

Betamix[®] Herbicide



Supplemental Label

FOR AGRICULTURAL USE ONLY

Postemergence Herbicide for Control of Weeds in Sugar Beets

ACTIVE INGREDIENT: Phenmedipham*	8.0%	
Desmedipham**	8.0%	
INERT INGREDIENTS:	84.0%	
Contains 1.3 lbs. active ingredient per gallon.	Total	100.0%

This product contains the toxic inert ingredient isophorone.

*3-methoxycarbonylamino-phenyl-3-methylcarbanilate

**Ethyl m-hydroxycarbanilate carbanilate (ester)

EPA Reg No. 264-621

EPA Est. No.

KEEP OUT OF REACH OF CHILDREN WARNING — AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(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 1-888-AVENTIS (1-888-283-6847)

FIRST AID

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

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor.

IF ON SKIN: 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.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING

Causes substantial but temporary eye injury. Harmful if swallowed or absorbed through skin. Do not get in eyes or on clothing. Avoid contact with skin.

PERSONAL PROTECTIVE EQUIPMENT

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category F on an EPA chemical resistance category selection chart.

Applicators and Other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate, or butyl rubber > 13 mils, or nitrile rubber > 13 mils
- Shoes plus socks
- Protective eyewear

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

Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Users should 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.

ENGINEERING CONTROLS STATEMENT

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4–6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic organisms. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to fish and aquatic organisms in adjacent aquatic sites. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

PHYSICAL OR CHEMICAL HAZARDS

COMBUSTIBLE; DO NOT USE OR STORE NEAR HEAT OR OPEN FLAME.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in original container and keep closed. Store in a cool, dry place. Do not use or store near heat or open flame.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

When packaged in Plastic containers:

Container Disposal: Triple rinse (or equivalent), then offer for recycling or reconditioning; or puncture and dispose of in a sanitary landfill; or by other procedures approved by State and local authorities.

DO NOT REUSE THIS CONTAINER.

DESTROY WHEN EMPTY.

[These statements are deleted when SVR packaging is used.]

When packaged in SVR containers:

ECHO SYSTEM® SVR Return Procedure: Return the ECHO SYSTEM SVR container clean (outside only) and empty to the place of business from which the BETAMIX® was purchased.

This ECHO SYSTEM SVR container is the sole property of Aventis CropScience.

DIRECTIONS FOR USE

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

Read the entire Directions for Use before using this product.

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 24 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 (barrier laminate, butyl rubber, nitrile rubber or Viton)
- Shoes plus socks
- Protective eyewear

GENERAL INFORMATION

When used as directed, BETAMIX® Herbicide is selective against weeds in sugar beets. Follow label directions carefully to avoid severe injury to sugar beets. For best results, spray weeds in the cotyledon stage which are actively growing and are not under water or heat stress. BETAMIX® will control the following weeds:

Annual sowthistle	<i>Sonchus oleraceus</i>
Black nightshade	<i>Solanum nigrum</i>
Coast fiddleneck	<i>Amsinckia intermedia</i>
Common chickweed	<i>Stellaria media</i>
Common lambsquarters.....	<i>Chenopodium album</i>
Common ragweed	<i>Ambrosia artemisiifolia</i>
Green foxtail	<i>Setaria viridis</i>
Groundcherry.....	<i>Physalis lanceifolia</i>
Hairy nightshade	<i>Solanum sarrachoides</i>
Kochia	<i>Kochia scoparia</i>
London rocket.....	<i>Sisymbrium irio</i>
Nettleleaf goosefoot	<i>Chenopodium murale</i>
Yellow foxtail (pigeon grass).....	<i>Setaria glauca</i>
Prostrate pigweed*	<i>Amaranthus gracizans</i>
Purslane	<i>Portulaca oleraceus</i>
Redroot pigweed*	<i>Amaranthus retroflexus</i>
Shepherdspurse	<i>Capsella bursa-pastoris</i>
Wild buckwheat	<i>Polygonum convolvulus</i>
Wild mustard	<i>Brassica kaber</i>

*Redroot pigweed and prostrate pigweed control will be improved with a tank mix of Betamix® and Betanex® Herbicide in Eastern North Dakota and Minnesota (see Chart 4).

GENERAL PRECAUTIONS AND RESTRICTIONS

DO NOT APPLY BETAMIX® HERBICIDE TO SUGAR BEETS LATER THAN 75 DAYS PRIOR TO HARVEST.

