

NORTRON E.C.

HERBICIDE

For selective control of weeds in sugar beets

ACTIVE INGREDIENT:

Ethofumesate (2-ethoxy-2,3-dihydro-3,3-dimethyl-5-benzofuranyl methanesulfonate*)

INERT INGREDIENTS:

Percent by Weight

19%

81%

100%

*Protected by U.S. Patent No. 3,688,507

This product contains 1.5 lb active ingredient per gallon

EPA REGISTRATION NO. 45639

PRECAUCION AL USARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

KEEP OUT OF REACH OF CHILDREN

DANGER

**CORROSIVE. CAUSES EYE DAMAGE.
WEAR GOGGLES OR FACE SHIELD WHEN HANDLING.**

IF SWALLOWED — DRINK PROMPTLY A LARGE QUANTITY OF MILK, EGG WHITES, GELATIN SOLUTION OR IF THESE ARE NOT AVAILABLE, DRINK LARGE QUANTITIES OF WATER. AVOID ALCOHOL. CALL A PHYSICIAN.
IF ON SKIN — FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES.
IF IN EYES — IMMEDIATELY FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. CALL A PHYSICIAN.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER

Corrosive. Causes eye damage. Do not get in eyes. Wear goggles or face shield when handling. Harmful if absorbed through skin. Avoid contact with skin.

FIRST AID — In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician. Get medical attention if skin irritation persists. Remove and wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS — Do not apply directly to water. Do not apply when weather conditions favor drift from treated area. Do not contaminate water by cleaning of equipment or disposal of wastes.

PHYSICAL OR CHEMICAL HAZARDS — Do not use, pour, spill or store near heat or open flame.

BFC Chemicals, Inc.
4311 Lancaster Pike, P.O. Box 2877
Wilmington, DE 19805

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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 entire Directions for Use and Disclaimer of Warranties before using this product.

STORAGE AND DISPOSAL

Storage

Store NORTRON E.C. in a cool place above 32°F. Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

Pesticide Disposal

Pesticide, spray mixture, or rinsate that cannot be used according to label instructions must be disposed of according to Federal, State or local procedures under the Resource Conservation and Recovery Act.

Container Disposal

Triple rinse (or equivalent) and offer for recycling or reconditioning, or dispose of in a sanitary landfill, or by other approved State and local procedures.

Consult Federal, State or Local disposal authorities for approved alternative procedures.

SUGAR BEETS

GENERAL INFORMATION: NORTRON E.C. is a selective herbicide for use in sugar beets for the control of the weed species listed below. It provides effective control of these weeds for up to 10 weeks following application.

Weed Species Controlled

Annual Broadleaf Weeds

Black nightshade
Common chickweed
Common lambsquarters
Common purslane
Kochia
Ladysthumb
Pennsylvania smartweed
Redroot pigweed
Russian thistle
Wild buckwheat

Solanum nigrum
Stellaria media
Chenopodium album
Portulaca oleracea
Kochia scoparia
Polygonum persicaria
Polygonum pennsylvanicum
Amaranthus retroflexus
Salsola kali var. *tenuifolia*
Polygonum convolvulus

Annual Grass Weeds

Annual bluegrass
Barnyardgrass**
Canarygrass
Green foxtail
Large crabgrass
Volunteer barley
Volunteer wheat
Wild oats*
Yellow foxtail

Poa annua
Echinochloa crus-galli
Phalaris canariensis
Setaria viridis
Digitaria sanguinalis
Hordeum sp.
Triticum sp.
Avena fatua
Setaria glauca

*Control of wild oats has been inconsistent in Minnesota and North Dakota.

**Control of barnyardgrass may be reduced with the NORTRON E.C. + Pyramin* tank-mix because of the lower rate of NORTRON E.C. recommended.

NORTRON E.C. alone will also reduce competition from these HARD TO CONTROL weeds.

Annual sowthistle
Puncturevine
Shepherdspurse
Purple nutsedge
Yellow nutsedge

Sonchus oleraceus
Trifolium terrestris
Capsella bursa-pastoris
Cyperus rotundus
Cyperus esculentus

al weeds controlled by the NORTON + Pyramin tank-mix in sugar beet.

