

JUN 10 1995

Mr. J. Keith Kelly  
 Cro Tech, Inc.  
 P.O. Box 290  
 Madison, GA 30650

**BEST AVAILABLE COPY**

Dear Mr. Kelly:

Subject: Pennington Crabgrass Preventer 10 with Preemergence  
 Herbicide  
 EPA Registration No. 59144-11  
 Pennington Crabgrass Preventer 43 with Fertilizer  
 Preemergence Herbicide  
 EPA Registration No. 59144-12  
 Pennington Crabgrass Preventer 35 with Fertilizer  
 Preemergence Herbicide  
 EPA Registration No. 59144-13  
 Pennington Crabgrass Preventer 40 with Fertilizer  
 Preemergence Herbicide  
 EPA Registration No. 59144-14  
 Pennington Crabgrass Preventer with Fertilizer  
 Preemergence Herbicide (23)  
 EPA Registration No. 59144-15  
 Pennington Crabgrass Preventer 275 with Fertilizer  
 EPA Registration No. 59144-17  
 Application dated October 27, 1994, request to Amend  
 Label to add use for landscape treatments and to  
 Update Label to Match Label of Barricade<sup>®</sup> Herbicide  
 and Letter dated November 23, 1994, Request for Attention  
 of Conditional Registration for each "se-100" Products  
 Listed Above

As requested we are extending the subject conditional  
 pesticide product registrations to September 27, 1997 based  
 on a request by Sandoz Agro, Inc. for an extension of time  
 to submit the required data to support the active ingredient  
 each of these products. The condition for these extensions  
 is:

- o Provided that the registrant of the active ingredient  
 in these products submits the required data to con-  
 tinue the registration of it (prodiavine) for the  
 use-patterns claimed on the labels of the subject  
 pesticide products.

If at any time during the time of these extensions, we  
 are able to establish that the required data to support the  
 registration of the active ingredient are in the Agency's

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files, we shall change these registrations to FIFPA section 3(c)(5) registrations. Failure of the registrant of the active ingredient to submit the required data may result in the suspension of the subject products.

Please note we use the name of the product that was registered and appears on the EPA "Notice of Registration" for each product. Requests such as these should conform with the EPA "General Information on Applying for Registration of Pesticides in the United States", Second Edition, August, 1992.

The proposed labeling amendments to add landscape ornamentals as uses sites and other amendments for these products have been reviewed for each of the subject pesticide product registrations and are acceptable for registration under the Federal Insecticide, Fungicide and Rodenticide Act as amended provided that you:

1. Revise the expression of dosage in footnote 1, listed under the section entitled: "Weeds Controlled", by listing the dosages in a consistent order from low to high.
2. Submit one (1) printed copy of the final printed label before releasing the product for shipment under the enclosed stamped label.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFPA, Section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Sincerely yours,

Joanne I. Miller  
Product Manager (23)  
Fungicide-Herbicide Branch  
Registration Division (7505C)

awilson:Diskette Prodiamine:01-10-95

3716

**PENNINGTON CRABGRASS PREVENTER PLUS  
FERTILIZER W/BARRICADE 0.43%**

**ACTIVE INGREDIENT:**

Prodiamine: [N<sup>3</sup>,N<sup>3</sup>-Di-n-propyl-2,4-dinitro-6-(trifluoromethyl)-m-phenylenediamine] ..... **0.43%**

**INERT INGREDIENTS:** ..... **99.57%**

**TOTAL:** ..... **100.0%**

**Guaranteed Fertilizer Analysis:**

Nitrogen            32 % (N)  
Phosphorus        4 % (P<sub>2</sub>O<sub>5</sub>)  
Potassium         6 % (K<sub>2</sub>O)

Nitrogen from: Urea formaldehyde, Urea, Ammonia

ACCEPTED  
with COMMENTS  
In EPA Letter Dated

JAN 10 1995  
Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.  
59144-12

For selective preemergence control of grass and broadleaf weeds in:

- established turf grasses (excluding golf course putting greens) and lawns
- landscape ornamentals (including perennial & wildflower plantings)

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

See the following section, Precautionary Statements, Hazards To Humans and Domestic Animals, for additional information.

Net Weight:

EPA Reg. No. 59144-12  
EPA Est. No.

Gro Tec, Inc.  
P.O. Box 290  
Madison, GA 30650

BARRICADE® is a Registered Trademark of Sandoz, Ltd.

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## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### CAUTION

Causes moderate eye injury (irritation). Harmful if inhaled or absorbed through the skin. Avoid contact with skin, eyes, or clothing. Avoid breathing dust. Wash thoroughly with soap and water after handling. Prolonged or frequently repeated skin contact while handling the material may cause allergic reactions in some individuals.

