



U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505C)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

EPA Reg. Number:

264-851

Date of Issuance:

MAR 22 2006

Term of Issuance:

Conditional

Name of Pesticide Product:

Betanal Forte

NOTICE OF PESTICIDE:
 Registration
 Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Bayer Cropscience
PO Box 12014, 2 T.W. Alexander Dr.
Research Triangle Park, NC 27709

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered and registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A) provided you agree in writing to:

1. Submit the outstanding data requirements 830.6317 Storage Stability and 830.6320 Corrosion Characteristics within one year from the data of this letter.
2. Change the EPA Registration Number on the label from 264-XXX to 264-851
3. Add an appropriate EPA Establishment Number to the label.
4. Under the Ingredient Statement, state the amount of lbs active ingredient per gallon PER active ingredient, i.e. "Contains X lbs a.i. phenmedipham and X lbs a.i. desmedipham per gallon."
5. Under the Ingredient Statement, add "**** Contains Petroleum Distillates"
6. In the PRECAUTIONARY STATEMENTS, remove the statements "Wear protective eyewear. Wear long-sleeved shirt and long pants, socks, shoes, and chemical resistant gloves such as barrier laminate or butyl rubber > 14 mils."

Signature of Approving Official:

Date:

James Tompkins, Product Manager (25)
Herbicide Branch, Registration Division (7505C)

3-22-06

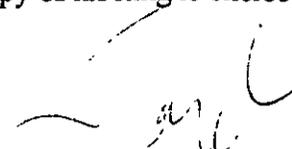
7. Under the PPE section, remove "protective eyewear."
8. In the Agricultural Use Requirements section, remove "protective eyewear."
9. On page 3, under the General Precautions and Restrictions section, revise the maximum use rate of 0.96 lb a.i. phenmedipham and 0.96 lb a.i. desmedipham to "0.956 lb a.i. phenmedipham and 0.956 lb a.i. desmedipham."
10. On page 9, add the statement "To the extent allowed by law" before the statement "All such risks shall be assumed by the user or buyer." Also add "To the extent allowed by law" before the statement under the subsection LIMITATIONS OF LIABILITY.
11. On page 2, under the "Engineering Controls" section, add the following statements at the end of the section "Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standards for agricultural pesticides. Human flagging is prohibited. Flagging to support aerial application is limited to the use of a Global Positioning System (GPS) or mechanical flagging system."

The Basic Formulation CSF [dated 6/15/2005] and the Alternate Formulation CSF [dated 6/16/2005] of the product referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act are acceptable, provided you make the following changes:

A) Revise Box #7 (density), so that the density is stated in pounds/gal.

You **must** submit a revised Basic and Alternate CSF incorporating the above change within **30 days** from the date of this letter.

You will submit one (1) copy of your final printed labeling before you release the product for shipment. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). A stamped copy of labeling is enclosed for your records.


James Tompkins
Product Manager (25)
Herbicide Branch
Registration Division (7505C)

Betanal® Forte Herbicide

FOR AGRICULTURAL USE ONLY

Postemergence Herbicide for Control of Weeds in Sugar Beets

ACTIVE INGREDIENT: Phenmedipham*	15.0%
Desmedipham**	15.0%
INERT INGREDIENTS***	70.0%
Contains 2.55 lbs. active ingredients per gallon.	TOTAL: 100.0%

* CAS Number: 13684-63-4
 ** CAS Number: 13684-56-5

EPA File Symbol: 264-XXX

EPA Est. No.:

KEEP OUT OF REACH OF CHILDREN CAUTION

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

IF IN EYES:	<ul style="list-style-type: none"> 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. Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	<ul style="list-style-type: none"> Immediately call a poison control center or doctor for treatment advice. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
IF ON SKIN:	<ul style="list-style-type: none"> 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.

For MEDICAL Emergencies Call 24 Hours A Day 1-800-334-7577.

Have the product container or label with you when calling a poison control center or doctor or going for treatment.

NOTE TO PHYSICIAN: May pose an aspiration pneumonia hazard. Contains petroleum distillate.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Causes moderate eye irritation. Harmful if swallowed or absorbed through the skin. Avoid contact with eyes, skin or clothing. Wear protective eyewear. Wear long-sleeved shirt and long pants, socks, shoes, and chemical-resistant gloves such as barrier laminate or butyl rubber ≥ 14 mils.

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 B on an EPA chemical resistance category selection chart.

ACCEPTED
with COMMENTS
in EPA Letter Dated

MAR 22 2006

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.

264-851

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
- 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

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco.

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.

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 Betanal® Forte Herbicide was purchased.

This ECHO SYSTEM SVR container is the sole property of Bayer 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 such as barrier laminate or butyl rubber \geq 14 mils
- Shoes plus socks
- Protective eyewear

GENERAL INFORMATION

When used as directed Betanal® Forte 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. Betanal® Forte Herbicide 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 Betanal ® Forte and Betanex® Herbicide in Eastern North Dakota and Minnesota (see Chart 4).

