

PM 23 4.5639-8 Page 18 11  
**SPECIMEN LABEL**

**ACCEPTED**

**6 AUG 1993**

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under  
EPA Reg. No. 45639-8

# Nortron® SC

## SUSPENSION CONCENTRATE

### 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

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

#### Percent by Weight

42%

#### INERT INGREDIENTS:

58%

**TOTAL** 100%

The pesticide must be used in accordance with the label.

EPA Reg. No. 45639-8

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

**KEEP OUT OF REACH OF CHILDREN**

## CAUTION

Avoid contact with skin, eyes, or clothing

### STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Do not induce vomiting. If conscious, give 1-2 glasses of water. If unconscious, give 1-2 glasses of water. Do not give any food or drink. Seek medical attention immediately.

IF ON SKIN: Wash with plenty of water. If on face, wash with soap and water. Remove contaminated clothing and shoes.

IF INHALED: Remove person to fresh air. If breathing is difficult, give oxygen. Seek medical attention immediately.

SEE BACK PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND FIRST AID

**NOR-AM**

NORTH AMERICAN MANUFACTURING COMPANY

A NORTH AMERICAN COMPANY

1000 E. 10th Avenue

2000 E. 10th Avenue

Denver, CO 80202

Phone (303) 733-1000

**NET CONTENTS:**

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No. 3,689,597

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Product of United Kingdom

# **PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION**

Harmful if swallowed, inhaled, or absorbed through skin. Avoid contact with skin, eyes, or clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

**FIRST AID**—In case of contact, immediately flush eyes or skin with plenty of water. Remove and wash contaminated clothing before reuse.

## **ENVIRONMENTAL HAZARDS**

Do not apply directly to water, 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 target area. Do not contaminate water when disposing of equipment washwaters.

**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® SC 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 SC 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 SC. 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 following preplant incorporated, preemergence, conventional postemergence applications, or split (low rate) applications totalling more than 12 fl. oz. (0.375 lb. ai/acre);
- 6 months following split (low rate) postemergence applications totalling 12 fl. oz. (0.375 lb. ai/acre) or less.

Thorough tillage, including moldboard plowing, should precede the planting of crops other than sugar beets or ryegrass. Do not use NORTRON SC 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.

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

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

**SHAKE CONTAINER WELL BEFORE USING**

## **STORAGE AND DISPOSAL**

**STORAGE:** Protect NORTRON SC from freezing temperatures.

**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.**

## **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 SC 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:

**CAUTION:** Area treated with NORTRON® SC herbicide on (date of application). Do not enter without appropriate protective clothing (long pants, long-sleeved shirt, rubber gloves, and boots) until spray has dried. In case of accidental exposure, see Statement of Practical Treatment on the label.

## **SUGAR BEETS**

### **GENERAL INFORMATION**

NORTRON SC 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.

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

### **CAUTION**

Following a preemergence treatment of NORTRON SC, do not apply conventional rates of NORTRON SC postemergence where more than 6 pints were applied preplant or preemergence. No more than a total of 1 gallon of NORTRON SC should be applied in a single growing season. See Use Precautions for additional information on proper use.

### **WEED SPECIES CONTROLLED**

#### **Annual Broadleaf Weeds**

Black nightshade .....	<i>Solanum nigrum</i>
Common chickweed .....	<i>Stellaria media</i>
Common lambsquarters .....	<i>Chenopodium album</i>
Common purslane .....	<i>Portulaca oleracea</i>
Kochia .....	<i>Kochia scoparia</i>
Ladysthumb .....	<i>Polygonum persicaria</i>
Pennsylvania smartweed .....	<i>Polygonum pennsylvanicum</i>
Redroot pigweed .....	<i>Amaranthus retroflexus</i>
Russian thistle .....	<i>Salsola kali</i>
Wild buckwheat .....	<i>Polygonum convolvulus</i>

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#### Annual Grass Weeds

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

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

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

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

Annual Sowthistle .....	<i>Sonchus oleraceus</i>
Puncturevine .....	<i>Tribulus terrestris</i>
Shepherdspurse .....	<i>Capsella bursa-pastoris</i>
Purple nutsedge .....	<i>Cyperus rotundus</i>
Yellow nutsedge .....	<i>Cyperus esculentus</i>

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 SC and tank-mixes. All existing vegetative growth should be thoroughly worked into the soil before treatment.