Annual sowthistle	<i>Sonchus oleraceus</i>
Black mustard	<i>Brassica nigra</i>
Buffalobur	<i>Solanum rostratum</i>
Coast fiddleneck	<i>Amsinckia intermedia</i>
Common groundsel	<i>Senecio vulgaris</i>
Common ragweed	<i>Ambrosia artemisiifolia</i>
Cutleaf nightshade	<i>Solanum triflorum</i>
Groundcherry	<i>Physalis</i> spp
Henbit	<i>Lamium amplexicaule</i>
Nettleleaf goosefoot	<i>Chenopodium murale</i>
Prickly lettuce	<i>Lactuca scariola</i>
Prostrate knotweed	<i>Polygonum aviculare</i>
Shepherdspurse	<i>Capsella bursa-pastoris</i>

PREPARATION: The soil should be prepared according to good agricultural practices. Large clods can reduce the effectiveness of NORTON E.C. and tank-mix. All existing vegetative growth should be thoroughly worked into the soil before treatment.

SPRAY EQUIPMENT: Apply NORTON E.C. alone or in tank-mixes to the soil using low pressure (20-50 psi) spray equipment. Spray equipment should be properly calibrated before use and checked frequently during application to see if it is functioning properly. Do not use smaller than 50 mesh strainer. Uniformly apply the recommended rates of NORTON E.C. or NORTON tank-mixes in 10-50 gallons of water per acre. Avoid overlaps since crop injury may result. When applying NORTON E.C. or tank-mixes in a band, check to make certain that the band width is accurate for the dosage rate being applied.

Spray tank and lines should be thoroughly cleaned and rinsed prior to using NORTON E.C.

INCORPORATION EQUIPMENT: Where soil incorporation is recommended use a disk-power or ground-driven rotary tiller, rolling cultivator or similar equipment properly adjusted to uniformly incorporate NORTON E.C. or tank-mixes to a depth of 2 inches. Deeper incorporation may reduce effectiveness. Do not apply NORTON E.C. or tank-mixes through soil injector shanks. Incorporation should be accomplished prior to planting; or if done after planting, proper precautions should be taken to avoid damaging or moving the crop seed. See below for Layering Application.

LAYERING APPLICATION: Spring: Form beds with appropriate bedding equipment. Regulate field if necessary. Remove bed top with suitable deridging machinery to leave a minimum width of 10" across the top of the bed. Apply NORTON E.C. in a band at the recommended rate indicated in the appropriate regional dosage table. Cover the treated band with 1 inch of soil using ditchers or discs equipment. Shape the bed with roller shaper and irrigate until the top of the beds are thoroughly wetted. Irrigate from furrows on both sides of the row.

This method of application can be used when spring moisture is marginal or when irrigation water is not available at planting time. Fall bedding utilizes the accumulated moisture to enhance activation of the herbicide and to aid in the germination of the sugar beet crop.

Prepare the field (as for planting; plow, pack, and float, etc.) in the fall (usually late September or October). Apply NORTON E.C. in a band on the soil surface at the recommended rate indicated in the appropriate regional dosage table. Be sure that the soil surface to be treated is free from trash and vegetation.

Cover the treated bands with soil and form beds or ridges using ditchers or discs. In the spring when the soil is sufficiently dry to be worked, de-ridge the beds down to within 1/2" to 1" of the treated layer using suitable equipment such as the Kirchner bedder or Oregon Northslope harrow. When de-ridging, maintain the original bedding guidance system by using a bull tongue chisel, slide guides or similar equipment. This will ensure that the planter will follow in the treated band. Plant sugar beets in the de-ridged area when the soil conditions allow.

MIXING DIRECTIONS: When mixing NORTON E.C. in the spray tank with Pyramin or TCA, add NORTON E.C. first. Agitate spray solution thoroughly and continuously. See Pyramin label for additional mixing directions.

