

## GENERAL INFORMATION

BETANAL is a selective post-emergence herbicide for use in sugar beets (including beets grown for seeds) and table (red) beets for the following weeds:

Wild mustard	Brassica kaber
Common lambsquarters	Chenopodium album
Shepherdspurse	Capsella bursa-pastoris
London rocket	Sisymbrium irio
Nettleleaf goosefoot	Chenopodium murale
Groundcherry	Physalis lanceifolia
Wild buckwheat	Polygonum convolvulus
Coast fiddleneck	Amaranthus intermedius
Common chickweed	Stellaria media
Purslane	Portulaca oleracea
Common ragweed	Ambrosia artemisiifolia
Kochia*	Kochia scoparia
Black nightshade	Solanum nigrum
Pigeon grass	Setaria glauca
(yellow foxtail)	
Green foxtail	Setaria viridis
Prostrate pigweed	Amaranthus graecizans
Annual sowthistle	Sonchus oleraceus

\*Spray kochia while in the rosette stage less than 1" in diameter. For best results spray when the weeds are at the two-leaf stage.

## USE PRECAUTIONS

DO NOT APPLY BETANAL OR THE BETANAL + BETANEX TANK-MIX TO SUGAR BEETS LATER THAN 90 DAYS PRIOR TO HARVEST. DO NOT APPLY BETANAL TO RED BEETS LATER THAN 60 DAYS PRIOR TO HARVEST.

BETANAL OR THE BETANAL + BETANEX TANK-MIX 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 (85°F or over), bright days.

Windy conditions or drought.

Use of a preplant or pre-emergence herbicide or other chemicals.

Insect or disease injury.

Close cultivation.

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

If extreme weather conditions are of short duration, delay spraying until the end of such a period. If BETANAL or BETANAL + BETANEX TANK-MIX applications must be made on days with extreme temperature and/or brightness, delay spraying until evening.

**DO NOT OVER-TREAT:** The use of higher than recommended rates may cause beet injury.

Do not spray while dew is present.

Rainfall 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.

## IMPORTANT

BETANAL or BETANAL + BETANEX TANK-MIX may cause temporary growth retardation and/or chlorosis or tip-burn on sugar beets. Beets usually resume normal growth within 10 days.

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# Betanal

## POST-EMERGENCE HERBICIDE FOR CONTROL OF WEEDS IN BEETS

EPA Registration No. 2139-101

### ACTIVE INGREDIENT:

Phenmedipham*	15.9%
INERT INGREDIENTS:	84.1%
Total	100.0%

\*Methyl m-hydroxycarbanilate m-methylcarbanilate (ester)  
Contains 1.3 lbs. active ingredient per gallon.

## KEEP OUT OF REACH OF CHILDREN WARNING

### PRECAUTIONARY STATEMENTS

**HAZARDS TO HUMANS**—Harmful if swallowed. May produce severe irritation of eyes and irritation to skin. Avoid breathing spray mist. Avoid contact with skin and eyes.

In case of eye contact, flush with plenty of water for 15 minutes and get medical attention; for skin, wash immediately with soap and water.

Avoid contamination of feed and foodstuffs.

**ENVIRONMENTAL HAZARDS**—This product is toxic to fish. Keep out of lakes, streams or ponds. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from areas treated.

SEE LEFT HAND PANEL FOR ADDITIONAL PRECAUTIONS

U.S. Patent Nos. 3,404,975, 3,692,820

## NET CONTENTS: 1 GALLON



MANUFACTURED FOR

## NOR-AM

AGRICULTURAL PRODUCTS, INC.

NAPERVILLE, ILLINOIS 60540

## IMPORTANT: READ BEFORE PURCHASE OR USE

Purchase or use of this product shall constitute acceptance of the following terms of sale. NOR-AM Agricultural Products, Inc. (NOR-AM) warrants that this product conforms to the chemical descriptions on this label and is reasonably fit for the purposes specified hereon. By way of limitation but not in derogation of the directions and statements printed on this label, Seller makes no warranty and no representation and NOR-AM makes no further warranty or representation, expressed or implied, including but not limited to any warranty as to MERCHANTABILITY and no agent of NOR-AM is authorized to do so except in writing, with a specific reference to the foregoing warranty. Since neither Seller nor NOR-AM has any control over the handling, storage, use or conditions of use of this product, Buyer or user assumes all risks and liability arising from handling, storage or use of this product under abnormal conditions or not in strict compliance with the directions and precautionary statements hereon. All claims related to the purchase, handling, storage or use of this product shall be barred unless written notice is given to NOR-AM within 30 days after the loss is discovered. Liability of the Seller or NOR-AM for any damages arising from a breach of this warranty shall be limited to exclude consequential commercial damages.

