Reg # 04569-5 PM-23 NOR-AM 1 of 12

A Schering Berlin Company

June 2, 1993

Attn: Ms. Joanne I. Miller, PM (23), RD
Document Processing Desk
Office of Pesticide Programs - H7505C
U. S. Environmental Protection Agency
Room 266A, Crystal Mall 2
1921 Jefferson Davis Highway
Arlington, VA 22202

NOR-AM Chemical Company

Little Falls Centre One
2711 Centerville Road
Wilmington, DE 19808
Telephone: (302) 892-3000
Telefax: (302) 892-3013

Copy sent to B. Herber 6/3/93 B.U.

Subject: **NORTRON EC** Herbicide
EPA Reg. No. 45639-5
Notification of Compliance with PR NOTICE 93-3

Dear Ms. Miller:

NOR-AM Chemical Company hereby makes notification to the Agency of insertion of the newly revised water/wetlands statement and replacement of the previous statement in the Environmental Hazards section of the NORTRON EC label. This action is to comply with the label changes required by PR NOTICE 93-3, and is in accordance with the notification procedure promulgated in PR NOTICE 88-6 and 40 CFR 152.46.

In support of this notification, I enclose a completed EPA Form 8570-1 and one (1) copy of the revised labeling.

If you have any questions concerning this action, please contact me at this office, telephone (302) 892-3039.

Sincerely,

Kenneth Chisholm

Registration Project Manager

060193L2.KWC

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Please read instructions on reverse before completing form.

Form Approved. OMB No. 2070-0060. Approval expires 11-30-93

(A) EPA

United States Environmental Protection Agency
Office of Pesticide Programs (H7505C)
Washington, DC 20460

Application for Pesticide:

[ ] Registration
[ ] Amendment
[X] Other

OPP Identifier Number: 161110

Section I

1. Company/Product Number: 04569-5

2. EPA Product Manager: Joanne I. Miller
PM#: (23)

3. Proposed Classification: [X] None [ ] Restricted

4. Company/Product (Name): NORTRON® EC

5. Name and Address of Applicant *(Include ZIP Code)*
NOR-AM Chemical Company
Little Falls Centre One
2711 Centerville Road
Wilmington, DE 19808
[X] *Check if this is a new address*

6. **Expedited Review.** In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to:
EPA Reg. No._____
Product Name_____

Section II

[ ] Amendment - Explain below
[ ] Resubmission in response to Agency letter dated_____
[X] Notification - Explain below.
[ ] Final printed labels in response to Agency letter dated_____
[ ] "Me Too" Application.
[ ] Other - explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

NOTIFICATION: Compliance with PR Notice 93-3.

NOTIFICATION
LABEL NOT REVIEWED
PER PR NOTICE 93-3
DATE 7/1/93

BEST AVAILABLE COPY

Section III

1. **Material This Product Will Be Packaged In:**

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
[ ] Yes* [X] No	[ ] Yes [X] No	[ ] Yes [X] No	[X] Metal [ ] Plastic [ ] Glass [ ] Paper [ ] Other (Specify)_____
* *Certification must be submitted.*	If "Yes," Unit Package wgt. / No. per container	If "Yes," Package wgt. / No. per container	

3. Location of Net Contents Information: [X] Label [ ] Container

4. Size(s) of Retail Container: 5 gal.

5. Location of Label Directions: [X] On Label [ ] On Labeling accompanying product

6. Manner In Which Label Is Affixed To Product: [ ] Lithograph [ ] Paper glued [ ] Stenciled [X] Other (Plastic sleeve with DFU attached)

Section IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)
Kenneth W. Chisholm	Registration Project Manager	(312) 892-3039

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received (Stamped)

2. Signature	3. Title
Kenneth Chisholm	Registration Project Manager
4. Typed Name	**5. Date**
Kenneth W. Chisholm	June 1, 1993

3912

SPECIMEN LABEL

NOTIFICATION
LABEL NOT REVIEWED
PER PR NOTICE 86-5
DATE 7/1/93

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FOR AGRICULTURAL USE ONLY

Nortron® EC

SUGAR BEET HERBICIDE

For selective control of weeds in sugar beets

GRASS SEED HERBICIDE

For Selective Control of Weeds in Certain Grass Seed Crops and Commercial Sod Production in California, Oregon, and Washington

ACTIVE INGREDIENT	Percent by Weight
[illegible]	[illegible]
INERT INGREDIENTS:	[illegible]
	TOTAL [illegible]

EPA Reg. No. 45639-5 EPA Est. No. 46142-EN-01

PRECAUCION AL USUARIO: Si usted no lee inglés no use este producto hasta que la etiqueta haya sido explicada ampliamente.

KEEP OUT OF REACH OF CHILDREN

DANGER — PELIGRO

CORROSIVE. CAUSES EYE DAMAGE

WEAR GOGGLES OR FACE SHIELD WHEN HANDLING

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED [illegible]

IF ON SKIN [illegible]

IF IN EYES [illegible]

SEE OTHER PANELS FOR ADDITIONAL PRECAUTIONS

NOR-AM

[illegible]

NET CONTENTS

[illegible]

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

For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated area. Do not contaminate water when disposing of equipment washwaters.

PHYSICAL OR CHEMICAL HAZARDS

DO NOT USE, POUR, SPILL OR STORE NEAR HEAT OR OPEN FLAME.

IN CASE OF FIRE, LEAKY OR DAMAGED CONTAINERS, OR OTHER EMERGENCY, REPORT AT ONCE BY TOLL-FREE TELEPHONE TO: 800-424-9300.

GENERAL USE PRECAUTIONS

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

Do not graze livestock on treated crops.

Do not apply this product through any type of irrigation system.

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

Do not rotate with any crops other than sugar beets or ryegrass for 12 months after application. Thorough tillage, including moldboard plowing, should precede the planting of crops other than sugar beets or ryegrass. Do not use NORTRON EC on muck or peat soils.

Do not allow spray mixture to stand in tank overnight. Flush and drain spray equipment after each day's use.

NORTRON EC may soften PVC hosing if not drained.

Store unused spray mixture in tightly-sealed containers and protect from frost.

