

264-621

2/7/2011

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

Nang-Ly Chow, Ph.D.  
Bayer CropScience  
P.O. Box 12014, 2 Alexander Drive  
Research Triangle Park, NC 27709

FEB 7 2011

Subject: Label Notification; Per PR-Notice 98-10  
BETAMIX Herbicide  
EPA Reg. No. 264-621  
Date Submitted: January 10, 2011

Dear Mr. Chow:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated January 10, 2011 for the product referenced above. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions regarding this letter, please contact Jasmine Branch at (703) 347-0351 or [branch.jasmine@epa.gov](mailto:branch.jasmine@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Kable Bo Davis", written over a horizontal line.

Kable Bo Davis  
Product Manager 25  
Herbicide Branch  
Registration Division (7505P)

 <b>EPA</b> United States <b>Environmental Protection Agency</b> Washington, DC 20460	<input type="checkbox"/> <b>Registration</b> <input type="checkbox"/> <b>Amendment</b> <input checked="" type="checkbox"/> <b>Other</b>	<b>OPP Identifier Number</b>
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**Application for Pesticide - Section I**

1. Company/Product Number <b>264-621</b>	2. EPA Product Manager <b>Mr. Kable Davis</b>	3. Proposed Classification <input type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) <b>BETAMIX® Herbicide (ABN: Sugarbeet Mix Herbicide)</b>	<b>PM Team 25</b>	
5. Name and Address of Application (Include ZIP Code) <b>Bayer CropScience</b> <b>PO Box 12014, 2 Alexander Drive,</b> <b>Research Triangle Park, NC 27709</b>  <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

**Section - II**

**NOTIFICATION**

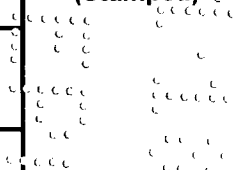
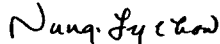
<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____	<b>FEB 07 2011</b>
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.	
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.	

**Explanation:** Use additional page(s) if necessary. (For Section I and Section II.)  
 A Pesticide Notification submission for Betamix® Herbicide - for the minor change made to correct one inadvertent omission we recently discovered in the existing Betamix label on file at the Agency (Ref: the EPA 3/8/2010 letter approving our Notification submission of Jan-26, 2010 for compliance with PR Notice 2007-4 (Containers and Containment labeling): We now added the 'Chart 5' and the Title description for an existing Chart located between Chart 4 and Chart 6 (see label page 8, as highlighted; and cover letter). Contact: [Nang-ly.chow@bayer.com](mailto:Nang-ly.chow@bayer.com)

**Section - III**

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No			<input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
* Certification must be submitted		If "Yes", Unit Packaging wgt.	No. per container	If "Yes" Package wgt.	No. per container
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container		5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product				<input type="checkbox"/> Other _____	
				<input type="checkbox"/> Lithograph	
				<input type="checkbox"/> Paper glued	
				<input type="checkbox"/> Stenciled	

**Section - IV**

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name <b>Nang-Ly Chow, Ph.D.</b>	Title <b>Registration Manager</b>	Telephone No.: Phone: <b>919-549-2147</b> Fax: <b>919-549-2971</b>
<b>Certification</b> I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received <b>(Stamped)</b> 
2. Signature 	3. Title: Registration Manager	
4. Typed Name: Nang-Ly Chow, Ph.D.	5. Date: January 10, 2011	



NOTIFICATION

FEB 07 2011

# Betamix® Herbicide

## FOR AGRICULTURAL USE ONLY

### Postemergence Herbicide for Control of Weeds in Red Beets and Sugar Beets

ACTIVE INGREDIENT: Phenmedipham*	8.0%
Desmedipham**	8.0%
<b>OTHER INGREDIENTS:</b>	<b>84.0%</b>
Contains 1.3 lbs. active ingredient per gallon.	<b>Total 100.0%</b>

This product contains the toxic inert ingredient isophorone.

\* CAS Number: 13684-63-4

\*\* CAS Number: 13684-56-5

EPA Reg No. 264-621

EPA Est. No. 070989-IA-001

## 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 1-866-99BAYER (1-866-992-2937)

### FIRST AID

<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>• Immediately call a poison control center or doctor for treatment advice.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>For MEDICAL Emergencies Call 24 Hours A Day 1-800-334-7577.</b>	
<b>Have the product container or label with you when calling a poison control center or doctor or going for treatment.</b>	
<b>NOTE TO PHYSICIAN:</b> 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  $\geq$  14 mils, or nitrile rubber  $\geq$  14 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 exist, 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:** Non-refillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. 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 puncture and dispose of in a sanitary landfill; or by other procedures approved by State and local authorities.