#### Statements of Practical Treatment

If in eyes: Flush thoroughly with water for several minutes. Get medical attention if irritation persists.

If on skin: Wash with soap and water. Rinse thoroughly. Get medical attention if irritation persists.

If inhaled: Remove victim to fresh air.

#### Environmental Hazards

This product has low solubility in water. At the limits of solubility, this product is not toxic to fish. However, at concentrations above the level of water solubility, it may be toxic to fish. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not contaminate water when disposing of equipment washwaters.

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## STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

### STORAGE

Store in original container away from other fertilizer, feed, or food stuffs and separated from other pesticides.

### PESTICIDE DISPOSAL

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

### CONTAINER DISPOSAL

Plastic Containers: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or; puncture and dispose of in a sanitary landfill or at an incineration facility, or; if allowed by state and local authorities, by burning locally. If burned, stay out of smoke.

Paper and plastic containers: Completely empty container into application equipment. Then dispose of empty container in a sanitary landfill or at an incineration facility, or; if allowed by state and local authorities, by burning locally. If burned, stay out of smoke.

Fiber Drums: Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residues into application equipment. Dispose of empty liner in a sanitary landfill or at an incineration facility if allowed by state and local authorities. If the drum cannot be reused, dispose of in a sanitary landfill or by incineration if allowed by state and local authorities.

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## DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

This product is a selective preemergence herbicide that provides residual control of many grass and broadleaf weeds in turf grasses and landscapes. This product controls susceptible weeds by inhibiting weed seeds germination and root development. For most effective weed control this product must be incorporated by 0.5 inch of rainfall or irrigation. Incorporation should take place as soon as possible after application and should not be delayed past 14 days from the date of application.

Not for use on plants being grown (1) for sale or other commercial use, (2) for commercial seed production, or (3) for research purposes. For use on plants intended for aesthetic purposes or climatic modification and being grown in ornamental gardens or parks, or on golf courses or lawns and grounds.

Do not graze or feed livestock forage cut from areas treated with this product.

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

Do not apply aerially.

Do not apply to golf course putting greens.

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**Application Directions**

Apply uniformly through suitable, calibrated commercial application equipment.

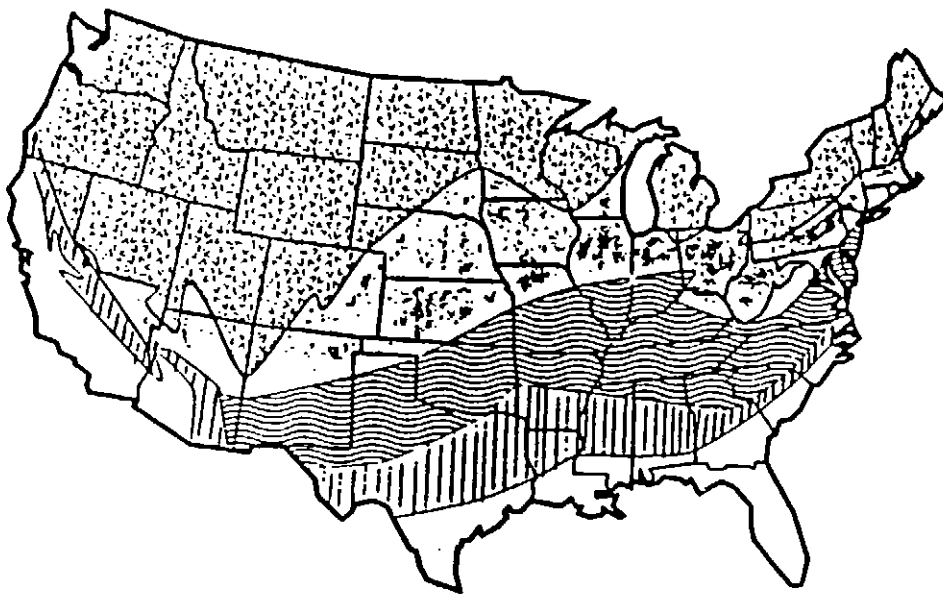
**ESTABLISHED TURF**






This product is a selective preemergence herbicide that, when properly applied, will control certain grass and broadleaf weeds in established turf grass and lawns. The species of turf grass determines the maximum amount of material that may be applied during a year.

Most effective weed control in turf grasses will be obtained when this product is activated by at least 0.5 inch of rainfall or irrigation within 14 days after application and prior to weed germination. See the map below for approximate crabgrass germination dates.