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

This label must be in the possession of the user at the time of pesticide application.

STORAGE AND DISPOSAL

STORAGE: Store NORTRON EC in a cool place above 34°F.

PESTICIDE DISPOSAL: Do not contaminate water, food or feed by storage or disposal. Pesticide wastes are acutely hazardous. 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.

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 EMPTY CONTAINER.

GENERAL INFORMATION

WEED SPECIES CONTROLLED
SUGAR BEETS

NORTRON EC 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 *(Solanum nigrum)*, Common chickweed *(Stellaria media)*, Common lambsquarters *(Chenopodium album)*, Common purslane *(Portulaca oleracea)*, Kochia *(Kochia scoparia)*, Ladysthumb *(Polygonum persicaria)*, Pennsylvania smartweed *(Polygonum pensylvanicum)*, Redroot pigweed *(Amaranthus retroflexus)*, Russian thistle *(Salsola kali var. tenuifolia)*, Wild buckwheat *(Polygonum convolvulus)*.

Annual Grass Weeds

Annual bluegrass *(Poa annua)*, Barnyardgrass* *(Echinochloa crus-galli)*, Canarygrass *(Phalaris canariensis)*, Green foxtail *(Setaria viridis)*, Large crabgrass *(Digitaria sanguinalis)*, Volunteer barley *(Hordeum* sp.), Volunteer wheat *(Triticum* sp.), Wild oats** *(Avena fatua)*, Yellow foxtail *(Setaria glauca)*.

*Control of barnyardgrass may be reduced with the NORTRON EC + Pyramin because of the lower rate of NORTRON EC recommended.

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

NORTRON EC alone will also reduce competition from these HARD-TO-CONTROL weeds:

Annual Sowthistle *(Sonchus oleraceus)*, Puncturevine *(Tribulus terrestris)*, Shepherdspurse *(Capsella bursa-pastoris)*, Purple nutsedge *(Cyperus rotundus)*, Yellow nutsedge *(Cyperus esculentus)*.

WEED SPECIES CONTROLLED
GRASS SEED

NORTRON EC is a selective herbicide for use in ryegrass, tall fescue, and bentgrass seed crops in California, Oregon, and Washington. It effectively controls or reduces competition from those weed species listed below. NORTRON EC may be applied preemergence to new seedings of annual ryegrass or postemergence to established stands of perennial ryegrass, tall fescue, or bentgrass. Application to bentgrass is restricted to plantings which have been established for one year or longer. Soil should be moist at time of application. NORTRON EC is less effective when applied to dry soil. Rainfall shortly after application is necessary for activation. Make only one application per season, either preemergence or postemergence, not both.

WEEDS CONTROLLED: Annual bluegrass *(Poa annua)*, Rattail fescue *(Festuca myuros)*, Seedling volunteer wheat *(Triticum* spp.), Seedling volunteer barley *(Hordeum* spp.), Soft chess *(Bromus mollis)*, Seedling Wild oats *(Avena fatua)*, Downy brome *(Bromus tectorum)*, Common chickweed *(Stellaria media)*, Common vetch *(Vicia sativa)*, Common velvetgrass *(Holcus lanatus)*, Mannagrass *(Glyceria* spp.).

Note: NORTRON EC does not control volunteer ryegrass. Other registered herbicides will be required to control volunteer annual or perennial ryegrass seedlings.

WEED SPECIES CONTROLLED
COMMERCIAL SOD PRODUCTION

NORTRON EC is a selective herbicide for use in established and newly planted tall fescue and perennial ryegrass grown for sod in California, Oregon, and Washington. NORTRON EC may be applied preemergence or postemergence for the control of weed species listed below. Overhead irrigation or rainfall shortly after application is necessary for activation.

WEEDS CONTROLLED: Annual bluegrass *(Poa annua)*, Large Crabgrass *(Digitaria sanguinalis)*, Green foxtail *(Setaria viridis)*, Yellow foxtail *(Setaria glauca)*, Canarygrass *(Phalaris canariensis)*, Volunteer barley *(Hordeum* sp.) Volunteer wheat *(Triticum* sp.), Wild oats *(Avena fatua)*, Rattail fescue *(Festuca myuros)*, Common velvetgrass *(Holcus lanatus)*, Mannagrass *(Glyceria* sp.), Downy brome *(Bromus tectorum)*, Soft chess *(Bromus mollis)*.

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.

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.

When NORTRON EC is applied preemergence, or postemergence, the following statements apply:

REENTRY STATEMENT: Do not enter treated areas without protective clothing until sprays have dried.

Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. (Indicate specific oral warnings which inform workers of areas or fields that may not be entered without specific protective clothing, period of time field must be vacated, and appropriate actions to take in case of accidental exposure.) When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information:

DANGER: Area treated with NORTRON® EC herbicide on (date of application). Do not enter without appropriate protective clothing until spray has dried. In case of accidental exposure, see Statement of Practical Treatment on the label.

NORTRON EC WITH LIQUID FERTILIZERS:
NORTRON EC and tank mixes may be combined with liquid (solution, slurry or suspension) fertilizers. However, physical compatibility with these fertilizers should be determined before combining in the spray tank. See Appendix I for directions for testing combinations. Constant agitation in the spray tank is recommended when combining NORTRON EC with compatible liquid fertilizers.

RYEGRASS, TALL FESCUE, AND BENTGRASS SEED CROPS

(For use in California, Oregon, and Washington only):
NORTRON EC may cause stunting and stand reduction of newly seeded perennial ryegrass and tall fescue, if the crop is planted late in the fall and subjected to adverse climatic conditions or pesticides which restrict normal growth.

If vegetative matter or stover from previous crop was burned, sufficient rainfall or overhead irrigation must have occurred to dissipate the charcoal residue remaining after burning prior to NORTRON EC treatment. Failure to allow for dissipation of charcoal residue may result in reduced weed control.

Spray equipment: Use a fixed boom power sprayer properly calibrated to a constant speed and rate of delivery. Do not use smaller than 50-mesh strainer. Avoid overlapping of spray swath. Shut off boom while starting, turning or stopping to avoid overlapping. Apply in 10 to 50 gallons of water per acre at low pressure (20–50 psi).