### 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 red (table) beets and sugar beets. Follow label directions carefully to avoid severe injury to labeled crops. For best results, spray weeds in the cotyledon stage which are actively growing and are not under water or heat stress. BETAMIX Herbicide will control the following weeds:

- Annual sowthistle ..... *Sonchus oleraceus*
- Black nightshade ..... *Solanum nigrum*
- Hairy nightshade ..... *Solanum sarrachoides*
- Coast fiddleneck ..... *Amsinckia intermedia*
- Common chickweed ..... *Stellaria media*
- Common lambsquarters ..... *Chenopodium album*
- Common ragweed ..... *Ambrosia artemisiifolia*
- Groundcherry ..... *Physalis lanceifolia*
- London rocket ..... *Sisymbrium irio*
- Mapleleaf goosefoot ..... *Chenopodium simplex*
- Narrowleaf lambsquarters ..... *Chenopodium denticatum*
- Nettleleaf goosefoot ..... *Chenopodium murale*
- Palmer amaranth ..... *Amaranthus palmeri*
- Powell amaranth ..... *Amaranthus powellii*
- Prostrate pigweed ..... *Amaranthus gracizans*
- Purslane ..... *Portulaca oleracea*
- Redroot pigweed ..... *Amaranthus retroflexus*
- Shepherdspurse ..... *Capsella bursa-pastoris*
- Smooth pigweed ..... *Amaranthus hybridus*
- Tall waterhemp ..... *Amaranthus tuberculatus*
- Wild buckwheat ..... *Polygonum convolvulus*
- Wild mustard ..... *Brassica kaber*

\*Redroot pigweed and prostrate pigweed control will be improved with a tank mix of BETAMIX Herbicide 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 APPLY BETAMIX HERBICIDE TO RED (TABLE) BEETS LATER THAN 14 DAYS PRIOR TO HARVEST OF RED BEET TOPS AND NOT LATER THAN 50 DAYS PRIOR TO HARVEST OF RED BEET ROOTS.

DO NOT EXCEED A TOTAL OF 12 PINTS BETAMIX HERBICIDE PER ACRE PER SEASON FOR SUGAR BEETS.

DO NOT EXCEED A TOTAL OF 0.96 lbs a.i. desmedipham and phenmedipham (7 PINTS BETAMIX HERBICIDE) PER ACRE PER SEASON FOR RED (TABLE) BEETS.

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 HERBICIDE.

BETAMIX HERBICIDE 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, saturated soils or other adverse conditions.
- 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 Red (Table) beets or 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.

Applications made when excess dew is present may reduce weed control.

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.

## PRACTICES TO LOWER THE POTENTIAL FOR SPRAY DRIFT

Avoiding spray drift at the application site is the responsibility of the applicator. The interactions of many equipment- and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses, or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed  $\frac{3}{4}$  the length of the wingspan or rotor.
2. Nozzles must always point backward, parallel with the air stream, and never be pointed downward more than 45 degrees.

Where States or Tribes have more stringent regulations, they should be observed.

The applicator should be familiar with, and take into account, the information covered in the *Aerial Drift Reduction Advisory Information*.

## AERIAL DRIFT REDUCTION ADVISORY INFORMATION

### Information On Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. 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*.)

### Controlling Droplet Size:

- Volume – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of Nozzles – Use the minimum number of nozzles that provide uniform coverage.

- Nozzle Orientation – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- 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. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

**Boom Length:**

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

**Application Height:**

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

**Swath Adjustment:**

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

**Wind:**

Drift potential is lowest between windspeeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application must be avoided below 2 mph due to variable wind direction and high inversion potential. 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 low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

**Temperature Inversions:**

Avoid applications during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures 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 the 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.

**Sensitive Areas**

The pesticide must be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, nontarget crops) is minimal (e.g., when wind is blowing away from sensitive areas).

**MIXING THE SPRAY:**

**Make sure the sprayer is CLEAN.**

BETAMIX Herbicide emulsifiable concentrate formulation contains sufficient wetting agents for optimum coverage. 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.

**RATES OF APPLICATION – SUGAR BEETS**

**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 Herbicide 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 Bayer CropScience.



**CHART 1**

**DOSAGE CHART FOR MULTIPLE (LOW RATE) BROADCAST APPLICATIONS**

Pt/A Broadcast					
Weed Stage*	BETAMIX Herbicide ALONE		BETAMIX Herbicide	+	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.

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

**CHART 2**

**BETAMIX Herbicide DOSAGE CHART FOR BAND APPLICATION**

Band Rate – Row Spacing (fl oz)					
Broadcast Equivalent	Band Width	22"	24"	28"	30"
1.50 pt/A	7"	7.6	7.0	6.0	5.6
	11"	12.1	11.0	9.5	8.8
2.0 pt/A	7"	10.2	9.3	8.0	7.5
	11"	16.1	14.7	12.5	11.7
3.0 pt/A	7"	15.3	14.0	12.0	11.2
	11"	24.0	22.0	18.9	17.6
4.5 pt/A	7"	22.9	21.0	18.0	16.8
	11"	36.1	33.0	28.4	26.4
6.0 pt/A	7"	30.5	28.0	24.0	22.4
	11"	48.0	44.0	37.6	35.2
7.5 pt/A	7"	38.2	35.0	30.0	28.0
	11"	60.0	55.0	47.1	44.0