**SPRAY EQUIPMENT:** Apply NORTRON SC 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 SC or NORTRON SC 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 SC 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 SC.

**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 SC or tank-mixes to a depth of 1 to 2 inches. Deeper incorporation may reduce effectiveness. Do not apply NORTRON SC 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 SC 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 SC 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.

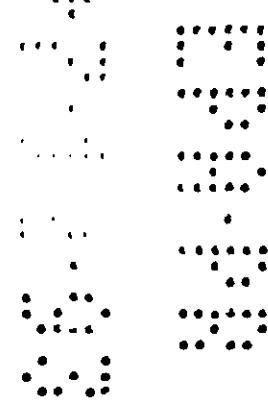
Cover the treated bands with soil and form beds or ridges using ditchers or discs. In the spring when the soil is sufficiently dry to be worked, de-ridge the beds down to within 1/2" to 1" of the treated layer using suitable equipment such as the Kirchner bedder or Oregon Northslope harrow. When de-ridging, 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.

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

**CULTURAL PRACTICES FOLLOWING APPLICATION:** When properly applied, NORTRON SC alone or in a tank-mix will provide up to 10 weeks control of susceptible weed species. When cultivating fields in which NORTRON SC 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 SC or tank-mixes.



## NORTRON SC ALONE

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

Soil Texture	Rate of NORTRON SC per Acre <sup>1</sup>			
	7-inch Band Width <sup>2</sup>			
	Broadcast	22" Row	36" Row	36" Row
<b>Coarse Textured Soils:</b> Sands, loamy sands and sandy loams	2½ to 3½ Pints	¾ to 1½ Pints	½ to 1 Pints	½ to 1 Pints
<b>Medium Textured Soils:</b> Silt loams, clay loams which contain less than 3% organic matter	3½ to 6 Pints	1½ to 2 Pints	1 to 1½ Pints	1 to 1½ Pints
<b>Fine Textured Soils:</b> Silt loams, clay loams, clays which contain more than 3% organic matter	6 to 7½ Pints	2 to 2½ Pints	1½ to 2 Pints	1½ to 1½ Pints

<sup>1</sup>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.

<sup>2</sup>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	NORTRON SC/acre	
	Broadcast	22" Row
<b>Coarse Textured Soils:</b> Sandy loams only	6 Pints	2 Pints
<b>Medium Textured Soils:</b> Silt loams and clay loams	6 Pints	2 Pints
<b>Fine Textured Soils:</b> Heavy clays	7½ Pints	2½ Pints

<sup>1</sup>For other band or row widths, adjust the rate in proportion to the area actually treated.

## NORTRON SC + ANTOR® 4ES (tank-mix) CALIFORNIA, COLORADO, MONTANA, NEBRASKA, TEXAS, AND WYOMING ONLY:

This tank-mix controls these additional weeds:

Italian ryegrass (annual) .....	<i>Lolium multi-florum</i>
Annual sowthistle .....	<i>Sonchus oleraceus</i>
Fall panicum .....	<i>Panicum dichotomiflorum</i>
Foxtail millet .....	<i>Setaria italica</i>
Groundcherry .....	<i>Physalis longifolia</i>
Junglerice .....	<i>Echinochloa colonum</i>
Prostrate pigweed .....	<i>Amaranthus blitoides</i>
Shepherdspurse .....	<i>Capsella bursa-pastoris</i>
Witchgrass .....	<i>Panicum capillare</i>

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

Preemergence applications of NORTRON SC + 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 SC where a broadcast preemergence treatment of ANTOR 4ES is followed by a band overlay of NORTRON SC preemergence. The same dosage rates should be used as in the tank-mix.