Soil preparation: A firm, fine and level seedbed free of trash and vegetative matter will provide best results from preemergence applications. Large clods can reduce effectiveness of NORTRON EC. All existing vegetative growth should be thoroughly worked into the soil before treatment.

NEW SEEDINGS OF ANNUAL OR PERENNIAL RYEGRASS:
Before weed emergence: Apply NORTRON EC after seeding and prior to weed emergence. For best results apply to moist soil. Apply ½ to 1 gallon per acre. Use the lower rate for control of annual bluegrass and common chickweed. For control of rattail fescue and other weeds listed use ¾ to 1 gallon per acre.

After weed emergence: Apply NORTRON EC at earliest possible weed growth stage but not later than the 4-leaf stage. Rattail fescue, which is more difficult to control, must be treated no later than the 2-leaf stage. Apply ¾ to 1¼ gallons per acre. Use the highest rate where rattail fescue is present and where weed infestation is heavy.

NEW SEEDINGS OF FALL-PLANTED PERENNIAL RYEGRASS AND TALL FESCUE TREATED WITH DIURON PLUS CHARCOAL:
Timing of application: Apply NORTRON EC following crop emergence and after sufficient rainfall and/or overhead irrigation has occurred to dissipate the charcoal band (approximately 4 inches). Use dosage rates listed in table below. Surface debris may result in reduced weed control. Failure to allow for complete dissipation of the charcoal band may result in reduced weed control within the crop row. For best results, apply NORTRON EC to a moist soil surface.

Before using diuron, read the diuron label for rate recommendations, timing of applications, directions for use and precautionary statements. Do not exceed maximum dosage rates for either herbicide.

DOSAGE TABLE

Crop	Rate Per Acre	Remarks
Perennial ryegrass and Tall fescue	½ to 1 gal.	For effective control, annual bluegrass must be treated before the 4-leaf stage; rattail fescue, wild oats and volunteer wheat must be treated before the 2-leaf stage. Use the lower rate for control of annual bluegrass and common chickweed; use the higher rate for control of rattail fescue, wild oats and other weeds listed.

ESTABLISHED STANDS OF PERENNIAL RYEGRASS AND TALL FESCUE:
Before weed emergence: Apply NORTRON EC at ¾ to 1 gallon per acre prior to weed emergence. Use higher rate where rattail fescue is expected to be a problem. For best results, apply to moist soil. Crop residue and debris will reduce effectiveness of treatment and should be removed or destroyed.

After weed emergence: Apply NORTRON EC at earliest possible weed growth stage but not later than the 4-leaf stage. Rattail fescue, which is more difficult to control, must be treated no later than the 2-leaf stage. Apply ¾ to 1 gallon per acre Use the higher rate where rattail fescue is present. Where weed pressure is very heavy and rattail fescue is at the maximum stage of growth for treating, a rate of 1¼ gallons of NORTRON EC is recommended.

ESTABLISHED STANDS OF BENTGRASS: Apply only to well-established stands which have been seeded for not less than 12 months. Straw from previous crop must be removed or destroyed. Failure to do so may result in reduced weed control.

Before weed emergence: Apply NORTRON EC at ½ to 1 gallon per acre prior to weed emergence. Use higher rate where rattail fescue is expected to be a problem. For best results, apply to moist soil.

After weed emergence: Apply NORTRON EC at earliest possible weed growth stage but no later than the 4-leaf stage. Rattail fescue, which is more difficult to control, must be treated no later than the 2-leaf stage. Apply at the rate of ½ to 1 gallon per acre. Use higher rate when rattail fescue is a problem. Do not apply more than 1 gallon of NORTRON EC per acre on bentgrass.

COMMERCIAL SOD PRODUCTION

(For Use in California, Oregon, and Washington Only):
Spray equipment: Use a fixed boom power sprayer properly calibrated to a constant speed and rate of delivery. Do not use smaller than a 50-mesh strainer. Avoid overlapping of spray swath. Shut off boom while starting, turning or stopping to avoid over-application. Make applications in 20 to 60 gallons of water per acre at low pressure (20 to 50 psi).

Soil preparation: All existing vegetative matter should be thoroughly worked into the soil surface before planting. Large clods, trash or vegetative matter left on the soil surface will reduce effectiveness of the NORTRON EC treatment.

NEWLY PLANTED PERENNIAL RYEGRASS AND TALL FESCUE GROWN FOR SOD: Apply NORTRON EC to newly planted areas when crop reaches the 2–3 leaf stage of growth. For best results, apply to moist soils.

Before weed emergence: Apply NORTRON EC at ¾ to 1 gallon per acre in 20 to 60 gallons of water prior to weed emergence. Use the higher rate where rattail fescue is expected to be a problem.

After weed emergence: Apply NORTRON EC at earliest possible weed growth stage but no later than the 4-leaf stage. Rattail fescue, which is more difficult to control, must be treated no later than the 2-leaf stage. Apply NORTRON EC at ¾ to 1 gallon per acre in 20 to 60 gallons of water.

ESTABLISHED PERENNIAL RYEGRASS AND TALL FESCUE SOD: For preemergence and/or postemergence control of susceptible weeds, apply NORTRON EC prior to weed emergence or at the earliest possible weed growth stage, but not later than the 4-leaf stage. For best results, apply to moist soils. Apply NORTRON EC at ¾ to 1 gallon per acre in 20 to 60 gallons of water. Repeat applications at 4 to 8 week intervals may be needed to maintain weed control. DO NOT apply more than 2⅔ gallons of NORTRON EC per acre per growing season.

SUGAR BEETS

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

PREPLANT INCORPORATED AND PREEMERGENCE APPLICATIONS
SOIL PREPARATION: The soil should be prepared according to good agricultural practices. Large clods can reduce the effectiveness of NORTRON EC and tank-mixes. All existing vegetative growth should be thoroughly worked into the soil before treatment.