GENERAL APPLICATION

Sugar beets grown under rainfall: Apply NORTON E.C. alone or in tank-mix preemergence at time of planting or shortly after, but prior to weed germination. NORTON E.C. or tank-mix does not require mechanical soil incorporation provided that sufficient rainfall occurs shortly following application to activate the chemical. One-half inch of rainfall is usually adequate for activation. In areas where rainfall can be marginal for activation, such as the Red River Valley (Minnesota and North Dakota), it is recommended that NORTON E.C. or the tank-mix be applied before or at the time of planting and incorporated into the soil.

Sugar beets grown under furrow irrigation: Apply NORTON E.C. alone or in a tank-mix to the soil surface preplant or at time of planting, but prior to weed germination, and incorporate into the soil. Where sugar beets are grown in beds, apply NORTON E.C. or tank-mix after bedding and incorporate. Since NORTON E.C. or tank-mix must have moisture to control weeds effectively, irrigate until tops of beds are thoroughly wetted.

Sugar beets grown under sprinkler irrigation: Apply NORTON E.C. alone or in tank-mix preemergence at time of planting or shortly after, and irrigate prior to crop and weed germination. Repeat irrigation as necessary to maintain good moisture in upper soil layer. Apply at least one-half inch of water during first irrigation. Do not mechanically incorporate NORTON E.C. or tank-mix into the soil under sprinkler irrigation.

ALL REGIONS

DOSAGE TABLE 1 (All Regions Except North Dakota and Minnesota):

Soil Texture	RATE OF NORTON E.C. PER ACRE (1)			
	Broadcast	7-inch Band Width (2)		
		22" Row	28" Row	30" Row
Coarse Textured Soils Sands, loamy sands and sandy loams	1 1/4 to 1 1/2 Gallons	2 to 3 1/4 Pints	1 1/2 to 2 1/2 Pints	1 1/4 to 2 1/4 Pints
Medium Textured Soils: Silt loams, clay loams which con- tain less than 3% organic matter	1 1/4 to 2 Gallons	3 1/4 to 5 Pints	2 1/2 to 4 Pints	2 1/4 to 3 3/4 Pints
Fine Textured Soils Clay loams which contain more than 3% organic matter and clays	2 to 2 1/2 Gallons	5 to 6 1/4 Pints	4 to 5 Pints	3 1/4 to 4 1/4 Pints

- (1) Use the higher rate within each soil texture category on the finer textured soils and/or where Kochia, Barnyard grass or Black nightshade are expected to be a problem.
- (2) For other band or row widths, adjust the rate in proportion to the area actually treated.

REGIONAL RECOMMENDATIONS:

CALIFORNIA (WINTER-GROWN SUGAR BEETS ONLY)

NORTRON E.C. + Pyramin (tank-mix):

This tank-mix controls the additional broadleaf weeds specified in the weed table at the rates recommended in Dosage Table 2.

DOSAGE TABLE 2 (California, winter-grown sugar beets only):

Soil Texture	NORTRON E.C. PER ACRE		PYRAMIN PER ACRE	
	Broadcast (For calibration purposes only)	10-Inch Band Width ^{1,2} 30" Row	Broadcast (For calibration purposes only)	10-Inch Band Width ¹ 30" Row
Coarse Textured Soils: Sands, loamy sands and sandy loams	NOT RECOMMENDED			
Medium Textured Soils: Silt loams, clay loams which contain less than 3% organic matter	1 to 1 1/4 Gallons	2 2/3 to 3 1/3 Pints	4 Pounds	1 1/2 Pounds
Fine Textured Soils: Clay loams which contain more than 3% organic matter and clays	1 1/2 to 1 3/4 Gallons	3 1/2 to 4 1/2 Pints	4 Pounds	1 1/2 Pounds

(1) For other band or row widths, adjust rates in proportion to the area actually treated. Do not apply this mixture broadcast.

(2) Use the higher rate of NORTRON E.C. within each soil texture category on finer-textured soils where volunteer barley or wheat are expected to be a problem.

Under sprinkler irrigation or where natural rainfall is adequate, apply this tank-mix preemergence. See Pyramin label for precautions regarding application of sprinkler irrigation. Where furrow irrigation is to be used, apply preplant. Prepare seedbed or form beds for planting. Then use rotary tiller type of incorporation and incorporate not more than 2 inches deep. Plant sugar beets and irrigate. Sub-irrigate until tops of beds are thoroughly wetted.