**CRABGRASS SEED GERMINATION DATES**

Approximate Date



-  After May 30
-  After May 10
-  After April 20
-  After March 20
-  January 1 to March 20

### Use Precautions

The following use precautions apply to the use of this product in turf grasses and lawns:

Application of this product may thin emerged annual bluegrass and newly over-seeded grasses.

Do not apply to OVERSEEDED TURF for 60 days after seeding or until after the second mowing, whichever is longer. Injury to desirable seedlings is likely if this product is applied before seedling secondary roots are in the second inch of soil, not thatch plus soil.

Do not apply to newly set sod until the following year.

Application of this product to turf stressed by drought, low fertility, or pest damage may result in turf injury.

Disturbing the herbicide barrier with cultural practices such as disking may result in reduced weed control.

Do not apply this product to putting greens or areas where dichondra, colonial bentgrass, velvet bentgrass or annual bluegrass (Poa annua) are desirable species.



**Maximum Annual Rates**

This product should not be applied above a maximum annual rate of 349 lb/A

**Turf Species and Rates**

For season long control this product may be applied as a single application, or if needed followed by a second application for increased length of control . The length of time of residual weed control provided by this product is related to the rate applied. Use the higher rate within the listed range for longer control. Longer control is desirable in areas where crabgrass germinates between January 1 and April 20 (See Crabgrass Seed Germination Data Map).

Select maximum use rate based on turf grass species. All applications must be made prior to germination of the target weed seeds. This product will not control established weeds.

**Turf Species and Rates Table:**

<b>MAXIMUM RATE/CALENDAR YEAR of PENNINGTON CRABGRASS PREVENTER 0.43% by Turf Grass Species<sup>1</sup></b>		
<b>Turf Species:</b>	<b>lb PENNINGTON CRABGRASS PREVENTER 0.43%/A</b>	<b>lb ai/A</b>
Bermudagrass <sup>2</sup> Bahigrass Centipedegrass Seashore Paspalum Tall Fescue (including turf-type) Zoysia	349	1.5
Buffalograss Kentucky Bluegrass Perennial Ryegrass	233	1.0
Creeping Red Fescue St. Augustinegrass	172	0.75
Creeping Bentgrass	154	0.65

<sup>1</sup> These are the maximum rate per calendar year by species limitations.

<sup>2</sup> May be used on newly sprigged or plugged Bermudagrass at rates not to exceed 121 lb/A. Newly sprigged or plugged Bermudagrass stolon rooting may be temporarily retarded. Suppression only of Foxtail, Goosegrass and Rescuegrass due to reduced product rates used in sprigging situations.

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- Do not apply more than **349 lb** of this product per calendar year.
- Use higher rates of this product to achieve higher levels of fertility and weed control for each turf type.

**Weeds Controlled**

When used at the recommended rates (see Turf Species and Rates Table) this product will control:

Barnyardgrass	Carpetweed
Bluegrass, Annual ( <u>Poa annua</u> )	Chickweed, Common
Crabgrass (large, smooth)	Henbit
Foxtails, Annual	Knotweed
Goosegrass <sup>1</sup>	Lambsquarter, Common
Johnsongrass (from seed)	Pigweed
Rescuegrass <sup>3</sup>	Purslane, Common
Signalgrass, Broadleaf	Shepard's-purse <sup>2</sup>
	Spurge, Prostrate
	Woodsorrel, Yellow (from seed)

Do not exceed the maximum annual application rates recommended for the turf species. All applications must be made prior to germination of weed seeds. This product will not control established weeds.

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<sup>1</sup> In many areas a single application of **154 to 349 lb/A** of this product will control goosegrass. However, under heavy goosegrass pressure and/or an extended growing season, make an initial application of **154 to 233 lb/A** followed after 60 to 90 days by a second application of **195 to 121 lb/A**, respectively, for season long goosegrass control. Do not exceed the maximum rate for turf grass species listed in the Maximum Annual rate Table above.

<sup>2</sup> Winter weeds are best controlled by applications made prior to germination: late summer, fall or winter timings.

<sup>3</sup> Suppression only.

**Oversceding/Reseeding**

This product will inhibit the germination of turf species if overseeded/reseeded too soon after application. The interval between application and overseeding/reseeding is dependent on the application rate, soil temperature, and soil moisture. A shorter interval is possible if growing conditions are warm and wet, while a longer interval is needed if conditions are cool and dry.

Use the Overseeding/Reseeding Intervals Table below as a guide when choosing the appropriate overseeding/reseeding interval for each situation.