SPRAY EQUIPMENT: Apply NORTRON EC alone or in tank-mixes to the soil using standard low pressure (20–50 psi) spray equipment. Spray equipment should be carefully calibrated before use and checked frequently during application to see that it is functioning properly. Do not use smaller than 50-mesh strainer. Uniformly apply the recommended rates of NORTRON EC or NORTRON EC tank-mixes in 10 to 60 gallons of water per acre on a broadcast basis. Avoid overlaps since crop injury may result. When applying NORTRON EC or tank-mixes in a band, check to make certain that the band width is accurate for the dosage rate being applied.

The spray tank and lines should be thoroughly cleaned and rinsed prior to using NORTRON EC.

INCORPORATION EQUIPMENT: Where soil incorporation is recommended use a hooded-power or ground-driven rotary tiller, rolling cultivator or similar equipment properly adjusted to uniformly incorporate NORTRON EC or tank-mixes to a depth of 1 to 2 inches. Deeper incorporation may reduce effectiveness. Do not apply NORTRON EC or tank-mixes through soil injector shanks. Incorporation should be accomplished prior to planting. 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. Pre-irrigate field if necessary. Remove bed top with suitable de-ridging machinery to provide a minimum width of 10" across the top of the bed. Apply NORTRON EC in a band at the recommended rate indicated in the appropriate regional dosage table and cover the treated band with 1 inch of soil using ditchers or discs equipment. Shape the bed with roller shaper and irrigate until the tops of the beds are thoroughly wetted. Irrigate from furrows on both sides of the row.

Fall: This method of application can be used when spring moisture is marginal or where irrigation water is not available at planting time. Fall bedding utilizes the winter-accumulated moisture to enhance activation of the herbicide and to aid in 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 NORTRON EC in a band to 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 of 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 ½" 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 NORTRON EC in the spray tank with Pyramin or TCA, add NORTRON EC first. Agitate spray solution thoroughly and continuously. See Pyramin label for additional mixing directions.

NORTRON EC IMPREGNATION ON DRY BULK FERTILIZERS: NORTRON EC may be impregnated on certain dry bulk fertilizers for use on sugar beets. NORTRON EC impregnated on dry bulk fertilizers may be applied and incorporated into the soil either in the fall before the ground freezes, or in the spring prior to planting. Uniform distribution of NORTRON EC on the fertilizer particles, accurate application, and uniform incorporation in the field are necessary to ensure adequate control of susceptible weed species. See Appendix II for special instructions regarding directions for impregnation and use.

GENERAL APPLICATION: Sugar beets grown under rainfall: Apply NORTRON EC alone or in a tank-mix preemergence at time of planting or shortly after, but prior to weed germination. NORTRON EC 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 NORTRON EC 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 NORTRON EC 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 NORTRON EC or tank-mix after bedding and incorporate. Since NORTRON EC 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 NORTRON EC 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 NORTRON EC or tank-mix into the soil under sprinkler irrigation.

CULTURAL PRACTICES FOLLOWING APPLICATION: When properly applied, NORTRON EC alone or in a tank-mix will provide up to 10 weeks control of susceptible weed species. When cultivating fields in which NORTRON EC or tank-mixes have been banded, care should be exercised to minimize the movement of untreated soil into the treated band. Where a broadcast application has been made, do not cultivate deeper than two inches, as this reduces the effectiveness of NORTRON EC or tank-mixes.

NORTRON EC ALONE

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

Soil Texture	Rate of NORTRON EC per Acre[1]			
	Broadcast	7-Inch Band Width[2]		
		22" Row	30" Row	36" Row
Course Textured Soils: Sands, loamy sands and sandy loams	¾ to 1¼ Gallons	2 to 3¼ Pints	1½ to 2¼ Pints	1¾ to 2¼ Pints
Medium Texture Soils: Silt loams, clay loams which contain less than 3% organic matter	1¼ to 2 Gallons	3¼ to 5 Pints	2½ to 4 Pints	2¼ to 3¼ Pints
Fine Textured Soils: Clay loams which contain more than 3% organic matter and clays	2 to 2¼ Gallons	5 to 6¼ Pints	4 to 5 Pints	3¼ to 4¾ Pints

[1]Use the higher rate within each soil texture category on the finer texture soils and/or where Kochia, barnyardgrass 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.

DOSAGE TABLE 2 (North Dakota and Minnesota only):

Soil Texture	Broadcast	NORTRON EC/acre	
		7-Inch Band Width[1]	
		22" Row	
Course Textured Soils: Sandy loams only	2 Gallons	5 Pints	
Medium Textured Soils: Silt loams and clay loams	2 Gallons	5 Pints	
Fine Textured Soils: Heavy clays	2¼ Gallons	6¼ Pints	

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

NORTRON EC + ANTOR® 4ES (tank-mix)

CALIFORNIA, COLORADO, MONTANA, NEBRASKA, TEXAS, AND WYOMING ONLY:

This tank-mix controls these additional weeds: Italian ryegrass (annual) *(Lolium multi-florum)*, Annual sowthistle *(Sonchus oleraceus)*, Fall panicum *(Panicum dichotomiflorum)*, Foxtail millet *(Setaria italica)*, Groundcherry *(Physalis longifolia)*, Junglerice *(Echinochloa colonum)*, Prostrate pigweed *(Amaranthus blitoides)*, Shepherdspurse *(Capsella bursa-pastoris)*, Witchgrass *(Panicum capillare)*.

NORTRON EC + ANTOR 4ES tank-mix may be applied preplant incorporated where furrow irrigation is practiced using shallow incorporation implements such as rolling cultivators or harrows, or using power tillers set to a depth of 1–2 inches.

Preemergence applications of NORTRON EC + ANTOR 4ES tank-mix may be used when application is followed by sprinkler irrigation prior to weed germination and crop emergence, or where rainfall can be expected to occur within 7–10 days after application.

ANTOR 4ES may also be utilized in sequential applications with NORTRON EC where a broadcast preemergence treatment of ANTOR 4ES is followed by a band overlay of NORTRON EC preemergence. The same dosage rates should be used as in the tank-mix.

Refer to Dosage Table 3 for recommended rates.

Before use, read the ANTOR 4ES label for additional information and precautions.