**CHART 3**

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

Band Rate – Row Spacing (fl oz)					
Broadcast Equivalent	Band Width	22"	24"	28"	30"
0.25 pt/A	7"	1.3	1.2	1.0	0.9
	11"	2.0	1.8	1.5	1.4
0.33 pt/A	7"	1.7	1.5	1.3	1.2
	11"	2.6	2.4	2.0	1.9
0.5 pt/A	7"	2.5	2.3	2.0	1.9
	11"	3.9	3.7	3.1	3.0

**CONVENTIONAL APPLICATIONS**

By Ground: Apply BETAMIX Herbicide at the rate of 4.5 to 7.5 pints per acre in 10 to 20 gallons of water broadcast basis. 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 Herbicide, the following buffer zones must be observed:

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

**REPEAT APPLICATION OF BETAMIX Herbicide:** For control of later germinating weeds, make a second application of BETAMIX Herbicide. Use 4.5 to 6 pints of BETAMIX Herbicide. 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.

**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.

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

**DOSAGE CHART 4**

**DOSAGE CHART FOR MULTIPLE MICRO-RATE BROADCAST APPLICATIONS**

Sugar Beet Stage	BETAMIX Herbicide fl oz/A Broadcast
Cotyledon to 4-leaf <sup>(1)</sup>	8.0-12.0 (0.08-0.12 lb a.i./A)
4-Leaf	12.0-16.0 (0.12-0.16 lb a.i./A)
4-Leaf or greater <sup>(2)</sup>	16.0 – 22.0 (0.16-0.22 lb a.i./A)

- (1) Caution should be considered when using higher rates and when sugar beets are in the early 2-leaf stage of growth because injury can occur.
- (2) When 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.

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 Herbicide 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/A; for Stinger, 4.0 fl oz/A.]

Use modified seed oils at a finished spray concentration of 1.5% v/v or a minimum of 1 pt/A. 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 multiple (low rate) applications.

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 Herbicide 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 HERBICIDE**

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 Herbicide 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 Herbicide mixed with UpBeet and Stinger will not control ALS-resistant kochia. Multiple low rates of BETAMIX Herbicide and/or hand labor may be required if multiple micro-rate applications do not adequately control weeds.

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 at 1% v/v. DO NOT apply micro-rate treatments when conditions are favorable for drift to nontarget species.

**CHART 5**

**MULTIPLE ENHANCED LOW-RATE BROADCAST OF BETAMIX AND NORTRON**

fl oz/A Broadcast		
Sugar Beet Stage	BETAMIX Herbicide	Nortron® SC Herbicide **
Cotyledon to 4-leaf	8.0 – 12.0 (0.08-0.12 lb a.i./A)	2.0 to 4.0 (0.06 - 0.12 lb a.i./A)
4-leaf *	12.0 – 22.0 (0.12-0.22 lb a.i./A)	2.0 to 4.0 (0.06-0.12 lb a.i./A)

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

\*\*Do not exceed 0.375 lb a.i. ethofumesate (12 fl oz of Nortron® SC) per acre per growing season.

**RATES OF APPLICATION – RED (TABLE) BEET**

When applying to red (table) beet BETAMIX Herbicide emulsifiable concentrate formulation contains sufficient wetting agents for optimum coverage. Do not add additional wetting agents or other spray adjuvants when applying to red (table) beets.

**By Ground:** Multiple applications of BETAMIX Herbicide may be applied by ground to red (table) beets to control early germinating weeds. The first application must be applied when the red (table) beets have reached the 2-leaf stage. See *Chart 6* for broadcast rates. For broadcast applications with ground equipment, apply in 10 to 20 gallons of water per acre. Use 5 to 10 gallons of water per acre with band applications. See *Chart 7* for equivalent band rates. Any weeds which are not completely controlled by the first treatment will usually be checked or 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. A maximum of three (3) applications is allowed.

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

**USE PRECAUTIONS**

The preharvest interval is 14 days for red beet tops and 50 days for red (table) beet roots.

For red (table) beets, leave a 16 feet buffer from the application area when the wind direction is toward sensitive dicot plants.

**CHART 6**

**DOSAGE CHART FOR BROADCAST APPLICATION**

P/A Broadcast	
Red (Table) Beet Stage	BETAMIX Herbicide
2 leaf	1.5
4 leaf	1.5-2.3
6 leaf	1.5-3.0

**CHART 7**

**BETAMIX HERBICIDE DOSAGE CHART FOR BAND APPLICATION**

**Band Rate — Row Spacing (fl oz)**

<b>Broadcast Equivalent</b>	<b>Band Width</b>	<b>22"</b>	<b>24"</b>	<b>28"</b>	<b>30"</b>
1.50 pts/A	5"	5.5	5.0	4.3	4.0
	7"	7.6	7.0	6.0	5.6
	11"	12.1	11.0	9.5	8.8
2.0 pts/A	5"	7.3	6.7	5.7	5.3
	7"	10.2	9.3	8.0	7.5
	11"	16.1	14.7	12.5	11.7
3.0 pts/A	5"	10.9	10.0	8.6	8.0
	7"	15.3	14.0	12.0	11.2
	11"	24.0	22.0	18.9	17.6

**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.

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**NET CONTENTS: 2.5 GALLONS**

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Produced for



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