## DO NOT RE-USE THIS CONTAINER

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## 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.

## STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited.  
Do not re-use container. Triple rinse and perforate empty containers and dispose of containers, left-over spray solution and concentrate by burying in non-cropland away from water supplies. Consult federal, state or local disposal authorities for approved procedures.

When used as directed, BETANAL and a 1:1 TANK-MIX OF BETANAL + BETANEX are selective in sugar beets past the two-true leaf stage. Beets may be severely injured if treated before the two-true leaf stage. The stage of growth of the weeds is very important for satisfactory control. Best results are obtained when the weeds are actively growing and are not under water or heat stress.

### Mixing the Spray: Make Sure the Sprayer is Clean

BETANAL is an emulsifiable concentrate. The formulation contains sufficient wetting agents for optimum coverage. Do not add additional wetting agents or other spray adjuvants. Add sufficient water to fill the lines. Then add the desired amount of BETANAL 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:

**By Ground:** Apply Betanal at the rate of 6 to 9 pints per acre in 22 to 33 gallons of water broadcast basis. TOO MUCH WATER MAY CAUSE PRECIPITATION. For band application see dosage chart.

**By Air:** Apply Betanal at the rate of 6 to 9 pints per acre using 5 to 15 gallons of spray per acre.

Use the 9 pint rate only on well established beets which are not under stress.

In order to avoid phytotoxic spray drift to non-target crops during application of Betanal or a 1:1 Betanal: Betanex tank mix 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.

To avoid excessive phytotoxicity to fall-planted sugar beets in Arizona and south of the Tehachapi Mountains in California when temperatures are above 85°F, apply BETANAL or a 1:1 tank-mix of BETANAL and BETANEX at the rate of 4 pints per acre (broadcast equivalent). Evening applications are recommended.

For further information, contact your County Agricultural Agent, Farm Advisor or NOR-AM Agricultural Products, Inc.

### BETANAL + BETANEX TANK-MIX FOR USE ON SUGAR BEETS ONLY

A 1:1 tank-mix of BETANAL and BETANEX gives similar weed control to BETANAL used alone. The tank-mix gives consistently better control of redroot pigweed. Apply the tank-mix at the rate of 4½ to 7½ pints per acre (2¼ pints BETANAL + 2¼ pints BETANEX to 3 pints BETANAL + 3 pints BETANEX). Allow at least 7 days between first and second applications. Apply when beets have at least 4 leaves. Where a repeat application is made the first application must not exceed 6 pints per acre. For best results, use the higher rate and spray when weeds are at the two-true leaf stage. Apply lower rates when the beets are under stress as explained on the left panel.

### REPEAT APPLICATION OF BETANAL AND 1:1 BETANAL + BETANEX TANK-MIX (FOR USE ON SUGAR BEETS ONLY)

Not to be used in Arizona or California south of the Tehachapi Mountains

For control of later germinating weeds, make a second application of BETANAL or 1:1 BETANAL + BETANEX tank-mix. Use 6 to 7½ pints of BETANAL per acre or 4½ to 6 pints of 1:1 BETANAL + BETANEX tank-mix (2¼ pints BETANAL + 2¼ pints BETANEX to 3 pints BETANAL + 3 pints BETANEX). Allow at least 7 days between first and second applications. Apply when beets have at least 4 leaves. Where a repeat application is made the first application must not exceed 6 pints per acre. For best results, use the higher rate and spray when weeds are at the two-true leaf stage. Apply lower rates when the beets are under stress as explained on the left panel.

## DOSAGE CHART FOR BAND APPLICATION

Broadcast Equivalent	Band Rate			
	Band Width	Row Spacing		
		22"	28"	32"
4½ pints/acre¹	5"	16.4 fl. oz.	12.9 fl. oz.	11.3 fl. oz.
	7"	22.9 fl. oz.	18.0 fl. oz.	15.8 fl. oz.
6 pints/acre	5"	21.8 fl. oz.	17.1 fl. oz.	15.0 fl. oz.
	7"	30.5 fl. oz.	24.0 fl. oz.	21.0 fl. oz.
7½ pints/acre	5"	27.3 fl. oz.	21.4 fl. oz.	18.8 fl. oz.
	7"	38.2 fl. oz.	30.0 fl. oz.	26.3 fl. oz.
9 pints/acre²	5"	32.7 fl. oz.	25.7 fl. oz.	22.5 fl. oz.
	7"	45.8 fl. oz.	36.0 fl. oz.	31.5 fl. oz.

This dosage applies only to tank-mixes with BETANEX.

² This dosage applies only to BETANAL used alone.