DOSAGE TABLE 3 (California, Colorado, Montana, Nebraska, Texas, and Wyoming only):

Soil Texture	ANTOR 4ES Per Acre[1]	NORTRON EC Per Acre[1]
Course: Loamy sands and sandy loams	1.5 Quarts	4 Quarts
Medium: Loams and silt loams	2 Quarts	5.3 Quarts
Fine: Clay loams and clays	3 to 4 Quarts[2]	8.6 Quarts

[1]See section on Band Applications for calculations of proportional amounts.

[2]Use higher rate on heavy clay soils.

NORTRON EC + PYRAMIN®* (tank-mix)

This tank-mix controls these additional broadleaf weeds: Annual sowthistle *(Sonchus oleraceus)*, Black mustard *(Brassica nigra)*, Buffalobur *(Solanum rostratum)*, Coast fiddleneck *(Amsinckia intermedia)*, Common groundsel *(Senecio vulgaris)*, Common ragweed *(Ambrosia artemisiifolia)*, Cutleaf nightshade *(Solanum triflorum)*, Groundcherry *(Physalis* spp.), Henbit *(Lamium amplexicaule)*, Nettleleaf goosefoot *(Chenopodium murale)*, Prickly lettuce *(Lactuca serriola)*, Prostrate knotweed *(Polygonum aviculare)*, Shepherdspurse *(Capsella bursa-pastoris)*.

CALIFORNIA (winter-grown sugar beets only): 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 incorporated. 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. Refer to Dosage Table 4 for recommended rates .

DOSAGE TABLE 4 (California, winter-grown sugar beets only):

Soil Texture	NORTRON EC Per Acre		PYRAMIN FL Per Acre	
	Broadcast (For calibration purposes only)	10-Inch Band Width[1,2] 30" Row	Broadcast (For calibration purposes only)	10-Inch Band Width 30" Row
Course 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 1¼ Gallons	1¼ to 1⅝ Pints	⅔ Quarts	1 Quart
Fine Textured Soils: Clay loams which contain more than 3% organic matter and clays	1⅛ to 1¾ Gallons	1⅝ to 2¼ Pints	⅞ Quarts	1 Quart

[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 EC within each soil texture category on the finer-textured soils and/or where volunteer barley or wheat are expected to be a problem.

PRECAUTIONS: Do not exceed ½ inch of sprinkler irrigation per set until the beets have two true leaves. Do not use the tank-mix under conditions where Pyramin alone is not recommended. Before use, read the Pyramin label for additional information and precautions.

*Pyramin® is a registered trademark of BASF Aktiengesellschaft.

CENTRAL AND EASTERN STATES, INCLUDING MICHIGAN AND OHIO: 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 5. 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 5 (Central and Eastern States Only):

Soil Texture	Broadcast	NORTRON EC/Acre 7-Inch Band Width[1] 22" Row	NORTRON EC/Acre 7-Inch Band Width[1] 28" Row	Broadcast	PYRAMIN® FL/Acre 7-Inch Band Width[1] 22" Row	PYRAMIN® FL/Acre 7-Inch Band Width[1] 28" Row
Coarse Textured Soils: Sandy loams only	1 Gallon	2½ Pints	2 Pints	2.25 Quarts	.75 Quart	.5 Quart
Medium Textured Soils: Silt and clay loams which contain less than 3% organic matter	1½ Gallons	3½ Pints	2½ Pints	3 Quarts	1 Quart	.75 Quart
Fine Textured Soils: Clay loams which contain more than 3% organic matter and clays	1¾ Gallons	4¼ Pints	3½ Pints	3 Quarts	1 Quart	.75 Quart

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

NORTRON EC + ANTOR 4ES + PYRAMIN® (tank-mix)

MICHIGAN ONLY: A tank-mix of NORTRON EC + ANTOR 4ES + Pyramin may be used in Michigan for control of the additional weeds:

Common ragweed *(Ambrosia artemisiifolia)*, Wild mustard *(Brassica kaber)*, Pennsylvania smartweed *(Polygonum pensylvanicum)*, Common lambsquarters *(Chenopodium album)*, Common purslane *(Portulaca oleracea)*, Nettleleaf goosefoot *(Chenopodium murale)*, Common chickweed *(Stellaria media)*, Henbit *(Lamium amplexicaule)*, Fanweed (stinkweed) *(Thlaspi arvense)*, Kochia *(Kochia scoparia)*, Russian thistle *(Salsola kali)*, Volunteer barley *(Hordeum* sp.), Volunteer wheat *(Triticum* sp.), Ladysthumb *(Polygonum persicaria)*.

For preemergence use without irrigation, apply the tank-mix to the soil surface at the time of planting or shortly after, but prior to weed germination. Use rates recommended in Dosage Table 6.

Do not use this mixture under conditions where Pyramin alone is not recommended. Before use, read the Pyramin and ANTOR 4ES labels for additional information and precautions.

DOSAGE TABLE 6 (Michigan only)

Soil Texture	Broadcast Rates Per Acre NORTRON EC (qts.)	ANTOR 4ES (qts.)	PYRAMIN® FL (qts.)
Coarse Textured Soils: Sandy loams only	4	1.5	2.25
Medium Textured Soils: Loams, silt loams and clay containing more than 3% organic matter	5.3	2	2.25
Fine Textured Soils: Clay loams and clays containing more than 3% organic matter	5.3	3	2.25

NORTRON EC + TCA (tank-mix)**

CENTRAL AND EASTERN STATES, INCLUDING MICHIGAN AND OHIO: 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 7. Before use, read TCA label for additional information and precautions.

DOSAGE TABLE 7 (Central and Eastern States, including Michigan and Ohio)

Soil Texture	NORTRON EC/Acre Broadcast	NORTRON EC/Acre 7-Inch Band[1] 28" Row	TCA/Acre[1] Broadcast	TCA/Acre[1] 7-Inch Band[1] 28" Row
Coarse Textured Soils: Sandy loams only	1 Gallon	2 Pints	3 Quarts	1½ Pints
Medium Textured Soils: Silt and clay loams which contain less than 3% organic matter	1½ Gallons	2½ 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.

