



Bayer CropScience

GROUP 5 HERBICIDE

Betamix[®] β EC Herbicide

FOR CONTROL OF WEEDS IN SUGARBEETS, RED GARDEN (TABLE) BEET AND
NEWLY-PLANTED JUNE-BEARING STRAWBERRY VARIETIES

NET CONTENTS: 5 – 110 LITRES

AGRICULTURAL
EMULSIFIABLE CONCENTRATE

GUARANTEE:

Phenmedipham..... 153 g/L

Desmedipham153 g/L

REGISTRATION NUMBER 28650 PEST CONTROL PRODUCTS ACT

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

WARNING - EYE AND SKIN IRRITANT

Product Information: 1-888-283-6847

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

BETAMIX β EC HERBICIDE

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GENERAL INFORMATION

SECTION 1: THE PRODUCT

BETAMIX β EC HERBICIDE is a selective post-emergence herbicide for weed control use in sugarbeets, red garden (table) beet and newly-planted strawberries.

SAFETY AND HANDLING

SECTION 2:

PRECAUTIONS, PROTECTIVE CLOTHING AND EQUIPMENT, USER SAFETY RECOMMENDATIONS

KEEP OUT OF REACH OF CHILDREN. Causes eye irritation. **DO NOT** get in eyes. May irritate the skin. Avoid contact with skin. Wear protective eyewear and clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Wear long sleeved shirt, long pants, shoes plus socks, and chemical resistant gloves during mixing/loading, application, clean up and repair. In addition, wear goggles or face shield during mixing and loading.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

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

USER SAFETY RECOMMENDATIONS

Wash hands thoroughly with soap and water before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. 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.

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.

SECTION 3: FIRST AID AND TOXICOLOGICAL INFORMATION

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

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/CLOTHING:

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

IF IN EYES:

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

IF 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.

GENERAL: Never give anything by mouth to an unconscious person. Remove victim to a safe and uncontaminated area. Seek medical attention immediately if symptom persists or is severe.

TOXICOLOGICAL INFORMATION: Treat symptomatically.

SECTION 4: ENVIRONMENTAL HAZARDS

TOXIC to aquatic organisms and non-target terrestrial plants. **DO NOT** apply this product directly to freshwater habitats (such as lakes, rivers, sloughs, ponds, Prairie potholes, creeks, marshes, streams, reservoirs, ditches and wetlands), estuaries or marine habitats. **DO NOT** contaminate aquatic habitats by cleaning of equipment or disposal of wastes.

DO NOT apply this product directly to sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, rangelands, riparian areas and shrub lands).

Observe buffer zones specified under **DIRECTIONS FOR USE**.

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. Boom height must be 60 cm or less above the crop or ground.

DO NOT apply by air.

SECTION 5: STORAGE

Do not contaminate, water, food, or feed by storage and disposal. Store product in original container only and keep closed. Store in a cool, dry place away from other pesticides, seeds, fertilizers, food, or feed. Do not use or store near heat or open flame.

SECTION 6: DISPOSAL

RECYCLABLE CONTAINER DISPOSAL:

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.

DISPOSAL OF UNUSED, UNWANTED PRODUCT: 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 cleanup of spills.

SECTION 7: 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.

DIRECTIONS FOR USE

SECTION 8: WEEDS, CROPS, RATES AND TIMING

8.1 WEEDS CONTROLLED:

BETAMIX β EC HERBICIDE is a selective post-emergence herbicide for control of the following weeds:

Group I: Weeds susceptible to BETAMIX β EC HERBICIDE if sprayed before reaching the 4 leaf stage.

Common Name	Scientific Name
Lamb's-quarters	<i>Chenopodium album</i>
Wild Buckwheat	<i>Polygonum convolvulus</i>
Green Foxtail (Wild Millet)	<i>Setaria viridis</i>
Yellow Foxtail (Pigeon Grass)	<i>Setaria glauca</i>
Mustard	<i>Brassica spp. Sisymbrium spp.</i>
Pigweed	<i>Amaranthus spp.</i>

Group II: Weeds which may be controlled if sprayed before reaching the 2 leaf stage, when use of BETAMIX β EC HERBICIDE is preceded by a pre-plant or pre-emergence herbicide treatment. For recommendation of a suitable pre-plant or pre-emergence treatment, consult your Provincial Department of Agriculture Extension Service or sugarbeet company agronomist.