Refer to Dosage Table 3 for recommended rates.

**MIXING DIRECTIONS:** When mixing NORTRON SC in the spray tank with ANTOR 4ES, fill the spray tank with ½ of the total amount of water to be used and add NORTRON SC first. Agitate spray solution thoroughly and continuously. See ANTOR 4ES label for additional mixing directions.

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

<sup>1</sup>Pyramin® is a registered trademark of BASF Agricultural Chemicals.

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

Soil Texture	ANTOR 4ES Per Acre <sup>1</sup>	NORTRON SC Per Acre <sup>1</sup>
	Per Acre <sup>1</sup>	Per Acre <sup>1</sup>
<b>Coarse:</b> Loamy sands and sandy loams	1½ Quarts	1½ Quarts
<b>Medium:</b> Loams and silt loams	2 Quarts	2 Quarts
<b>Fine:</b> Clay loams and clays	3 to 4 Quarts <sup>2</sup>	2½ Quarts

<sup>1</sup>See section on Band Applications for calculations of proportional amounts.

<sup>2</sup>Use higher rate on heavy clay soils.

## NORTRON SC + PYRAMIN® (tank-mix)

This tank-mix controls these additional broadleaf weeds:

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>

**MIXING DIRECTIONS:** When mixing NORTRON SC in the spray tank with Pyramin, fill the spray tank with ½ of the total amount of water to be used and add NORTRON SC first. Agitate spray solution thoroughly and continuously. See Pyramin label for additional mixing directions.

**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 SC Per Acre		PYRAMIN DF Per Acre	
	Broadcast (For calibration purpose only)	16-inch Band Width <sup>1</sup> 36" Row	Broadcast (For calibration purpose only)	16-inch Band Width 36" Row
<b>Coarse Textured Soils:</b> Sands, loamy sands and sandy loams	NOT RECOMMENDED			
<b>Medium Textured Soils:</b> Silt loams, clay loams which contain less than 3% organic matter	3 to 3½ Pints	1 to 1½ Pints	4½ Pounds	1½ Pounds
<b>Fine Textured Soils:</b> Clay loams which contain more than 3% organic matter and clays	4 to 6½ Pints	1½ to 1½ Pints	4½ Pounds	1½ Pounds

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

<sup>2</sup>Use the higher rate of NORTRON SC 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 ¾ 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.

**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	NORTRON SC/Acre			PYRAMIN FL/Acre		
	Broad cast	7-inch Band Width <sup>1</sup> 22" Row	35" Row	Broad cast	7-inch Band Width <sup>1</sup> 22" Row	35" Row
<b>Coarse Textured Soils:</b> Sandy loams only	3 Pints	1 Pint	1/2 Pint	2 1/2 Qts.	1/2 Qt.	1/4 Qt.
<b>Medium Textured Soils:</b> Silt and clay loams which contain less than 3% organic matter	4 Pints	1 1/2 Pints	1 Pint	3 Qts.	1 Qt.	1/2 Qt.
<b>Fine Textured Soils:</b> Clay loams which contain more than 3% organic matter and clays	5 Pints	1 1/2 Pints	1 1/2 Pints	3 Qts.	1 Qt.	1/2 Qt.

<sup>1</sup>For other band or row widths, adjust the rate in proportion to the area actually treated.

**NORTRON SC + ANTOR 4ES + PYRAMIN  
(tank-mix)**

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

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

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.

**MIXING DIRECTIONS:** When mixing NORTRON SC in the spray tank with Pyramin and ANTOR 4ES, fill the spray tank with 1/2 of the total amount of water to be used and add NORTRON SC first and ANTOR 4ES last. Agitate spray solution thoroughly and continuously. See ANTOR 4ES and Pyramin labels for additional mixing directions.