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

EPTAM® (fall-applied) + NORTRON EC (spring-applied)**

NORTH DAKOTA AND MINNESOTA ONLY (sequential treatment): The control of certain weeds, particularly yellow foxtail and redroot pigweed, can be improved by the sequential treatment of Eptam 7E applied in the fall followed by a spring application of NORTRON EC. Furthermore, the addition of NORTRON EC provides up to 10 weeks' control of susceptible weeds .

Apply Eptam 7E in the fall in accordance with directions on the label. Apply NORTRON EC in the spring to the soil surface preplant or at the time of planting and incorporate into the soil. Apply at recommended rates listed in Dosage Table 8. This sequential treatment is not recommended for use on coarse-textured soils.

Do not use in areas or under conditions where Eptam 7E is not recommended. Before use, read Eptam 7E label for additional information and precautions.

DOSAGE TABLE 8 (North Dakota and Minnesota only)

Soil Texture	NORTRON EC Per Acre Broadcast	NORTRON EC Per Acre 7-Inch Band Width[1] 22" Row
Coarse Textured Soils: Sands, loamy sands and sandy loams	NOT RECOMMENDED	
Medium Textured Soils: Silt loams and 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.

POSTEMERGENCE APPLICATION

(For use in California, Michigan, Ohio, Minnesota, and North Dakota only):

GENERAL INFORMATION

The tank-mixes of NORTRON EC plus BETANEX® and NORTRON EC plus BETAMIX® applied postemergence broaden and enhance the control of weeds.

Furthermore, control of susceptible weeds which may germinate after treatment can be obtained provided overhead moisture is applied to activate NORTRON EC. The choice of tank-mixes is dependent upon weed species present. NORTRON EC alone is not recommended for postemergence use.

Timing of Application: Apply the tank-mix NORTRON EC + BETANEX or NORTRON EC + BETAMIX when sugar beets have at least 4 fully expanded true leaves. Apply at rates recommended in the Dosage Tables. Use the higher rate of NORTRON EC where increased residual weed control is desired. Where Eptam has been applied preplant (fall or spring applied), do not apply NORTRON EC + BETANEX or BETAMIX tank-mix before the sugar beets have 6 expanded true leaves.

**TCA is a registered trademark of Hopkins Chemical Company.
***Eptam® is a registered trademark of ICI Americas, Inc.

Sugar beets may be killed or severely injured if treated at earlier stages of crop growth. See Postemergence Use Precautions for additional information on proper use.

Mixing the Spray: NORTRON EC, BETANEX and BETAMIX are formulated as emulsifiable concentrates and are easily mixed. Add NORTRON EC to the water in the spray tank followed by BETANEX or BETAMIX while agitating the spray solution thoroughly. Refer to the BETANEX or BETAMIX labels for additional precautions and information on mixing.

Spray Equipment: Apply the mixture using standard low pressure (20–60 psi) spray equipment. Ensure that the sprayer is thoroughly clean. Spray equipment should be carefully calibrated before use and checked frequently during application to see that it is functioning properly. Uniformly apply the recommended rate in 20–60 gallons of water per acre on a broadcast basis. Avoid overlaps, since crop injury may result. When applying in a band, check to make certain that the band width is accurate for the dosage rate being applied. Do not use strainer smaller than 50-mesh.

Moisture Following Application/Residual Weed Control: Rainfall or sprinkler irrigation within 6 hours of spraying may reduce weed control; however, moisture after this period of time is advantageous for moving NORTRON EC into the 1–2" layer of soil where it can be absorbed by the roots of sprayed and germinating weeds to provide optimum control. One-half inch or more of sprinkler irrigation is required to activate NORTRON EC on most soil types.

Residual control of weeds is dependent upon soil moisture conditions, rate of herbicide used, and soil texture. The activity of NORTRON EC in the soil is reduced as the soil texture becomes finer and organic matter increases.

CAUTION:

MINNESOTA AND NORTH DAKOTA—Do not apply to crop which has been previously treated with NORTRON EC.

CALIFORNIA, MICHIGAN AND OHIO—Following a preemergence treatment of NORTRON EC, do not apply NORTRON EC postemergence where more than 2 gallons were applied preemergence. No more than a total of 2¾ gallons of NORTRON EC should be applied in a single growing season. See Postemergence Use Precautions for additional information on proper use.

NORTRON EC + BETANEX (tank-mix)

MICHIGAN, OHIO, MINNESOTA, AND NORTH DAKOTA ONLY: NORTRON EC applied postemergence in a tank-mix with BETANEX broadens and enhances the control of troublesome weeds. Furthermore, preemergence control of susceptible weeds which may germinate following treatment can be obtained provided overhead moisture is sufficient to activate NORTRON EC.

WEED SPECIES CONTROLLED:

Group I: Weeds controlled up to the 6-leaf stage. Redroot pigweed *(Amaranthus retroflexus)*, Wild mustard *(Brassica kaber)*, Nettleleaf goosefoot *(Chenopodium murale)*, London rocket *(Sisymbrium irio)*, Common lambsquarters *(Chenopodium album)*.

Group II: Weeds controlled up to the 4-leaf stage. Common chickweed *(Stellaria media)*, Black nightshade *(Solanum nigrum)*, Common ragweed *(Ambrosia artemisiifolia)*, Shepherdspurse *(Capsella bursa-pastoris)*, Groundcherry *(Physalis lancelfolia)*, Pennsylvania smartweed *(Polygonum pensylvanicum)*, Ladysthumb *(Polygonum persicaria)*.

Group III: Weeds controlled up to the 2-leaf stage. Annual sowthistle *(Sonchus oleraceus)*, Common purslane *(Portulaca oleracea)*, Wild buckwheat *(Polygonum convolvulus)*, Kochia* *(Kochia scoparia)*

*Spray kochia while in the rosette stage, less than 1" in diameter.