Common Name	Scientific Name
Nightshade	<i>Solanum spp.</i>
Kochia*	<i>Kochia scoparia</i>
Goosefoot	<i>Chenopodium spp.</i>
Ragweed	<i>Ambrosia spp.</i>
Stinkweed (Field Pennycress, Frenchweed)	<i>Thlaspi arvense</i>

*Spray Kochia while in the rosette stage, less than 2.5 cm in diameter.

8.2 SUGARBEETS

IMPORTANT

BETAMIX β EC HERBICIDE may cause temporary growth delay and/or chlorosis or tip burn on sugarbeets. Beets usually resume normal growth within 10 days.

RATES AND TIMING:

SINGLE (FULL RATE) APPLICATION: Broadcast BETAMIX β EC HERBICIDE at the rate of 2.75 to 4.75 L in 100 to 200 L/ha of water, at a weed growth stage from cotyledon up to 4-true leaves. Apply only to sugarbeets past the 2-true leaf stage.

REPEAT APPLICATION OF BETAMIX β EC HERBICIDE: For control of later germinating weeds, make a second application of BETAMIX β EC HERBICIDE. Use 2.75 to 3.5 L/ha of BETAMIX β EC HERBICIDE. Allow at least 7 days between first and second applications.

SPLIT (REDUCED RATE) APPLICATIONS: Split (reduced rate) applications of BETAMIX β EC HERBICIDE may be applied to sugarbeets at any stage of growth (as early as cotyledon) when necessary to control early germinating, difficult-to-control weeds. Spray BETAMIX β EC HERBICIDE at 1.15 to 1.75 L/ha broadcast in 100 – 200 L of water. The first spray must be applied when the earliest weeds have reached the cotyledon stage.

A second application should be made 5 to 7 days following the first application, or when another flush of weeds germinates, in order to control any weeds not completely controlled by the first treatment. If the second application is delayed (i.e. by more than 7 days), full rate treatment as described above will be necessary.

NOTE: Apply the 2.75 to 4.75 L/ha rate only to sugarbeets past the 2-true leaf stage.

Refer to the table below for the amount to use for band application.

DOSAGE CHART

Dosage Broadcast Equivalent	Band Width	Band Rate		
		Row Spacing		
		55 cm	70 cm	75 cm
1.15 L/ha	15 cm	0.30 L/ha	0.25 L/ha	0.23 L/ha
	20 cm	0.40 L/ha	0.33 L/ha	0.30 L/ha
1.75 L/ha	15 cm	0.48 L/ha	0.38 L/ha	0.35 L/ha
	20 cm	0.63 L/ha	0.50 L/ha	0.45 L/ha
2.75 L/ha	15 cm	0.75 L/ha	0.60 L/ha	0.55 L/ha
	20 cm	1.00 L/ha	0.78 L/ha	0.73 L/ha
3.5 L/ha	15 cm	0.95 L/ha	0.75 L/ha	0.70 L/ha
	20 cm	1.28 L/ha	1.00 L/ha	0.93 L/ha
4.75 L/ha	15 cm	1.25 L/ha	1.00 L/ha	0.93 L/ha
	20 cm	1.68 L/ha	1.33 L/ha	1.23 L/ha

8.2.1: TANK MIXES IN SUGARBEET

NOTE:

- Consult the label of the tank-mix partner for further instructions regarding directions for use, restrictions and precautions. Certain tank-mix partners may have additional restrictions for leaf staging.
- Do not tank-mix BETAMIX β EC HERBICIDE with pesticides, fertilizers or any other chemical additives unless recommended on this label.