**Overseeding/Reseeding Intervals Table:**

This Product Rate (lbs./A)	Overseeding/Reseeding Interval (months) Based Upon Seeding Method and Predominant Soil Conditions for the Season			
	Broadcast Seeding		Drill Seeding	
	Wet and Warm	Cool and Dry	Wet and Warm	Cool and Dry
121	4	6	3	4
233	8	12	6	8
349	12	18	9	12

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**LANDSCAPE ORNAMENTALS (including Perennial and Wildflower Plantings)**

This product may be applied for residual preemergence weed control in ornamentals.

**Use Rates**

Apply this product at 154 to 349 lb/A in fall and/or spring. Use the higher rate of application for longer control periods. Sequential or single applications are allowed so long as the total amount of product applied does not exceed the maximum annual application rate of 349 lb/A.

**Application Timing and Information**

Apply this product prior to weed seed germination to the soil surface surrounding established tolerant ornamentals listed below. Delay application to allow soil to settle around new transplants and water thoroughly before applying this product. Apply this product after cuttings form roots and become established.

This product is a preemergence herbicide and will not control emerged weeds. Most effective weed control in ornamentals will be obtained when this product is activated by at least 0.5 in of rainfall or irrigation, or with shallow (1 to 2 in) mechanical incorporation, before weed seeds germinate. Acceptable control will be obtained when this product is activated within 14 days after application.

Best weed control is obtained when this product is applied to soil free of clods, weeds, and debris such as leaves and mulch. Prior to application of this product, control existing vegetation by hand weeding, cultivation or the use of an appropriate postemergence herbicide.

**Tolerant Ornamental Species**

This product will not harm most established ornamental trees, shrubs and flowers. The species listed below are tolerant to this product. Best results will be obtained when this product is uniformly applied to the soil surface; avoid applying to ornamental shoots which may defeat the effort to get uniform distribution on the soil surface. This product may be applied over the top of these species without injury.

Scientific name	Common name
<i>Acer palmatum</i>	Japanese Maple
<i>A. platanoides</i>	Norway Maple
<i>Actinidia chinensis</i>	Kiwi*
<i>Agapanthus africanus</i>	Lily-of-the-Nile
<i>Arctostaphylos densiflora</i>	Vine Hill Manzanita
<i>Arctotheca calendula</i>	Cape Weed
<i>Aucuba japonica</i>	Japanese Aucuba
<i>Barberis gladwynensis</i>	Barberry
<i>B. julianae</i>	Wintergreen Barberry
<i>B. mentorensis</i>	Mentor Barberry
<i>B. thunbergii</i>	Japanese Barberry
<i>B. verruculosa</i>	Warty Barberry
<i>Buxus microphylla</i>	Japanese Boxwood
<i>Callistemon viminalis</i>	Weeping Bottlebrush
<i>Calluna vulgaris</i>	Scotch Heather
<i>Carpobrotus edulis</i>	Fottentot Fig (Ice Plant)
<i>Cassia artemisoides</i>	Feathery Cassia
<i>Ceanothus rigidus</i>	Wild Lilac
<i>Chamaecyparis pisifera</i>	False Cypress
<i>Cleyera japonica</i>	Cleyera
<i>Citrus spp.</i>	Citrus species*
<i>Cornus florida</i>	Flowering Dogwood
<i>C. stolonifera</i>	American Dogwood
<i>Cortaderia seloana</i>	Pampas Grass
<i>Cotoneaster apiculatus</i>	Cranberry Cotoneaster
<i>C. buxifolius</i>	Cotoneaster
<i>C. dammeri</i>	Bearberry Cotoneaster
<i>C. microphyllus</i>	Rockspray Cotoneaster
<i>Cretaeus spp.</i>	Hawthorne*
<i>Cupressus sempervirens</i>	Italian Cypress
<i>Delasperma alba</i>	White Trailing Ice Plant
<i>Dodonea viscosa</i>	Hop Bush
<i>Elaeagnus pungens</i>	Silverberry
<i>Euonymus fortunei</i>	Wintercreeper
<i>E. japonica</i>	Evergreen Euonymus
<i>E. kiautschovica</i>	Spreading Euonymus
<i>Fatsia japonica</i>	Japanese Aralia
<i>Forsythia intermedia</i>	Border Forsythia
<i>F. viridissima</i>	Greenstem Forsythia
<i>Gardenia jasminoides</i>	Gardenia, Cape-Jasmine
<i>Hedera helix</i>	English Ivy
<i>Hibiscus rosa-sinensis</i>	Chinese Hibiscus
<i>Ilex cornuta</i>	Chinese Holly
<i>I. crenata</i>	Japanese Holly
<i>I. opaca</i>	American Holly
<i>I. pernyi</i>	Holly