DOSAGE TABLE 9 (Michigan, Ohio, Minnesota and North Dakota only):

Rate of NORTRON EC Per Acre[1]					Rate of BETANEX Per Acre[1]				
		Row Spacing					Row Spacing		
Broadcast Rate	Band[2] Width (in.)	22"	28"	30"	Broadcast Rate	Band[2] Width (in.)	22"	28"	30"
¾-1 Gallons	7	2-2⅔ Pints	1⅓-2 Pints	1⅓-1¾ Pints	4⅓-6 Pints	7	1⅓-2 Pints	1⅓-1⅓ Pints	1-1⅓ Pints

[1]Use the higher rate on larger weeds and sugar beets.
[2]For other band or row widths, adjust rates in proportion to the area actually treated.

NORTRON EC + BETAMIX (tank-mix)

CALIFORNIA, MICHIGAN, OHIO, MINNESOTA AND NORTH DAKOTA ONLY: NORTRON EC applied postemergence in a tank-mix with BETAMIX broadens and enhances the control of troublesome weeds. Furthermore, preemergence control of susceptible weeds which may germinate following treatment can be obtained provided overhead moisture is sufficient to activate NORTRON EC.

WEED SPECIES CONTROLLED:

Group I: Weeds controlled up to the 6-leaf stage. Redroot pigweed *(Amaranthus retroflexus)*, Wild mustard *(Brassica kaber)*, Nettleleaf goosefoot *(Chenopodium murale)*, London rocket *(Sisymbrium irio)*, Common lambsquarters *(Chenopodium album)*.

Group II: Weeds controlled up to the 4-leaf stage. Common chickweed *(Stellaria media)*, Black nightshade *(Solanum nigrum)*, Common ragweed *(Ambrosia artemisiifolia)*, Shepherdspurse *(Capsella bursa-pastoris)*, Groundcherry *(Physalis lancelfolia)*, Pennsylvania smartweed *(Polygonum pensylvanicum)*, Ladysthumb *(Polygonum persicaria)*, Prostrate pigweed *(Amaranthus blitoides)*, Coast fiddleneck *(Amsinckia intermedia)*.

Group III: Weeds controlled up to the 2-leaf stage. Annual sowthistle *(Sonchus oleraceus)*, Kochia* *(Kochia scoparia)*, Common purslane** *(Portulaca oleracea)*, Prostrate knotweed *(Polygonum aviculare)*, Wild buckwheat *(Polygonum convolvulus)*, Green foxtail*** *(Setaria viridis)*, Yellow foxtail (pigeongrass)*** *(Setaria glauca)*, Annual bluegrass*** *(Poa annua)*, Canarygrass*** *(Phalaris canariensis)*.

*Spray kochia while in the rosette stage, less than 1" in diameter.
**Group II weed in California.
***For best control, overhead moisture required

DOSAGE TABLE 10 (California, Michigan, Ohio, Minnesota and North Dakota only):

Rate of NORTRON EC Per Acre[1]					Rate of BETAMIX Per Acre[1]				
		Row Spacing					Row Spacing		
Broadcast Rate	Band[2] Width (in.)	22"	28"	30"	Broadcast Rate	Band[2] Width (in.)	22"	28"	30"
¾-1 Gallons	7	2-2⅔ Pints	1⅓-2 Pints	1⅓-1¾ Pints	4⅓-6 Pints	7	1⅓-2 Pints	1-1⅓ Pints	1⅓ Pints

[1]Use the higher rate on larger weeds and sugar beets.
[2]For other band or row widths, adjust rates in proportion to the area actually treated.

PREPLANT AND PREEMERGENCE USE PRECAUTIONS: NORTRON EC 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 EC, which dries the upper soil layer, may reduce effectiveness.

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

POSTEMERGENCE USE PRECAUTIONS: Make only one application of NORTRON EC + BETANEX or BETAMIX tank-mix during each growing season.

Do not apply NORTRON EC + BETANEX or BETAMIX tank-mix to sugar beets later than 90 days prior to harvest.

Crop Planting Precautions: If crop is lost due to unfavorable growth conditions following treatment, do not replant with crops other than sugar beets in treated land during the same season. If fields are replanted to sugar beets, reseed into treated band. Do not retreat field with NORTRON EC in the same season.

NORTRON EC + BETANEX OR BETAMIX MAY CAUSE SUGAR BEET INJURY OR STAND LOSS 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 evening when the temperature is lower.
- Frost within seven days following treatment;
- Windy or drought conditions;
- Use of a preplant or preemergence herbicide or other chemicals;
- Insect or disease injury;
- Close cultivation.

If stress conditions are present, delay application until crop has recovered.

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

Do not spray while dew is present.

Rainfall or sprinkler irrigation within 6 hours of application may reduce weed kill.

Do not allow spray drift to contact adjacent crops which may be injured by spray drift.

IMPORTANT: This tank-mix may cause temporary growth retardation and/or chlorosis or tip-burn on sugar beets. Sugar beets usually resume normal growth within 10 days.

APPENDIX I
NORTRON EC WITH LIQUID FERTILIZERS

The following procedure is suggested for evaluation of physical compatibility of NORTRON EC in mixtures with liquid fertilizers for spray tank application.

MATERIAL REQUIRED:

1. NORTRON EC—components of tank-mixes if intended for use
2. Liquid fertilizer to be used
3. Adjuvant for fertilizer tank mix: Compex* or E-Z Mix**.
4. Two (or more) one quart, wide mouth containers with lids or stoppers
5. Measuring spoons—(25 ml pipette or graduated cylinder provides more accurate measurement)
6. Measuring cup, 8 fl. oz. (237 ml)

*Compex—Kalo Laboratories, Inc., Kansas City, MO
**E-Z Mix—United Agri-Products, Greeley, CO

PROCEDURE:

1. Pour one pint (473 ml) of the liquid fertilizer into each of the quart containers.
2. Add adjuvant(s) to one or more of the containers and mix; follow label directions of adjuvant.
3. Add the NORTRON EC and tank mix components to the containers (see rate table below).
4. Close the containers with lids or stoppers and mix contents by inverting the containers ten times.
5. Inspect the surface and body of the mixture:
   a. immediately after mixing,
   b. after allowing mixtures to stand quietly for 30 minutes,
   c. immediately after mixing again (invert the containers ten more times).

