

264-854

8/24/2009

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**U.S. ENVIRONMENTAL PROTECTION AGENCY**  
**Office of Pesticide Programs**  
**Registration Division (7505P)**  
**Ariel Rios Building**  
**1200 Pennsylvania Ave., NW**  
**Washington, D.C. 20460**

EPA Reg. Number:  
  
264-854

Date of Issuance:  
  
AUG 24 2009

NOTICE OF PESTICIDE:  
 Registration  
 Reregistration  
(under FIFRA, as amended)

Term of Issuance:

Name of Pesticide Product:  
  
Betanal Power Herbicide

Name and Address of Registrant (include ZIP Code):  
Bayer CropScience LP  
P.O. Box 12014  
2 T.W. Alexander Drive  
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/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is 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 reregistered in accordance with FIFRA section 4(g)(2)(C) provided you:

1. Submit and/or cite all data required for registration/reregistration review of your product when the Agency requires all registrants of similar products to submit data.
2. Make all of the following changes to the product label:
  - a. Revise the **First Aid** heading from "If on Skin" to "If on Skin or Clothing".
  - b. Based on desmedipham RED, the statement "Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals." must be added to the **Hazards to Humans and Domestic Animals** section.
  - c. Revise the heading to read "Personal Protective Equipment (PPE)".
  - d. Revise the **PPE** requirement for gloves to read "Chemical-resistant gloves (except for applicators in cockpits and enclosed cabs)".

Continued on Page 2

Signature of Approving Official:  
  
Joanne Miller  
Product Manager 23  
Herbicide Branch  
Registration Division (7505P)

Date:  
  
AUG 24 2009

- e. Revise the product name from “Progress Ultra Herbicide” to “Betanal Power Herbicide” in the **Pesticide Storage** section.
- f. Revise the **Container Disposal** section in accordance with PR Notice 2007-4.
- g. Make the following changes to the **Spray Drift** section:
  - i. Change the heading from “Practices to Lower the Potential for Spray Drift” to “Spray Drift Management”.
  - ii. Change the product name from “Progress Ultra Herbicide” to “Betanal Power Herbicide” in the fourth sentence.
  - iii. Revise the statement from “Avoid applications when conditions favor drift.” to “Do not apply when conditions favor drift.”
  - iv. Revise the statement to read “1. The distance of the outermost nozzles on the boom must not exceed 70% of the wingspan or 85% of the rotor blade diameter.”
  - v. Revise the statement to read “Where States or Tribes have more stringent regulations, they **must** be observed. The applicator **must** be familiar with, and take into account, the information covered **below**.”
  - vi. Remove the heading “Spray Drift Management” since it will be at the top.
- h. On page 4, revise the heading from “General Information” to “Product Information”, as the term “general” renders any information contained within advisory and unenforceable.
- i. On pages 5 & 6, remove the word “general” from “General Precautions and Restrictions”.

A stamped copy of your label is enclosed for your records. You must submit one (1) copy of the final printed label before you release the product for shipment. Products shipped after twelve (12) months from the date of this notice or the next printing of the label whichever occurs first, must bear the new revised label. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

Enclosure

# Betanal Power Herbicide

**FOR AGRICULTURAL USE ONLY**

**Postemergence Herbicide for Control of Weeds in Sugar Beets**

**ACTIVE INGREDIENT:**

Phenmedipham*	13.1%
Desmedipham**	10.2%
Ethofumesate***	15.9%

**OTHER INGREDIENTS:** 60.8%

Contains 1.14 lbs phenmedipham, 0.89 lb desmedipham and 1.39 lbs ethofumesate per gallon. **TOTAL: 100.0%**

\* CAS Number: 13684-63-4

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

\*\*\* CAS Number: 26225-79-6

**EPA Reg No. : 264-854**

**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**

**ACCEPTED**

<b>IF ON SKIN:</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>	<p>with <b>COMMENTS</b> In EPA Letter Dated: <b>AUG 24 2009</b> Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.</p>
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>Call a Poison Control Center or doctor immediately for treatment advice.</li> <li>Do not induce vomiting unless told to do so by the 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>	<p><b>264-854</b></p>
<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 eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>	

**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:** There is no specific antidote. Treat patient symptomatically.

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION**

Harmful if absorbed through the skin. Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing.

**PERSONAL PROTECTIVE EQUIPMENT**

Some materials that are chemical-resistant to this product are barrier laminate or butyl rubber ≥ 14 mils. For more information, follow instructions in Supplement Three of PR Notice 93-7. If you want more options, follow the instructions for Category B on an EPA chemical resistance category selection chart.

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**All mixers, loaders, applicators and other handlers must wear:**

- Long-sleeved shirt and long pants,
- Shoes and socks, and
- Chemical-resistant gloves (except for flaggers, or applicators in cockpits, and enclosed cabs).