Precautions: Do not exceed 3/4 inch of sprinkler irrigation per set until the beets have two true leaves. Do not use the mixture under conditions where Pyramin alone is not recommended. Before use, read the Pyramin label for additional information and precautions.

CENTRAL AND EASTERN STATES, INCLUDING MICHIGAN AND OHIO:

NORTRON E.C. + Pyramin (tank-mix):

This tank-mix controls the additional weed, common ragweed and other broadleaf weeds specified in the weed table. Apply preemergence at the time of planting or shortly after, but before weed germination using recommended rates listed in Dosage Table 3. Do not mechanically incorporate the herbicides into the soil as crop injury may result. Do not use this tank-mix where Pyramin alone is not recommended. Before use, read Pyramin label for additional information and precautions.

DOSAGE TABLE 3 (Central and Eastern States only):

Soil Texture	NORTRON E.C./ACRE			PYRAMIN/ACRE		
	Broad- cast	7-Inch Band Width ¹		Broad- cast	7-Inch Band Width ¹	
		22" Row	28" Row		22" Row	28" Row
Coarse Textured Soils: Sandy loams only	1 Gallon	2 1/2 Pints	2 Pints	3 Pounds	1 Pound	3/4 Pound
Medium Textured Soils: Silt and clay loams which contain less than 3% organic matter	1 1/2 Gallons	3 1/3 Pints	2 2/3 Pints	4 Pounds	1 1/4 Pounds	1 Pound
Fine Textured Soils: Clay loams which contain more than 3% organic matter and clays	1 2/3 Gallons	4 1/4 Pints	3 1/3 Pints	4 Pounds	1 1/4 Pounds	1 Pound

(1) For other band or row widths, adjust the rate in proportion to the area actually treated.

NORTRON E.C. + TCA (tank-mix):

The control of certain grass weeds, particularly yellow foxtail and barnyardgrass, can be enhanced by the use of this tank-mix.

Apply preemergence at time of planting or shortly after, but prior to weed germination. Apply at rates recommended in Dosage Table 4. Before use, read TCA label for additional information and precautions.

DOSAGE TABLE 4

(Central and Eastern States, including Michigan and Ohio):

Soil Texture	NORTRON E.C./ACRE		TCA/ACRE ¹	
	Broadcast	7-Inch Band ² 28" Row	Broadcast	7-Inch Band ² 28" Row
Coarse Textured Soils: Sandy loams only	1 Gallon	2 Pints	3 Quarts	1 1/2 Pints
Medium Textured Soils: Silt and clay loams which contain less than 3% organic matter	1 1/2 Gallons	2 2/3 Pints	1 Gallon	1 Quart
Fine Textured Soils: Clay loams which contain more than 3% organic matter and clays	2 Gallons	4 Pints	1 Gallon	1 Quart

(1) Based on commercial liquid formulation containing the equivalent of 6 pounds of dry 90% sodium TCA per gallon.

(2) For other band or row widths, adjust the rate in proportion to the area actually treated.

NORTH DAKOTA AND MINNESOTA:

NORTRON E.C. alone, apply at recommended rates listed in Dosage

SAGE TABLE 5 (North Dakota and Minnesota only):

Soil Texture	NORTRON E.C. / ACRE	
	Broadcast	7-Inch Band Width 22" Row
Coarse Textured Soils Sands, loamy sands and sandy loams	2 Gallons	5 Pints
Medium Textured Soils Silt loams & clay loams	2 Gallons	5 Pints
Fine Textured Soils Clays	2 1/2 Gallons	6 1/4 Pints

and or row widths, adjust the rate in proportion to the area actually

E.C. + TCA (tank-mix):

enhances the control of yellow foxtail (pigeongrass) and barnyard-
ally on fine-textured soils. Apply to the soil surface preplant or at
ing and incorporate into the soil. Apply at recommended rates listed
able 6. Before use, read TCA label for additional information and

DOSAGE TABLE 6 (North Dakota and Minnesota only):

