3/4 of the wing or rotor length - longer booms increase drift potential.
- **Application Height** - Application more than 10 ft above the canopy increases the potential for spray drift.

BOOM HEIGHT

Setting the boom at the lowest labeled height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, the boom should remain level with the crop and have minimal bounce.

WIND

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given wind speed. **AVOID GUSTY OR WINDLESS CONDITIONS.**

Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to

no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

AIR ASSISTED (AIR BLAST) FIELD CROP SPRAYERS

Air assisted field crop sprayers carry droplets to the target via a downward directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, is configured properly, and that drift is not occurring.

Note: Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Consult the application equipment section of this label to determine if use of an air assisted sprayer is recommended.

IMPORTANT PRECAUTIONS

- Prevent drift of spray to desirable plants (refer to SPRAY DRIFT MANAGEMENT section of this label).
- Thoroughly clean application equipment immediately after use (refer to SPRAYER PREPARATION AND CLEAN-UP section of this label).
- UPBEET® is non-corrosive, non-flammable, non-volatile, and does not freeze in storage.

CROP INJURY THAT RESULTS FROM INADEQUATELY CLEANED SPRAY EQUIPMENT IS THE RESPONSIBILITY OF THE APPLICATOR.

SPRAY DRIFT PRECAUTIONS (refer to SPRAY DRIFT MANAGEMENT section of this label).

Avoid Spray drift to adjacent crops as injury may occur. The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions.

Aerial applicators applying UPBEET® herbicide must position at least one person at the application site, with a wind indicator visible to the pilot of the aircraft, at all times during the application. In addition, the personnel at the application site must be able to communicate with the aircraft.

Crops which are sensitive to UPBEET® include, but are not limited to Lettuce (Head and Leaf varieties), Broccoli, Cauliflower, Cabbage, Onions, and seedling alfalfa. Applications to fields adjacent to these and all other crops must be made only under conditions which are not likely to result in drift off the treated site.

STORAGE AND DISPOSAL

Pesticide Storage: Store product in original container only. Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Store in a cool, dry place.

Pesticide Disposal: Do not contaminate water, food, or feed by disposal. Waste resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Container Handling: Refer to the Net Contents section of this product's labeling for the applicable "Nonrefillable Container" or "Refillable Container" designation.

Nonrefillable Plastic and Metal Containers (Capacity Equal to or Less Than 50 Pounds): Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. 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, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Nonrefillable Plastic and Metal Containers (Capacity Greater Than 50 Pounds): Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: 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. Turn the container over onto its other 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. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Nonrefillable Plastic and Metal Containers, e.g., Intermediate Bulk Containers [IBC] (Size or Shape Too Large to be Tipped, Rolled or Turned Upside Down): Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying the contents from this container into application equipment or mix tank and before final disposal using the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Nonrefillable Paper or Plastic Bags, Fiber Sacks including Flexible Intermediate Bulk Containers (FIBC) or Fiber Drums With Liners: Nonrefillable container. Do not reuse or refill this container. Completely empty paper or plastic bag, fiber sack or drum liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer for recycling if available or dispose of empty paper or plastic bag, fiber sack or fiber drum and liner in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

Refillable Fiber Drums With Liners: Refillable container (fiber drum only). *Refilling Fiber Drum:* Refill this fiber drum with UPBEET® containing triflurosulfuron methyl only. Do not reuse this fiber drum for any other purpose. Cleaning before refilling is the responsibility of the refiller. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. *Disposing of Fiber Drum and/or Liner:* Do not reuse this fiber drum for any other purpose other than refilling (see preceding). Cleaning the container (liner and/or fiber drum) before final disposal is the responsibility of the person disposing of the container. Offer the liner for recycling if available or dispose of liner in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. If drum is contaminated and cannot be reused, dispose of it in the manner required for its liner. To clean the fiber drum before final disposal, completely empty the fiber drum by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer the fiber drum for recycling if available or dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

All Other Refillable Containers: Refillable container. *Refilling Container:* Refill this container with UPBEET® containing triflusaluron methyl only. Do not reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn out threads and closure devices. If damage is found, do not use the container, contact FMC at the number below for instructions. Check for leaks after refilling and before transporting. If leaks are found, do not reuse or transport container, contact FMC at the number below for instructions. *Disposing of Container:* Do not reuse this container for any other purpose other than refilling (see preceding). Cleaning the container before final disposal is the responsibility of the person disposing of the container. To clean the container before final disposal, use the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Outer Foil Pouches of Water Soluble Packets (WSP): Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available or, dispose of the empty outer foil pouch in the trash as long as WSP is unbroken. If the outer pouch contacts the formulated product in any way, the pouch must be triple rinsed with clean water. Add the rinsate to the spray tank and dispose of the outer pouch as described previously.

Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, or in the event of a major spill, fire or other emergency, call CHEMTREC (Transportation and Spills): (800) 424-9300, day or night.

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