**DOSAGE TABLE 6 (Michigan and Ohio only)**

Soil Texture	Broadcast Rates Per Acre		
	NORTRON SC (qts.)	ANTOR 4ES (qts.)	PYRAMIN <sup>®</sup> FL (qts.)
<b>Coarse Textured Soils:</b> Sandy loams only	3	1 1/2	2 1/2
<b>Medium Textured Soils:</b> Loams, silt loams and clay containing more than 3% organic matter	4	2	2 1/2
<b>Fine Textured Soils:</b> Clay loams and clays containing more than 3% organic matter	4	3	2 1/2

**PREPLANT AND PREEMERGENCE USE**

**PRECAUTIONS:**

NORTRON SC 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 SC, which dries the upper soil layer, may reduce effectiveness.

**DO NOT OVERTREAT:** The use of higher than recommended rates may cause beet injury and/or carry over problems.

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

**POSTEMERGENCE APPLICATION**

**GENERAL INFORMATION**

The tank-mixes of NORTRON SC plus BETAMIX<sup>®</sup> or BETANEX<sup>®</sup> applied postemergence broaden and enhance the control of weeds. The choice of tank-mixes is dependent upon weed species present. NORTRON SC alone is not recommended for postemergence use.

Tank-mixes of NORTRON SC plus BETAMIX or BETANEX applied postemergence control the following weeds:

**ANNUAL BROADLEAF WEEDS**

- |                              |                                 |
|------------------------------|---------------------------------|
| Annual sowthistle .....      | <i>Sonchus oleraceus</i>        |
| Black nightshade .....       | <i>Solanum nigrum</i>           |
| Hairy nightshade .....       | <i>Solanum sarrachoides</i>     |
| Coast fiddleneck .....       | <i>Amsinckia intermedia</i>     |
| Common chickweed .....       | <i>Stellaria media</i>          |
| Common lambsquarters .....   | <i>Chenopodium album</i>        |
| Common ragweed .....         | <i>Ambrosia artemisiifolia</i>  |
| Groundcherry .....           | <i>Physalis lanceifolia</i>     |
| Kochia <sup>*</sup> .....    | <i>Kochia scoparia</i>          |
| Ladysthumb .....             | <i>Polygonum persicaria</i>     |
| London rocket .....          | <i>Sisymbrium irio</i>          |
| Nettleleaf goosefoot .....   | <i>Chenopodium murale</i>       |
| Pennsylvania smartweed ..... | <i>Polygonum pennsylvanicum</i> |
| Prostrate pigweed .....      | <i>Amaranthus gracizans</i>     |
| Redroot pigweed .....        | <i>Amaranthus retroflexus</i>   |
| Purslane .....               | <i>Portulaca oleraceus</i>      |
| Shepherdspurse .....         | <i>Capsella bursa-pastoris</i>  |
| Wild buckwheat .....         | <i>Polygonum convolvulus</i>    |
| Wild mustard .....           | <i>Brassica kaber</i>           |

<sup>\*</sup>Spray kochia while in the rosette stage, less than one inch in diameter.

**ANNUAL GRASS WEEDS**

- |                        |                             |
|------------------------|-----------------------------|
| Annual bluegrass ..... | <i>Poa annua</i>            |
| Canarygrass .....      | <i>Phalaris canariensis</i> |

Additionally, a tank-mix of NORTRON SC plus BETAMIX applied postemergence also controls the following annual grass weeds:

- |                                     |                        |
|-------------------------------------|------------------------|
| Green foxtail .....                 | <i>Setaria viridis</i> |
| Pigeon grass (Yellow foxtail) ..... | <i>Setaria glauca</i>  |

**Mixing the Spray:** Add NORTRON SC to the water in the spray tank followed by BETAMIX or BETANEX while agitating the spray solution thoroughly. Refer to the BETAMIX or BETANEX 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 or 5-10 gallons of water per acre in a band. 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, with conventional rates moisture after this period of time is advantageous for moving NORTRON SC into the top 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 SC 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 SC in the soil is reduced as the soil texture becomes finer and organic matter increases.