	RATE OF NORTRON E.C./ACRE		RATE OF TCA/ACRE	
	Broadcast	7-Inch Band Width 22" Row	Broadcast	7-Inch Band Width 22" Row
Coarse Textured Soils: Sands, loamy sands and sandy loams	1 1/2 Gallons	3 3/4 Pints	1 1/4 Gallons	3 1/4 Pints
Medium Textured Soils: Silt loams and clay loams	2 Gallons	5 Pints	1 1/4 Gallons	3 1/4 Pints
Fine Textured Soils: Clays	2 1/2 Gallons	6 1/4 Pints	1 1/4 Gallons	3 1/4 Pints

commercial liquid formulation containing the equivalent of 6 pounds
% sodium TCA per gallon.

band or row widths, adjust the rate in proportion to the area actually

Fall-applied) + NORTRON E.C. (Spring-applied) — Treatment:

of certain weeds, particularly yellow foxtail and redroot pigweed can
by the sequential treatment of Eptam 7E applied in the Fall followed
application of NORTRON E.C.. Furthermore, the addition of NOR
provides up to 10 weeks' control of susceptible weeds

n 7E in the Fall in accordance with directions on the label

IRON E.C. in the Spring to the soil surface preplant or at the time of
d incorporate into the soil. Apply at recommended rates listed in
le 7. This sequential treatment is not recommended for use on coarse
ls.

in areas or under conditions where Eptam 7E is not recommended
read Eptam 7E label for additional information and precautions

DOSAGE TABLE 7 (North Dakota and Minnesota only):

Soil Texture	NORTRON E.C. PER ACRE	
	Broadcast	7-Inch Band Width 22" Row
Coarse Textured Soils Sands, loamy sands and sandy loams	NOT RECOMMENDED	
Medium Textured Soils Silt loams & clay loams	2 Gallons	5 Pints
Fine Textured Soils Heavy clays	2 Gallons	5 Pints

(1) For other band or row widths, adjust the rate in proportion to the area actually
treated

CULTURAL PRACTICES FOLLOWING APPLICATION:

When properly applied NORTRON E.C. alone or in tank-mix will provide up to 10
weeks' control of susceptible weed species. When cultivating fields in which
NORTRON E.C. or tank-mixes have been banded, care should be exercised to
minimize the movement of untreated soil into the treated band. Where a broad-
cast application has been made, do not cultivate deeper than two inches or this
may reduce the effectiveness of NORTRON E.C. or tank-mixes.

GENERAL USE PRECAUTIONS:

NORTRON E.C. or tank-mixes should be used only for recommended purposes
and at recommended rates (DO NOT OVERTREAT).

Apply tank-mixes only in specified regions or states and in accordance with direc-
tions on the label.

NORTRON E.C. applied alone or in tank-mixes according to label directions and
under normal growing conditions may cause temporary leaf fusion, distortion and
stunting. Crop injury may occur during early growth when crop is stressed due to
herbicide residue carryover, highly saline or alkaline soils, unusually cold and wet
weather or improperly placed fertilizers or soil insecticides.

Unusually dry, windy weather following application of NORTRON E.C., which
dries the upper soil layer, may reduce effectiveness.

Do not rotate with any crops other than sugar beets for 12 months after applica-
tion. Thorough tillage, including moldboard plowing, should precede the planting
of crops other than sugar beets.

If crop is lost due to climatic or soil conditions following application of NORTRON
E.C. or tank-mixes, do not plant crops other than sugar beets in treated land dur-
ing the same season. Do not retreat field with NORTRON E.C.. If fields are
replanted to sugar beets, reseed into treated band.

Do not mix NORTRON E.C. or tank-mixes with liquid fertilizers

Do not allow spray mixture to stand in tank overnight. Flush and drain spray
equipment after each day's use. Store unused spray mixture in tightly sealed con-
tainers and protect from frost.

Where NORTRON E.C. is used in a tank-mix with TCA, do not use treated sugar
beet tops for feed or forage.

Do not use NORTRON E.C. in water having a temperature below 40°F. as
crystallization of spray mixture may occur in the nozzles and strainers.

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