<b>Scientific name</b>	<b>Common name</b>
<i>Jasminium nudiflorum</i>	Winter Jasmine
<i>Juniperus chinensis</i>	Chinese Juniper
<i>J. conferta</i>	Shore Juniper
<i>J. horizontalis</i>	Creeping Juniper
<i>Juglans</i> sp.	Walnut*
<i>Justicia brandegeana</i>	Shrimp Plant
<i>Lagerstromia indica</i>	Crepe Myrtle
<i>Ligustrum amurense</i>	Amur Privet
<i>L. japonicum</i>	Japanese Privet
<i>L. lucidum</i>	Glossy Privet
<i>Liriope muscari</i>	Big Blue Lily Turf
<i>Lonicera japonica</i>	Japanese Honeysuckle
<i>L. tatarica</i>	Tatarian Honeysuckle
<i>Maleophora luteola</i>	Ice Plant
<i>Malus</i> sp.	Crabapple*
<i>Nandina domestica</i>	Heavenly Bamboo
<i>Olea europa</i>	Olive*
<i>Ophiopogon japonicus</i>	Mondo Grass
<i>Osteospermum fruticosum</i>	Trailing African Daisy
<i>Oxydendrum arboreum</i>	Sourwood
<i>Persea americana</i>	Avocado*
<i>Photinia fraseri</i>	Frasier's Photinia
<i>Picea abies</i>	Norway Spruce
<i>Pieris japonica</i>	Lily-of-the-Valley Shrub
<i>Pinus brutia</i>	Calabrian Pine
<i>P. canariensis</i>	Canary Island Pine
<i>P. halepensis</i>	Aleppo Pine
<i>P. nigra</i>	Austrian Black Pine
<i>P. radiata</i>	Monterey Pine
<i>P. thunbergiana</i>	Japanese Black Pine
<i>P. strobus</i>	Eastern White Pine
<i>P. sylvestris</i>	Scotch Pine
<i>Pistachio</i> sp.	Pistachio*
<i>Pittosporum rhombifolium</i>	Queensland Pittosporum
<i>P. tobira</i>	Japanese Pittosporum
<i>Podocarpus macrophyllus</i>	Japanese Yew
<i>Prunus laurocerasus</i>	English Laurel
<i>Prunus</i> sp.	Almond, Apricot, Nectarine, Peach, Plum and Prune*
<i>Pyracantha coccinea</i>	Firethorn
<i>P. fortuneana</i>	Firethorn
<i>P. koidzumii</i>	Firethorn
<i>Pyrus</i> sp.	Bradford Pear sp.
<i>Quercus rubra</i>	Red Oak
<i>Raphiolepis indica</i>	Indian Hawthorne

Scientific name	Common name
Rhododendron (including Azalea)	'Coral Bells' 'Formosa' 'Hino-crimson' 'PJM' 'Roseum Elegans'
Rosa banksiae	Lady Bank's Rose
Rosmarinus officinalis	Rosemary
Sartolina virens	
Sedum album	Stonecrop
Syzygium paniculatum	Japanese Boxcherry
Taxus cuspidata	Japanese Yew
T. media	Yew
Thuja occidentalis	American Arborvitae
Trachelospermum asiaticum	Star Jasmine
Tsuga canadensis	Canada Hemlock
Viburnum japonicum	Japanese Viburnum
V. odoratissimum	Sweet Viburnum
V. plicatum	Japanese Snowball
V. rigidum	Canary Island Viburnum
V. tinus	Laurustinus
V. trilobium	Cranberry Bush
V. wrightii	
Vinca minor	Dwarf Periwinkle
Vitis sp.	Grape*
Weigela florida	Old Fashioned Weigela
Yucca aloifolia	Spanish Bayonet
Y. filamentosa	Yucca, Adam's Needle

\*Ornamental species only. Do not use on food producing trees or vines.

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**LIMITATION OF WARRANTY AND LIMITATION OF LIABILITY**

**NOTICE:** Read this Limitation of Warranty and Limitation of Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of the manufacturer or seller. All such risks shall be assumed by buyer or user.

The manufacturer warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, under normal use conditions, subject to the risks described above. **THE MANUFACTURER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR OF MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.** In no event shall the manufacturer or seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product.

The manufacturer and seller offer this product, and buyer and user accept it, subject to the foregoing limitations of warranty and limitation of liability, which may not be modified by any oral or written agreement.