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.

See engineering controls for additional requirements.

**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. Pilots must use an enclosed cockpit that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(d)(6)].

**USER SAFETY RECOMMENDATIONS**

Users should wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco, or using the toilet.

Users should remove clothing/PPE 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.

**ENVIRONMENTAL HAZARDS**

This pesticide is toxic to fish and aquatic organisms. Do not apply directly to water, 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 or rinseate.

**PHYSICAL OR CHEMICAL HAZARDS**

Do not use or store near heat or open flame.

**STORAGE AND DISPOSAL**

Do not contaminate water, food, or feed by storage or 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. Protect Progress Ultra Herbicide from freezing temperatures.

**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.**

**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 Power 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. 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 made of any waterproof material
- Shoes plus socks
- Protective eyewear

### PRACTICES TO LOWER THE POTENTIAL FOR SPRAY DRIFT

Avoiding spray drift at the application site is the responsibility of the applicator and the grower. 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. In order to avoid phytotoxic spray drift to nontarget crops during application of Progress Ultra Herbicide, the following buffer zones should be observed:

Cotton, Potatoes, Sunflowers, Sorghum, Wheat .....	50 feet
Blackeye Beans, Cabbage, Flax .....	100 feet
Lettuce, Canola, Tomatoes .....	300 feet

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

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 outermost nozzles on the boom must not exceed 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: **SPRAY DRIFT MANAGEMENT.**

### SPRAY DRIFT MANAGEMENT

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.")

A variety of factors including weather conditions (e.g., wind directions wind speed, temperature, relative humidity) and method of application (e.g., ground, aerial) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

Damage to sensitive crops can occur as a result of spray drift. Spray drift can be managed by several application factors and by spraying under the appropriate climatic conditions. Consequently, avoidance of spray drift is the responsibility of the applicator and grower.

#### WIND:

Drift potential is lowest between wind speeds of 2 - 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.

For all non-aerial applications, wind speed must be measured adjacent to the application site, on the upwind side, immediately prior to application.

#### TEMPERATURE INVERSIONS:

Do not make applications into areas of temperature inversion or stable atmospheric conditions.

Do not make ground applications into areas of temperature inversions 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

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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 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.

**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**

The boom length must not exceed 70% of the wingspan or 85% of the rotor blade diameter.

**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 at the downwind edge of the application area by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

**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.

**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).

**GENERAL INFORMATION**

When used as directed, Betanal Power Herbicide controls weeds in sugar beets. For best results, spray weeds in the cotyledon stage which are actively growing and are not under water or heat stress.

Betanal Power Herbicide broadens and enhances the control of troublesome weeds, including the following:

- Annual bluegrass..... *Poa annua*
- Annual sowthistle ..... *Sonchus oleraceus*
- Black nightshade ..... *Solanum nigrum*
- Hairy nightshade ..... *Solanum sarrachoides*
- Canarygrass ..... *Phalaris canariensis*
- Coast fiddleneck..... *Amsinckia intermedia*
- Common chickweed ..... *Stellaria media*
- Common lambsquarters ..... *Chenopodium album*
- Common ragweed ..... *Ambrosia artemisiifolia*
- Green foxtail ..... *Setaria viridis*
- Groundcherry ..... *Physalis lanceifolia*
- Kochia ..... *Kochia scoparia*
- Ladysthumb ..... *Polygonum persicaria*
- London rocket..... *Sisymbrium irio*
- Nettleleaf goosefoot ..... *Chenopodium murale*
- Pennsylvania smartweed..... *Polygonum pennsylvanicum*
- Prostrate pigweed\* ..... *Amaranthus gracizans*
- Purslane ..... *Portulaca oleraceus*

Redroot pigweed*	<i>Amaranthus retroflexus</i>
Shepherdspurse	<i>Capsella bursa-pastoris</i>
Yellow foxtail (Pigeongrass)	<i>Setaria glauca</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 Power Herbicide and Betanal® Compact Herbicide in Eastern North Dakota and Minnesota (see Chart 3).

**GENERAL PRECAUTIONS AND RESTRICTIONS**

DO NOT APPLY BETANAL POWER HERBICIDE TO SUGAR BEETS WITHIN 75 DAYS OF HARVEST.

DO NOT EXCEED A TOTAL OF 0.67 lb a.i. PHENMEDIPHAM and 0.53 lb a.i. DESMEDIPHAM and 0.82 lb a.i. ETHOFUMESATE (4.7 PINTS PROGRESS ULTRA HERBICIDE) PER SEASON.

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

DO NOT PLANT OR TRANSPLANT CEREAL GRAINS IN TREATED AREA FOR AT LEAST 120 DAYS FOLLOWING AN APPLICATION OF THIS PRODUCT.