DO NOT EXCEED A TOTAL OF 12 PINTS BETAMIX® PER ACRE PER SEASON.

DO NOT APPLY THIS PRODUCT THROUGH ANY TYPE OF IRRIGATION SYSTEM.

DO NOT ROTATE WITH CEREAL GRAIN CROPS FOR 120 DAYS FOLLOWING POSTEMERGENCE APPLICATION OF BETAMIX®.

BETAMIX® MAY CAUSE BEET INJURY IF THE CROP IS UNDER STRESS FROM ONE OR MORE OF THE FOLLOWING CONDITIONS:

- Rapid climatic changes from cool, overcast days, to hot (80°F or over) bright days. When the air temperature is, or is likely to be, above 80°F on the day of spraying, application should be made in the late afternoon when the temperature is decreasing.
- Frost within 3 days prior to application or 7 days following treatment could cause beet injury.
- Windy conditions or drought
- Use of a preplant or preemergence 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.

IMPORTANT: BETAMIX® Herbicide may cause temporary growth retardation and/or chlorosis or tipburn on sugar beets. Sugar beets usually resume normal growth within 10 days.

DO NOT OVERTREAT:

The use of higher than recommended rates may cause beet injury and/or carry over problems when tank mixed with NORTRON® SC Herbicide.

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.

MIXING THE SPRAY:

Make sure the sprayer is CLEAN.

BETAMIX® emulsifiable concentrate formulation contains sufficient wetting agents for optimum coverage. Do not add additional wetting agents or other spray adjuvants except as specified for "Micro-Rate Applications". Add sufficient water to fill the lines. Then add the desired amount of BETAMIX®

Herbicide and the remaining quantity of water with the bypass agitator running. Bypass agitation is sufficient. Mechanical agitation is not necessary. Only use freshly prepared spray emulsions.

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

APPLICATION INSTRUCTIONS

MULTIPLE (LOW RATE) APPLICATIONS:

Multiple (low rate) applications of BETAMIX® Herbicide may be applied by air or ground to sugar beets to control early germinating weeds. The first application must be applied when the earliest emerging weeds have reached cotyledon size. See Chart 1 for broadcast rates. For broadcast applications with ground equipment, apply in 10 to 20 gallons of water per acre. Use 5 to 15 gallons of water per acre with aerial application. See Chart 2 for equivalent band rates. Any weeds which are not completely controlled by the first treatment will usually be checked and controlled by repeat applications. The repeat application should be made 5 to 7 days after the preceding application or when another flush of weeds germinates. If the second application is delayed, conventional treatment as described below will be necessary.

To avoid excessive phytotoxicity to fall-planted sugar beets south of the Tehachapi Mountains in California when temperatures are above 85°F, apply BETAMIX® at the rate of 1 pint per acre (broadcast equivalent). Evening applications are recommended.

BETAMIX® Herbicide applied postemergence in a tank mix with NORTRON SC Herbicide (see Chart 3) broadens and enhances the control of troublesome weeds, in addition, provides control of Ladysthumb (*Polygonum persicaria*), Pennsylvania smartweed (*Polygonum pennsylvanicum*), Annual bluegrass (*Poa annua*) and Canarygrass (*Phalaris canariensis*).

For further information, contact your County Agricultural Agent, Farm Advisor, or Aventis CropScience.

CHART 1

DOSAGE CHART FOR MULTIPLE (LOW RATE) BROADCAST APPLICATIONS

Weed Stage*	Pints/Acre Broadcast			
	BETAMIX® ALONE	BETAMIX®	+	NORTRON SC
Cotyledon	1.5-3.0	1.5	+	0.25
2 leaf	2.0-3.0	2.0	+	0.33
4 leaf	3.0-4.5	3.0	+	0.5

*Applications should begin at the cotyledon stage of the weeds.

*Higher dosage rates could be required, depending on the advancement of the weed stage.

*Do not exceed 1.5 pt./acre when sugarbeets are at the cotyledon stage.

*Early two true-leaf sugar beets tend to be the most susceptible to phytotoxicity.