GENERAL PRECAUTIONS AND RESTRICTIONS

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

DO NOT EXCEED A TOTAL OF 0.96 lb a.i. PHENMEDIPHAM and 0.96 lb a.i. DESMEDIPHAM (6 PINTS BETANAL FORTE HERBICIDE) 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 BETANAL ® FORTE HERBICIDE.

BETANAL® FORTE 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.

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- 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: Betanal ® Forte 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.

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.

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 following section: "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 $\frac{3}{4}$ 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.).

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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 should 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 should 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.

Betanal ® Forte emulsifiable concentrate formulation contains sufficient wetting agents for optimum coverage. Add sufficient water to fill the lines. Then add the desired amount of Betanal ® Forte 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 Betanal ® Forte 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 Betanal ® Forte Herbicide at the rate of 0.5 pint per acre (broadcast equivalent). Evening applications are recommended.

Betanal ® Forte 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 Ladythumb (*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.

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CHART 1

DOSAGE CHART FOR MULTIPLE (LOW RATE) BROADCAST APPLICATIONS

Weed Stage*	Pints/Acre Broadcast			
	BETANAL @ Forte ALONE	BETANAL @ Forte SC	+	+ NORTRON®
Cotyledon	0.8-1.6	0.8	+	0.25
2 leaf	1.1-1.6	1.1	+	0.33
4 leaf	1.6-2.4	1.6	+	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 0.8 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

BETANAL @ FORTE HERBICIDE DOSAGE CHART FOR BAND APPLICATION

Broadcast Equivalent	Band Width	Band Rate - Row Spacing (fluid ounces)			
		22"	24"	28"	30"
0.75 pints/acre	5"	2.75	2.5	2.1	2.0
	7"	3.8	3.5	3.0	2.8
1.0 pints/acre	5"	3.6	3.3	2.8	2.6
	7"	5.1	4.6	4.0	3.75
1.5 pints/acre	5"	5.4	5.0	4.3	4.0
	7"	7.6	7.0	6.0	5.6
2.25 pints/acre	5"	8.2	7.5	6.4	6.0
	7"	11.4	10.5	9.0	8.4
3.0 pints/acre	5"	10.9	10.0	8.5	8.0
	7"	15.25	14.0	12.0	11.2
3.75 pints/acre	5"	13.6	12.5	10.7	10.0
	7"	19.1	17.5	15.0	14.0

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

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CONVENTIONAL APPLICATIONS

By Ground: Apply Betanal ® Forte Herbicide at the rate of 2.4 to 4.0 pints per acre in 20 to 50 gallons of water broadcast basis. For band application, see Dosage Chart 2.

By Air: Apply Betanal ® Forte Herbicide at the rate of 2.4 to 4.0 pints per acre using 5 to 15 gallons of spray per acre.

Apply the 2.4 to 4.0 -pint rates only to sugar beets past the two true-leaf stage. Use the 4.0-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 Betanal ® Forte Herbicide, 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 BETANAL ® FORTE HERBICIDE: For control of later germinating weeds, make a second application of Betanal ® Forte Herbicide. Use 2.4 to 3.2 pints of Betanal® Forte. 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.

Betanal ® β 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.

<u>Herbicide</u>	<u>Use Rate (pt./A)</u>
Stinger®*	0.25-0.50
Betanex® Compact	See Chart 4

*The Betanal ® Forte + 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 Betanal ® Forte Herbicide and Betanal® Compact Herbicide

Equivalent Betanal ® Forte Desired Rate (Pints/acre Broadcast)	Betanal ® Forte + Betanal® Compact (Pints/acre Broadcast)		
0.57	0.28	+	0.28
0.62	0.32	+	0.32
0.67	0.33	+	0.33
0.75	0.37	+	0.37
0.87	0.44	+	0.44
1.12	0.57	+	0.57
1.62	0.81	+	0.81
2.50	1.25	+	1.25

MICRO-RATE APPLICATIONS (EXCEPT CALIFORNIA)

Multiple Micro-rate applications of Betanal ® Forte 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 5

DOSAGE CHART FOR MULTIPLE MICRO-RATE BROADCAST APPLICATIONS

Sugar Beet Stage	Betanal ® Forte Herbicide Fluid Ounces/Acre Broadcast
Cotyledon to 4-leaf	4.2 (equivalent to 0.08 lb. ai/A)
4-Leaf*	4.2 – 6.4 (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 Betanal ® Forte Herbicide in broadcast applications is strongly recommended. If band applications are used, do not use less than 11-inch bands.

For broadcast applications of Betanal® Forte 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 multiple (low rate) applications.

Betanal ® Forte 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. Betanal ® Forte Herbicide cannot be mixed with any product containing a label prohibition against such mixing.

Fungicides or insecticides can be tank mixed with Betanal® Forte 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 BETANAL ® FORTE 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 slurred UpBeet® to spray tank.
4. Fill spray tank to two-thirds of the total amount of clean water needed for the application.
5. Add Betanal ® Forte 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 Betanal® Forte mixed with UpBeet® and Stinger® will not control ALS-resistant kochia. Multiple low rates of Betanal® Forte 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 (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.

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IMPORTANT: READ BEFORE USE

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