### CAUTION

Following a preemergence treatment of NORTRON SC, do not apply conventional rates of NORTRON SC postemergence where more than 6 pints were applied preplant or preemergence. No more than a total of 1 gallon of NORTRON SC should be applied in a single growing season. See Use Precautions for additional information on proper use.

## SPLIT (LOW RATE) APPLICATIONS

Split (low rate) applications of NORTRON SC + BETAMIX or BETANEX may be applied to sugar beets to control early germinating weeds (the tank-mix of NORTRON SC + BETANEX may be used in all sugar beet areas except California). The first spray must be applied when the earliest emerging weeds have reached cotyledon size. See Dosage Table 8 for broadcast rates. See Dosage Table 9 for equivalent band rates. For band applications, apply in 5-10 gallons of water per acre. 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 second application is delayed, conventional applications as described below will be necessary.

**DOSAGE TABLE 8**  
DOSAGE CHART FOR BROADCAST APPLICATION

Sugar Beet Stage	Pints/Acre Broadcast	
	NORTRON SC + BETAMIX	NORTRON SC + BETANEX
Cotyledon	0.25 + 1.50	0.25 + 1.50
2 Leaf	0.33 + 2.00	0.33 + 2.00
4 Leaf	0.50 + 3.00	0.50 + 3.00

**DOSAGE TABLE 9**  
BETAMIX OR BETANEX DOSAGE CHART FOR BAND APPLICATION

Broadcast Equivalent	Band Width	BAND RATE — ROW SPACING		
		22"	26"	30"
1.5 pints/acre	5'	5.5 fl. oz.	4.3 fl. oz.	4.0 fl. oz.
	7'	7.6 fl. oz.	6.0 fl. oz.	5.6 fl. oz.
2.0 pints/acre	5'	7.3 fl. oz.	5.7 fl. oz.	5.3 fl. oz.
	7'	10.2 fl. oz.	8.0 fl. oz.	7.5 fl. oz.
3.0 pints/acre	5'	10.9 fl. oz.	8.6 fl. oz.	8.0 fl. oz.
	7'	15.3 fl. oz.	12.0 fl. oz.	11.2 fl. oz.

**DOSAGE TABLE 10**  
NORTRON SC DOSAGE CHART FOR BAND APPLICATION

Broadcast Equivalent	Band Width	BAND RATE — ROW SPACING		
		22"	26"	30"
0.25 pints/acre	5'	0.9 fl. oz.	0.7 fl. oz.	0.7 fl. oz.
	7'	1.3 fl. oz.	1.0 fl. oz.	0.9 fl. oz.
0.33 pints/acre	5'	1.2 fl. oz.	0.9 fl. oz.	0.8 fl. oz.
	7'	1.7 fl. oz.	1.3 fl. oz.	1.2 fl. oz.
0.5 pints/acre	5'	1.8 fl. oz.	1.4 fl. oz.	1.3 fl. oz.
	7'	2.5 fl. oz.	2.0 fl. oz.	1.9 fl. oz.

## CONVENTIONAL APPLICATIONS

**Timing of Application:** Apply the tank-mix NORTRON SC + BETANEX or NORTRON SC + 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 SC where increased residual weed control is desired. Where Eptam has been applied preplant (fall or spring applied), do not apply NORTRON SC + BETAMIX or BETANEX tank-mix before the sugar beets have 6 expanded true leaves.

See Postemergence Use Precautions for additional information on proper use.

### NORTRON SC + BETAMIX (tank-mix)

NORTRON SC 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 SC.