BETANAL POWER 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 or evening 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:** Betanal Power 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 exceed specified label rates.

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.

Betanal Power Herbicide contains sufficient wetting agents for optimum coverage. Add sufficient water to fill the lines. Then add the desired amount of Betanal Power 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.

**RATE OF APPLICATION**

**MULTIPLE (LOW RATE) APPLICATIONS**

Multiple (low rate) applications of Betanal Power 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 Power at the rate of 0.4 pint per acre (broadcast equivalent). Apply in the evening.

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

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**CHART 1**  
**DOSAGE CHART FOR BROADCAST APPLICATION**  
**(Air and Ground Applications)**

Weed Stage*	Pints/Acre Broadcast Betanal Power Herbicide
Cotyledon	0.6-0.8
2 leaf	0.7-1.2
4 leaf	0.8 – 1.73

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

\*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**  
**DOSAGE CHART FOR BAND APPLICATION**

Broadcast Equivalent	Band Width	Row Spacing Band Rate (fluid ounces)			
		22"	24"	28"	30"
0.57 pints/acre	5"	2.0	1.9	1.6	1.5
	7"	2.8	2.7	2.2	2.1
0.63 pints/acre	5"	2.2	2.1	1.8	1.7
	7"	3.2	2.9	2.5	2.3
0.67 pints/acre	5"	2.4	2.2	1.9	1.8
	7"	3.4	3.1	2.7	2.5
0.75 pints/acre	5"	2.7	2.5	2.2	2.0
	7"	3.8	3.5	3.0	2.8
0.87 pints/acre	5"	3.2	2.9	2.5	2.4
	7"	4.4	4.1	3.5	3.7
1.12 pints/acre	5"	4.1	3.7	3.2	3.0
	7"	5.7	5.2	4.5	4.2
1.63 pints/acre	5"	5.9	5.4	4.7	4.3
	7"	8.2	7.6	6.5	6.0
2.5 pints/acre	5"	9.2	8.3	7.1	6.7
	7"	12.7	11.6	10.0	9.3

**CONVENTIONAL APPLICATIONS**

**By Ground:** Apply Betanal Power Herbicide at the rate of 1.73 to 2.65 pints in 10 to 50 gallons water broadcast basis. For band application, see Chart 2.

**By Air:** Apply Betanal Power Herbicide at the rate of 1.73 to 2.65 pints per acre using 5 to 15 gallons of spray per acre.

Apply the 1.73 to 2.65 pint rates only to sugar beets past the two true-leaf stage. Use the 2.65 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.

**REPEAT APPLICATION OF BETANAL POWER HERBICIDE:** For control of later germinating weeds, make a second application of Betanal Power Herbicide. Use 1.73 to 2.65 pints of Betanal Power 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 specified 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 may be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing.

Betanal Power 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® Ultra	See Chart 3

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

**CHART 3**

**DOSAGE CHART FOR TANK MIXES OF BETANAL POWER HERBICIDE AND BETANEX® ULTRA HERBICIDE**

Equivalent Betanal Power Desired Rate (Pints/acre Broadcast)	Betanal Power + Betanex® Ultra (Pints/acre Broadcast)		
0.57	0.28	+	0.41
0.63	0.32	+	0.46
0.67	0.34	+	0.49
0.75	0.375	+	0.53
0.88	0.44	+	0.64
1.13	0.57	+	0.85
1.63	0.87	+	1.20
2.50	1.25	+	1.85

**MICRO-RATE APPLICATIONS (EXCEPT CALIFORNIA)**

Multiple Micro-rate applications of Betanal Power 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	Betanal Power Herbicide Fluid Ounces/Acre Broadcast
Cotyledon to 4-leaf	3.1 (equivalent to 0.08 lb. ai/A)
4-Leaf*	3.1 - 4.6 (equivalent to 0.08 - 0.12 lb. ai/A)

\* Rate can be increased to the higher end of the specified rate range when the smallest sugar beet plants in the field are in the 4-true leaf stage or larger.

Application of Betanal Power Herbicide in broadcast applications is the preferred method of application. If band applications are used, do not use less than 11-inch bands.

For broadcast applications of Betanal Power 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 specified 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 Power 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 may be exceeded. Betanal Power Herbicide cannot be mixed with any product containing a label prohibition against such mixing.

Fungicides or insecticides can be tank mixed with Betanal Power 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 BETANAL POWER 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 Betanal Power 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 Power Herbicide mixed with UpBeet® and Stinger® will not control ALS-resistant kochia. Multiple low rates of Betanal Power 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 pH blend additive (A basic pH blend additive is a formulated combination of a non-ionic surfactant and a nitrogen source) at 1% v/v. DO NOT apply micro-rate treatments when conditions are favorable for drift to nontarget species.