If a uniform mixture does not occur, the spray tank mixture should not be used. If any of the mixtures remain uniform for 30 minutes, that mixture may be used in spray tank applications. Should any of the mixtures separate after 30 minutes but remix readily into a uniform mixture with inversion of the container, the mixture may be used provided that adequate agitation is maintained in the spray tank. If a NORTRON EC + fertilizer mixture utilizing an adjuvant is satisfactory, but the one without adjuvant is not, be sure to use the adjuvant in the spray tank at the rate recommended on the label, which was used in this test.

If non-dispersible oil, sludge or clumps of solids form in the mixtures, those combinations should not be used for spray tank application .

RATE TABLE FOR NORTRON EC MIXTURES WITH LIQUID FERTILIZERS

Gal. of Liquid Fertilizer to be applied per acre	*ml or tsp. of NORTRON EC to be added to 1 pint of fertilizer	
	ml	tsp.
20	47	9.5
30	32	6.5
40	24	5.0
50	19	4.0
60	16	3.25

*Based on field use rate of 3.0 lb. ai/acre (2 gal/a.i.) for the fertilizer volumes indicated. Adjust amount of NORTRON EC added proportionately to correspond with intended field use rate recommended on NORTRON EC label for soil type. Add the proportionate amount of tank mix component (e.g., ANTOR 4E8, Pyramin) if intended for use, based on volume of NORTRON EC used in the test.

APPENDIX II
NORTRON EC IMPREGNATION ON DRY BULK FERTILIZERS

NORTRON EC may be impregnated on many dry bulk fertilizers (1) and applied and incorporated into the soil before planting for the control of labeled grasses and broadleaf weeds in sugar beets.

All NORTRON EC label and supplementary literature instructions and precautions regarding rates per acre, soil type and soil incorporation, application and other directions must be followed .

All individual state regulations relating to dry bulk fertilizer blending, registration, labeling and application are the responsibility of the individual and/or company selling the NORTRON fertilizer mixtures.

CAUTION: Nitrate fertilizers represent a potential explosive hazard, particularly in contact with organic substances such as NORTRON EC. Do not impregnate NORTRON EC on ammonium nitrate. Do not use fertilizers containing ammonium, potassium or sodium nitrate. Such mixtures may cause explosion.

A minimum of 200 pounds and a maximum of 700 pounds of approved fertilizer ingredients (1) impregnated with the appropriate amount of NORTRON EC must be applied per acre.

For impregnating the pesticide on dry fertilizers, use a closed rotary-drum type mixer equipped with suitable spraying equipment. The spray nozzles should be positioned inside of the mixer to provide uniform spray coverage of the tumbling fertilizer. The NORTRON EC should be sprayed uniformly onto the fertilizer using a fine spray pattern.

The physical properties of fertilizers vary, particularly in liquid absorptive capacity. When absorptivity is sufficient, simple spray impregnation of the fertilizer with NORTRON EC provides a satisfactory dry mixture.

If the absorptivity is not adequate, use of a highly absorptive powder is required to provide a dry, free-flowing mixture. Microcel E (Johns-Manville Products Corporation) is the recommended absorbent powder. It should be added separately and uniformly to the prepared pesticide-fertilizer mixture in a quantity that is sufficient to provide a suitably free-flowing mixture. Generally, less than 2% by weight of Microcel E is required.

The amount of NORTRON EC actually required in the formulation of specific fertilizer mixtures should be calibrated carefully for each production operation. This is necessary to ensure that the amount of NORTRON EC actually contained in the fertilizer mixture applied to the soil represents the correct dosage rate.

Bulk fertilizers impregnated with NORTRON EC should be applied immediately, NOT STORED.

NORTRON EC IMPREGNATION ON DRY BULK FERTILIZERS:

1. Approved dry fertilizer ingredients for use with NORTRON EC

	N	P	K
Ammonium sulfate	21	0	0
Ammonium phosphate-sulfate	16	20	0
Diammonium phosphate	18	46	0
Monoammonium phosphate	11	56	0
Potassium chloride	0	0	60
Potassium sulfate	0	0	52
Single superphosphate	0	20	0
Triple superphosphate	0	46	0
Urea	45	0	0

NORTRON EC PHYSICAL DATA

Density	0.95 g/cm³
Pounds/gallon	7.92
Flashpoint	85°F (29°C) using P.M.C.C. method; flammable

2. Rate Chart for the Impregnation of Dry Bulk Fertilizers with NORTRON EC:

Fertilizer Rate per Acre	¼ G/acre	1 G/acre	1½ G/acre
200	7½ G/ton	10 G/ton	15 G/ton
250	6 G/ton	8 G/ton	12 G/ton
300	5 G/ton	6⅔ G/ton	10 G/ton
350	4¼ G/ton	5¾ G/ton	8½ G/ton
400	3¾ G/ton	5 G/ton	7½ G/ton
450	3⅓ G/ton	4½ G/ton	6⅔ G/ton
500	3 G/ton	4 G/ton	6 G/ton
550	2¾ G/ton	3⅔ G/ton	5½ G/ton
600	2½ G/ton	3⅓ G/ton	5 G/ton
650	2⅓ G/ton	3 G/ton	4⅔ G/ton
700	2⅛ G/ton	2⅞ G/ton	4⅓ G/ton

IMPORTANT: READ BEFORE USE

By using this product, user accepts the following conditions, warranty, disclaimer of warranties and limitations of liability.

CONDITIONS: The directions for use of this product are believed to be adequate and should be followed carefully. However, because of extreme weather and soil conditions, manner of use and other factors beyond NOR-AM Chemical Company's control, it is impossible for NOR-AM to eliminate all risks associated with the use of this product. As a result, crop injury or ineffectiveness is always possible.

DISCLAIMER OF WARRANTIES: THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, WHICH EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. No agent of NOR-AM Chemical Company is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. UNDER NO CIRCUMSTANCES SHALL NOR-AM CHEMICAL COMPANY BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM FAILURE TO USE THIS PRODUCT IN ACCORDANCE WITH LABEL DIRECTIONS.

LIMITATIONS OF LIABILITY: In no event shall NOR-AM Chemical Company's liability for damages arising out of the use of this product exceed the purchase price of the product used.

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