### 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 lanceifolia*  
Pennsylvania smartweed ..... *Polygonum pennsylvanicum*  
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 11

Rate of NORTRON SC Per Acre <sup>1</sup>					Rate of BETANEX Per Acre <sup>1</sup>				
Broadcast Rate	Band <sup>2</sup> Width (in.)	Row Spacing			Broadcast Rate	Band <sup>2</sup> Width (in.)	Row Spacing		
		22"	28"	36"			22"	28"	36"
2 1/4-3 Pints	7	1 1/4 Pint	1 1/4 Pint	1 1/4 Pint	4 1/4-6 Pints	7	1 1/4-2 Pints	1 1/4-1 1/2 Pints	1 1/4 Pints

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

**NORTRON SC + BETANEX (tank-mix)**

**ALL AREAS EXCEPT CALIFORNIA:** NORTRON SC 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 SC.

**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 lanceifolia*
- Pennsylvania smartweed ..... *Polygonum pennsylvanicum*
- 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*

DOSAGE TABLE 12  
(all areas except California)

Rate of NORTRON SC Per Acre <sup>1</sup>					Rate of BETANEX Per Acre <sup>1</sup>				
Broadcast Rate	Band <sup>2</sup> Width (in.)	Row Spacing			Broadcast Rate	Band <sup>2</sup> Width (in.)	Row Spacing		
		22"	28"	36"			22"	28"	36"
2 1/4-3 Pints	7	1 1/4 Pint	1 1/4 Pint	1 1/4 Pint	4 1/4-6 Pints	7	1 1/4-2 Pints	1 1/4-1 1/2 Pints	1 1/4 Pints

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

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

Do not apply NORTRON SC + 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 or ryegrass in treated land during the same season. If fields are replanted to sugar beets, reseed into treated band. Do not retreat field with conventional rates of NORTRON SC in the same season.

**NORTRON SC + 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 and/or carry over problems.

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.

**NORTRON SC Mixtures With Fertilizers**

**NORTRON SC IMPREGNATION ON DRY BULK FERTILIZERS**

NORTRON SC 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 SC 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.

A minimum of 200 pounds and a maximum of 700 pounds of approved fertilizer ingredients (2) impregnated with the appropriate amount of NORTRON SC 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 SC 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 SC 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 SC 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 SC actually contained in the fertilizer mixture applied to the soil represents the correct dosage rate.

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

### NORTRON SC IMPREGNATION ON DRY BULK FERTILIZERS:

#### 1. Approved dry fertilizer ingredients for use with NORTRON SC

	N	P	K
Ammonium nitrate	?	?	?
Ammonium sulfate	21	0	0
Ammonium phosphate-sulfate	18	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 SC PHYSICAL DATA

Density 1.14 g/cm<sup>3</sup>  
Pounds/gallon 9.50  
Flashpoint Non-combustible

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

Fertilizer Rate per Acre	0.75 G/acre	1 G/acre	1.50 G/acre
200	2.80 G/ton	3.75 G/ton	5.63 G/ton
250	2.25 G/ton	3.00 G/ton	4.50 G/ton
300	1.88 G/ton	2.50 G/ton	3.75 G/ton
350	1.59 G/ton	2.16 G/ton	3.19 G/ton
400	1.41 G/ton	1.88 G/ton	2.81 G/ton
450	1.25 G/ton	1.69 G/ton	2.50 G/ton
500	1.13 G/ton	1.50 G/ton	2.25 G/ton
550	1.03 G/ton	1.38 G/ton	2.06 G/ton
600	0.94 G/ton	1.25 G/ton	1.88 G/ton
650	0.87 G/ton	1.13 G/ton	1.75 G/ton
700	0.80 G/ton	1.08 G/ton	1.62 G/ton

#### NORTRON SC WITH LIQUID FERTILIZERS

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

#### MATERIAL REQUIRED:

1. NORTRON SC—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 SC 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 SC + 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 SC MIXTURES WITH LIQUID FERTILIZERS