CHART 2

BETAMIX® DOSAGE CHART FOR BAND APPLICATION

Broadcast Equivalent	Band Width	Band Rate – Row Spacing (fluid ounces)			
		22"	24"	28"	30"
1.50 pints/acre	5"	5.5	5.0	4.3	4.0
	7"	7.6	7.0	6.0	5.6
2.0 pints/acre	5"	7.3	6.7	5.7	5.3
	7"	10.2	9.3	8.0	7.5
3.0 pints/acre	5"	10.9	10.0	8.6	8.0
	7"	15.3	14.0	12.0	11.2
4.5 pints/acre	5"	16.4	15.0	12.9	12.0
	7"	22.9	21.0	18.0	16.8
6.0 pints/acre	5"	21.8	20.0	17.1	16.0
	7"	30.5	28.0	24.0	22.4
7.5 pints/acre	5"	27.3	25.0	21.4	20.0
	7"	38.2	35.0	30.0	28.0

CHART 3

NORTRON SC DOSAGE CHART FOR MULTIPLE (LOW RATE) BAND APPLICATIONS

Broadcast Equivalent	Band Width	Band Rate – Row Spacing (fluid ounces)			
		22"	24"	28"	30"
0.25 pints/acre	5"	0.9	0.8	0.7	0.7
	7"	1.3	1.2	1.0	0.9
0.33 pints/acre	5"	1.2	1.1	0.9	0.9
	7"	1.7	1.5	1.3	1.2
0.5 pints/acre	5"	1.8	1.7	1.4	1.3
	7"	2.5	2.3	2.0	1.9

CONVENTIONAL APPLICATIONS

By Ground: Apply BETAMIX® Herbicide at the rate of 4.5 to 7.5 pints per acre in 20 to 50 gallons of water broadcast basis. For band application, see Dosage Chart 2.

By Air: Apply BETAMIX® Herbicide at the rate of 4.5 to 7.5 pints per acre using 5 to 15 gallons of spray per acre.

Apply the 4.5- to 7.5-pint rates only to sugar beets past the two true-leaf stage. Use the 7.5-pint rate only on well-established sugar beets which are not under stress. The stage of growth of the weeds is very important for satisfactory control. For best results, spray when the weeds are at the two true-leaf stage or smaller, are actively growing and are not under water or heat stress.

In order to avoid phytotoxic spray drift to nontarget crops during application of BETAMIX®, the following buffer zones should be observed:

- Cotton, Potatoes, Sunflowers,
Sorghum, Wheat 50 feet
- Blackeye beans, Cabbage, Flax..... 100 feet
- Lettuce, Rape, Tomatoes 300 feet

DO NOT APPLY WHEN WIND SPEED IS OVER 10 MILES PER HOUR. AVOID APPLICATIONS WHEN CONDITIONS FAVOR DRIFT.

REPEAT APPLICATION OF BETAMIX®: For control of later germinating weeds, make a second application of BETAMIX® Herbicide. Use 4.5 to 6 pints of BETAMIX®. Allow at least 7 days between first and second applications. Apply when sugar beets have at least 4 leaves. For best results, use the higher rate and spray when weeds are at the two true-leaf stage. Apply lower rates when the sugar beets are under stress as explained in the General Precautions And Restrictions section.

TANK MIX COMBINATIONS

When tank mixing, read and follow the label for each tank mix product used for precautionary statements, directions for use, weeds controlled, geographic and other restrictions. Use in accordance with the most restrictive of label limitations and precautions. No label dosage should be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing.

Betamix® Herbicide can be tank mixed with the following broadleaf herbicides for improved broadleaf weed control if application timing is correct for the tank mix products.

Herbicide	Use Rate (pt./A)
Stinger®*	0.25–0.50
Betanex®	See Chart 4

*The Betamix® + Stinger tank mix should be applied when sugar beets are in the two true-leaf stage or larger.

Chart 4

Dosage Chart for Tank Mixes of Betamix® and Betanex®

Desired Rate (Pints/acre Broadcast)	BETAMIX® + BETANEX® (Pints/acre Broadcast)		
1.13	0.57	+	0.57
1.25	0.63	+	0.63
1.33	0.67	+	0.67
1.50	0.75	+	0.75
1.75	0.88	+	0.88
2.25	1.13	+	1.13
3.25	1.63	+	1.63
5.0	2.50	+	2.50

MICRO-RATE APPLICATIONS (EXCEPT CALIFORNIA)

Multiple Micro-rate applications of Betamix® Herbicide in tank mixtures with reduced rates of UpBeet™, Stinger®, and modified seed oils may be applied by air or ground equipment to sugar beets to control early germinating weeds.