TANK MIX PRODUCT	BROADCAST RATE	DIRECTIONS
BETAMIX β EC HERBICIDE + Upbeet	0.88 – 1.75 L/ha + 35 – 70 g/ha*	Use this tank-mix for control of Group I weeds plus control of velvetleaf. A second application should be made 5 – 10 days later or as weeds germinate. If velvetleaf is the predominant weed, use of Upbeet alone with adjuvant is preferable (see Upbeet label for proper application directions). DO NOT use an adjuvant when tank-mixing BETAMIX β EC HERBICIDE with Upbeet.

* The total grams of Upbeet applied must not exceed 100 g/ha per growing season.

8.3 MINOR USES

NOTE TO USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR THE INDICATED SPECIAL USE APPLICATIONS (BELOW): The DIRECTIONS FOR USE for this product for the uses described below were developed by persons other than Bayer CropScience and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion program. Bayer CropScience itself makes no representation or warranty with respect to performance (efficacy) or crop tolerance (phytotoxicity) claims for this product when used on the crops listed below. Accordingly, the Buyer and User assume all risks related to performance and crop tolerance arising, and agree to hold Bayer CropScience harmless from any claims based on efficacy or phytotoxicity in connection with the uses described below.

8.3.1 RED GARDEN (TABLE) BEET

BETAMIX β EC HERBICIDE is a selective post-emergence herbicide for use in red garden (table) beets. The product will control labelled weeds, if sprayed before reaching the 4 leaf stage.

IMPORTANT: BETAMIX β EC HERBICIDE may cause temporary growth retardation and/or chlorosis or tip burn on red garden (table) beets. Beets usually resume normal growth within 10 days. Do not exceed rates recommended on this label. Uneven application such as swath overlapping, variable tractor speed, spraying on turns, etc., may result in crop injury.

Timing of application and application rates:

BETAMIX β EC HERBICIDE may be applied to red garden (table) beet at any stage of growth (as early as cotyledon) when necessary to control early germinating, difficult-to-control weeds. Apply BETAMIX β EC HERBICIDE at 1.15 to 1.75 L/ha as a broadcast spray in 100 – 200 L of water. The first spray must be applied when the earliest weeds have reached the cotyledon stage. Repeat applications at 5 to 7 days intervals following the first application, or when another flush of weeds germinates. Apply a maximum of 3 applications per season.

Refer to the DOSAGE CHART in section 8 for the amount to use for band application.

Pre-Harvest Interval:

Do not harvest treated beets within 30 days of application.

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.

8.3.2 NEWLY-PLANTED JUNE-BEARING STRAWBERRY VARIETIES (Transplanted Strawberries)

RATES AND TIMING:

BETAMIX β EC HERBICIDE Alone: Post Transplanting Application

Weeds controlled	Rate of BETAMIX β EC	Remarks
Annual weeds listed in Section 8.1	1.15 to 1.75 L/ha	<ul style="list-style-type: none"> • Apply specified dosage as a broadcast spray in 100 – 200 L of water. • The first spray must be applied when the earliest weeds have reached the cotyledon stage. • Repeat applications at 5 to 7 days intervals following the first application, or when another flush of weeds germinates. • Apply a maximum of 3 applications per season. • Refer to the DOSAGE CHART in section 8.2 for the amount to use for band application. • Use in June-bearing strawberry varieties in the year of planting only. • Do not use on varieties that may bear fruit in the planting year. Do not harvest any berries that might develop in the year of planting.

NOTE:

Strawberry varieties may vary in their tolerance to herbicides, including BETAMIX β EC. Since not all strawberry varieties have been tested for tolerance to BETAMIX β EC, first use of BETAMIX β EC should be limited to a small area of each variety to confirm tolerance prior to adoption as a general field practice. Additionally, consult your plant supplier for information on the tolerance of specific strawberry varieties to BETAMIX β EC.

BETAMIX β EC HERBICIDE may cause temporary chlorosis or tip burn on strawberry plants. Plants should resume normal growth within 7 to 21 days.