Gal. of Liquid Fertilizer to be applied per acre	*ml or tsp. of NORTRON SC to be added to 1 pint of fertilizer	
	ml	tsp.
20	17.6	3.6
30	12.0	2.4
40	9.0	1.9
50	7.1	1.5
60	6.0	1.2

\*Based on field use rate of 3.0 lb. ai/acre (¾ gal/acre) in the fertilizer volumes indicated. Adjust amount of NORTRON SC added proportionately to correspond with intended field use rate recommended on NORTRON SC label for soil type. Add the proportionate amount of tank mix component (e.g., ANTOR 4ES, Pyramin) if intended for use, based on volume of NORTRON SC used in the test.

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# RYEGRASS, TALL FESCUE, AND BENTGRASS SEED CROPS

## GENERAL INFORMATION

NORTRON SC is a selective herbicide for use in ryegrass, tall fescue, and bentgrass seed crops in California, Idaho, Oregon, and Washington. It effectively controls or reduces competition from those weed species listed below. NORTRON SC may be applied preemergence to new seedlings of annual or perennial ryegrass or postemergence to 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 SC is less effective when applied to dry soil. Rainfall or overhead irrigation shortly after application is necessary for activation.

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

## WEEDS CONTROLLED

Annual bluegrass .....	<i>Poa annua</i>
Seedling Rattail fescue .....	<i>Festuca myuros</i>
Seedling volunteer wheat .....	<i>Triticum</i> spp.
Seedling volunteer barley .....	<i>Hordeum</i> spp.
Soft chess .....	<i>Bromus mollis</i>
Seedling Wild oats .....	<i>Avena fatua</i>
Dowdy brome .....	<i>Bromus tectorum</i>
Common chickweed .....	<i>Stellaria media</i>
Common vetch .....	<i>Vicia sativa</i>
Common velvetgrass .....	<i>Holcus lanatus</i>
Mannagrass .....	<i>Glyceria</i> spp.
Barnyardgrass .....	<i>Echinochloa crus-galli</i>
Canarygrass .....	<i>Phalaris canariensis</i>
Green foxtail .....	<i>Setaria viridis</i>
Large crabgrass .....	<i>Digitaria sanguinalis</i>
Yellow foxtail .....	<i>Setaria glauca</i>

**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 SC. 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 SC after seeding and prior to weed emergence. For best results apply to moist soil. Apply 1½ to 3 pints per acre. Use the lower rate for control of annual bluegrass and common chickweed. For control of rattail fescue, wild oats, and volunteer cereals and other weeds listed use 2¼ to 3¾ pints per acre.

**After weed emergence:** Apply NORTRON SC at earliest possible weed growth stage but not later than the 4-leaf stage. Rattail fescue, wild oats, and volunteer cereals which are more difficult to control, must be treated no later than the 2-leaf stage. Apply 2¼ to 3¾ pints per acre. Use the highest rate where rattail fescue, wild oats, and volunteer cereals are 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 SC 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 SC 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.

**NOTE:** Do not apply NORTRON SC when crop shows Diuron injury.

DOSEAGE TABLE 13

Crop	Rate Per Acre	Remarks
perennial ryegrass and tall fescue	1½ to 3 pints	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.

**After weed emergence:** Apply NORTRON SC at earliest possible weed growth stage but not later than the 4-leaf stage. Rattail fescue, wild oats, and volunteer cereals which are more difficult to control, must be treated no later than the 2-leaf stage. Apply 2¼ to 3¾ pints per acre. Use the highest rate where rattail fescue, wild oats, and volunteer cereals are present and where weed infestation is heavy.