When adding spray adjuvants to Betamix® the rate must not exceed 0.08 lb a.i./A (see Dosage Chart 5 below) when sugar beets are in the cotyledon to 4-true-leaf stage. When the smallest sugar beet plants in the field are in the 4-true-leaf stage, the rate can be increased to 0.12 lb a.i./A (see Dosage Chart 5 below). The use of wetting agents or spray adjuvants with conventional rates (0.73 to 1.22 lb a.i./acre) or multiple low rate (0.24 to 0.73 lb a.i./acre) applications of Betamix® is prohibited.

Favorable climatic conditions (good conditions for plant growth and development) are essential for adequate weed control.

DOSAGE CHART 5

DOSAGE CHART FOR MULTIPLE MICRO-RATE BROADCAST APPLICATIONS

Sugar Beet Stage	Betamix® Fluid Ounces/Acre Broadcast
Cotyledon to 4-leaf	8.0 (equivalent to 0.08 lb. ai/A)
4-Leaf*	8.0 – 12.0 (equivalent to 0.08 – 0.12 lb. ai/A)

* Rate can be increased when the smallest sugar beet plants in the field are in the 4-true leaf stage or larger.

Application of Betamix® Herbicide in broadcast applications is strongly recommended. If band applications are used, do not use less than 11-inch bands.

For broadcast applications of Betamix® with selected tank mix partners, apply in 10 to 20 gallons of water per acre for ground application, or 5 to 15 gallons of water per acre for aerial application. Use the minimum rate recommended on the tank mix partner label, or a reduced rate of the tank mix partner(s), at the discretion of the grower or applicator, as permitted under FIFRA. [Minimum label rate for UpBeet is 0.5 oz/acre; for Stinger, 4.0 fl oz/acre.]

Use modified seed oils at a finished spray concentration of 1.5% v/v or a minimum of 1 pt/acre. A minimum of three sequential applications should be used. Accurate timing is essential; make initial application immediately after weeds emerge, and make repeat applications on 5- to 7-day intervals. If weed control is not adequate due to climatic conditions, spray coverage or other factors, return to conventional application rates.

Betamix® Herbicide can be mixed with UpBeet, Stinger, and modified seed oils for use on sugar beets in accordance with the most restrictive label limitations and precautions. No label dosage rates should be exceeded. Betamix® Herbicide cannot be mixed with any product containing a label prohibition against such mixing.

Fungicides or insecticides can be tank mixed with Betamix® plus UpBeet plus Stinger plus methylated seed oils, however, do not combine both fungicides and insecticides with micro-rate mixtures.

MIXING INSTRUCTIONS FOR MICRO-RATE MULTIPLE APPLICATIONS OF BETAMIX®

1. Start with a clean spray tank.
2. Fill spray tank with one-third of the total amount of clean water needed for application and start gentle agitation.
3. Slurry UpBeet in water before adding to spray tank, then add slurried UpBeet to spray tank.
4. Fill spray tank to two-thirds of the total amount of clean water needed for the application.
5. Add Betamix® followed by Stinger, then modified seed oil.
6. Add remaining amount of water while continuing gentle agitation. Spray immediately. Spray mixture should not remain in spray tank overnight.

USE PRECAUTIONS FOR MICRO-RATE APPLICATIONS

Not all weeds will be adequately controlled, even with favorable climatic conditions. Micro-rate applications of Betamix® mixed with UpBeet and Stinger will not control ALS-resistant kochia. Conventional rates of Betamix® and/or hand labor may be required if multiple micro-rate applications do not adequately control weeds.

Modified seed oils must not be added if the Betamix® rates exceed the rates listed in Dosage Chart 5 above, as the addition of modified seed oils could increase the possibility of crop injury at dosage rates greater than those listed in Dosage Chart 5.

Multiple micro-rate applications may injure sugar beets if climatic conditions rapidly change from cool, wet, overcast days to bright sunny days. Plugging of spray nozzles may be encountered due to the potential formation of a precipitate in the spray solution that is often associated with micro-rate applications. To minimize potential formation of precipitate, start with a clean spray system, use warm spray water for mixing, completely empty spray solution from each tank load, flush tank and lines between loads with fresh water, never leave diluted spray solution in tank overnight, and/or add ammonia (2% household) at 1% v/v or a basic blend additive (as referenced in the most recent North Dakota State University Weed Control Guide) at 1% v/v. DO NOT apply micro-rate treatments when conditions are favorable for drift to nontarget species.

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 Aventis CropScience. All such risks shall be assumed by the user or buyer.

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Aventis CropScience USA LP
P.O. Box 12014, 2 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

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