SECTION 9: APPLICATION INSTRUCTIONS AND CAUTIONS

DO NOT APPLY BY AIR

APPLICATION INSTRUCTIONS:

When used as directed, BETAMIX β EC HERBICIDE is selective in sugarbeets beginning at the cotyledon stage. The stage of growth of the weeds is very important for satisfactory control. For best results, spray when the weeds are between the cotyledon and 2-leaf stage. Best results are obtained when the weeds are actively growing and are not under water or heat stress.

APPLICATION CAUTIONS:

BETAMIX β EC HERBICIDE may cause beet injury if the crop is under stress from one or more of the following conditions:

- Rapid climatic change from cool, overcast days, to hot (30°C or over) bright days.
- Frost within 3 days prior to application or 7 days following treatment could cause beet injury.
- Windy conditions or drought.
- Use of a pre-plant or pre-emergence herbicide or other chemicals.
- Insect or disease injury.
- Close cultivation.

If stress conditions are present, delay application in order to give plants a chance to recover.

If extreme weather conditions are of short duration, delay spraying until the end of such a period.

If BETAMIX β EC HERBICIDE applications must be made on days with extreme temperature and sunshine, delay spraying until evening.

DO NOT OVER-TREAT: The use of higher than recommended rates may cause beet injury.
DO NOT APPLY THIS PRODUCT THROUGH ANY TYPE OF IRRIGATION SYSTEM.

Do not spray while dew is present.

Rainfall or sprinkler irrigation within 6 hours of spraying may reduce weed kill.

Do not allow spray drift to contact adjacent crops, which may be injured, by spray drift.

For sugar beets, do not spray in excess of a total of 8.25 L/ha of BETAMIX EC Herbicide per season.

For garden beets and newly planted strawberries do not spray in excess of a total of 5.25 L/ha of BETAMIX EC Herbicide per season.

SECTION 10: BUFFER ZONES

Use of the following spray methods or equipment **DO NOT** require a buffer zone: hand-held or backpack sprayer and spot treatment.

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, riparian areas and shrublands), sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine/marine habitats.

Method of Application	Crop	Buffer Zones (metres) Required for the Protection of:				
		Freshwater Habitats of Depths:		Estuarine/Marine Habitats of Depths:		Terrestrial Habitat
		Less than 1 m	Greater than 1 m	Less than 1 m	Greater than 1 m	
Field sprayer	Sugarbeet, table beet, newly-planted strawberries (reduced rate applications)	1	1	1	0	1
	Sugarbeet (full rate applications)	1	1	1	0	1

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.

SECTION 11: MIXING INSTRUCTIONS

MIXING THE SPRAY: MAKE SURE THE SPRAYER IS CLEAN.

BETAMIX β EC HERBICIDE is an emulsifiable concentrate containing 306 grams of active ingredients per litre.

The formulation contains sufficient wetting agents for optimum coverage. **DO NOT** add additional wetting agents or other spray adjuvants.

Add sufficient water in the tank to fill the lines.

Then add the desired amount of BETAMIX β EC HERBICIDE and the remaining quantity of water with the bypass agitator running.

Bypass agitation is sufficient. Mechanical agitation is not recommended. Only use freshly prepared spray solutions.

Always spray immediately after preparing the spray solution. Prepare only enough spray solution to last less than 4 hours.

SECTION 12: LIVESTOCK FEEDING, PREHARVEST INTERVALS AND RE-ENTRY INTERVAL

CAUTION: Do not graze treated crops or use for livestock feed; sufficient data are not available to support such use.

Do not apply BETAMIX β EC HERBICIDE to sugarbeets later than 60 days prior to harvest.

Do not apply BETAMIX β EC HERBICIDE to red garden (table) beets within 30 days of harvest.

RE-ENTRY INTERVAL

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

SECTION 13: RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, BETAMIX β EC HERBICIDE is a Group 5 herbicide. Any weed population may contain or develop plants naturally resistant to BETAMIX β EC HERBICIDE and other Group 5 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 BETAMIX β EC HERBICIDE or other Group 5 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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