## ESTABLISHED STANDS OF PERENNIAL RYEGRASS AND TALL FESCUE:

**Before weed emergence:** Apply NORTRON SC at 2¼ to 3¾ pints per acre prior to weed emergence. Use higher rate where rattail fescue, wild oats, and volunteer cereals are 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 SC at earliest possible weed growth stage but not later than the 4-leaf stage. Rattail fescue, wild oats, and volunteer cereals which are more difficult to control, must be treated no later than the 2-leaf stage. Apply 2¼ to 3¾ pints per acre. Use the higher rate where rattail fescue, wild oats, and volunteer cereals are present. Where weed pressure is very heavy and rattail fescue is at the maximum stage of growth for treating, a rate of 3¾ pints of NORTRON SC 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 SC at 1½ to 3 pints per acre prior to weed emergence. Use higher rate where rattail fescue, wild oats, and volunteer cereals are expected to be a problem. For best results, apply to moist soil.

**After weed emergence:** Apply NORTRON SC at earliest possible weed growth stage but no later than the 4-leaf stage. Rattail fescue, wild oats, and volunteer cereals which are more difficult to control, must be treated no later than the 2-leaf stage. Apply at the rate of 1½ to 3 pints per acre. Use higher rate when rattail fescue, wild oats, and volunteer cereals are a problem. Do not apply more than 3 pints of NORTRON SC per acre on bentgrass.

## USE PRECAUTIONS:

(For use in California, Idaho, Oregon, and Washington only):

NORTRON SC 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 SC treatment. Failure to allow for dissipation of charcoal residue may result in reduced weed control.

## COMMERCIAL SOD PRODUCTION

### GENERAL INFORMATION

NORTRON SC is a selective herbicide for use in established and newly planted tall fescue and perennial ryegrass grown for sod in California, Idaho, Oregon, and Washington. NORTRON SC 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.

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

### WEEDS CONTROLLED:

Annual bluegrass .....	<i>Poa annua</i>
Large crabgrass .....	<i>Digitaria sanguinalis</i>
Green foxtail .....	<i>Setaria viridis</i>
Yellow foxtail .....	<i>Setaria glauca</i>
Canarygrass .....	<i>Phalaris canariensis</i>
Volunteer barley .....	<i>Hordeum</i> sp
Volunteer wheat .....	<i>Triticum</i> sp.
Wild oats .....	<i>Avena fatua</i>
Rattail fescue .....	<i>Festuca myuros</i>
Common velvetgrass .....	<i>Holcus lanatus</i>
Mannagrass .....	<i>Glyceria</i> sp.
Downy brome .....	<i>Bromus tectorum</i>
Soft chess .....	<i>Bromus mollis</i>

(For Use in California, Idaho, 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 10 to 50 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 SC treatment.

**NEWLY PLANTED PERENNIAL RYEGRASS AND TALL FESCUE GROWN FOR SOD:** Apply NORTRON SC 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 SC at 2¼ to 3 pints per acre prior to weed emergence. Use the higher rate where rattail fescue, wild oats, and volunteer cereals are expected to be a problem.

**After weed emergence:** Apply NORTRON SC at earliest possible weed growth stage but no later than the 4-leaf stage. Rattail fescue, wild oats, and volunteer cereals which are more difficult to control, must be treated no later than the 2-leaf stage. Apply NORTRON SC at 2¼ to 3 pints per acre.

**ESTABLISHED PERENNIAL RYEGRASS AND TALL FESCUE SOD:** For preemergence and/or postemergence control of susceptible weeds, apply NORTRON SC 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 SC at 2¼ to 3 pints per acre. Repeat applications at 4 to 8 week intervals may be needed to maintain weed control. DO NOT apply more than 1 gallon of NORTRON SC per acre per growing season.

## USE PRECAUTIONS:

(For use in California, Idaho, Oregon, and Washington only):

NORTRON SC 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 SC treatment. Failure to allow for dissipation of charcoal residue may result in reduced weed control.

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**IMPORTANT: READ BEFORE USE**

By using this product, user or buyer 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. All such risks shall be assumed by the user or buyer.

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