

US ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDES PROGRAMS
REGISTRATION DIVISION (75-767)
WASHINGTON, DC 20460

EPA REGISTRATION NO.

DATE OF ISSUANCE

8376-38

21 SEP 1993

TERM OF ISSUANCE

Conditional, EXPIRES: January 1, 1995

NAME OF PESTICIDE PRODUCT

SHAW'S TONE FOOD/CRABGRASS CONTROL
BARICADE 20

NOTICE OF PESTICIDE: REGISTRATION
 REREGISTRATION

(Under the Federal Insecticide, Fungicide,
and Rodenticide Act, as amended)

NAME AND ADDRESS OF REGISTRANT (Include ZIP code)

Knox Fertilizer Company
P.O. BOX 248
KNOX, IN 46534

NOTE: Changes in labeling formula differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above U.S. EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby Registered/Reregistered under the Federal Insecticide, Fungicide, and Rodenticide Act.

✓ copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.

Registration is in no way to be construed as an indorsement or approval of this product by this Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(C) provided that you:

1. Add the phrase "EPA Registration No. 8376-38" to the label before you release the product for shipment.
2. Revise the Environmental Hazards Statement, second sentence to read: "At the limit". Not limits.
3. Submit analysis of formulations containing nitrates or nitrites to show the level of nitrosamines that may be present. Data must be submitted within 1 year from the date of registration.
4. Submit five (5) copies of the final printed labeling before you release the product for shipment.

and provided that Sandoz Agro, Inc., the manufacturer of the active ingredient of this product, submits the required data to continue the registration of proflumicarb as listed in the EPA Fact Sheet No. 231.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA 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.

BEST AVAILABLE COPY

Enclosure

Joanne I. Miller
Product Manager (23)
Fungicide-Herbicide Branch
Registration Division (75-7600)

ATTACHMENT IS APPLICABLE

SIGNATURE OF APPROVING OFFICIAL

DATE

21 SEP 1993



TURF FOOD / CRABGRASS CONTROL

2 of 3

Barricade 20

6-21

For Selective Preemergence Control of Grass and Broadleaf Weeds in Established Turf Grasses (excluding golf course putting greens), Lawns and Landscape Ornamentals.

ACTIVE INGREDIENT:
Proflumicloralidone [N,N-Di-n-propyl-2,4-dinitro-6-(trifluoromethyl)-m-phenylenediamine] - 0.20%
99.80%
INERT INGREDIENTS: - - - - - Total 100.00%

KEEP OUT OF REACH OF CHILDREN
CAUTION

See the following section, Precautionary Statements, Hazards to Humans and Domestic Animals, for additional information. Barricade® is a Registered Trademark of Sandoz, Ltd.
EPA Reg. No. 8378- EPA Est. No. 8378-01-1

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 frequent 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 irritations persist. **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.

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 foodstuffs, 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:** Do not reuse empty bag. Completely empty bag into application equipment. Then dispose of empty bag 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.

DIRECTIONS FOR USE

In accordance with Federal law to use this product in a manner consistent with its labeling. This product is a turf fertilizer and a selective preemergence herbicide that provides residual control of many grass and broadleaf weeds in turf grasses and landscapes. It controls susceptible weeds by inhibiting weed seeds germination and root development.

MAXIMUM ANNUAL RATES

This product should not be applied above a maximum annual rate of 750 lbs. per acre or 17 lbs. per 1,000 sq.ft.

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 turfgrass species. All applications must be made prior to germination of the target weed seeds. This product will not control established weeds. The rates listed in the table below are for weed control of approximately 2 to 8 months.

Turf Species	Maximum Rate of product for Calendar Year lbs./acre (lbs./1,000 sq.ft.)
Bermudagrass*	750 lbs.(17.2 lbs.)
Centipede grass	·
Seashore Paspalum	·
Tall Fescue	·
Zoysia	·
Kentucky Bluegrass	500 lbs.(11.5 lbs.)
Perennial Ryegrass	·
Creeping Red Fescue	375 lbs.(8.6 lbs.)
St. Augustinegrass	·
Creeping Bentgrass	330 lbs.(7.6 lbs.)

*May be used on newly sprigged or plugged Bermudagrass at rates not to exceed 260 lbs. product/acre(5.9 lbs./1,000 sq.ft.). 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. Do not apply more than 375 lbs. per application nor more than 750 lbs. per calendar year. If making more than one application, do not apply more than 375 lbs. within any 60 day period. Use higher rates 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 the following weeds.
Crabgrass (Large, Smooth) Carpetweed
Annual Bluegrass (Poa Annua) Common Chickweed
Goosegrass (1) Common Lambsquarter
Annual Foxtail - Yellow Common Purslane
Barnyardgrass Henbit
Broadleaf Signalgrass Knotweed
Johnsongrass (from seed) Pigweed
Rescuegrass (3) Prostrate Spurge
Shepardspurge(2)
Yellow Sorrel(from seed)

Use the following Overseeding / Reseeding Intervals Table as a guide for each situation.

lbs./Acre of product	Overseeding/Reseeding Interval (Months) Based Upon Seeding Method and Predominant Soil Conditions for the Species			
	Broadcast Seeding Wet & Warm	Drill Seeding Cool & Dry	Drill Seeding Wet & Warm	Drill Seeding Cool & Dry
260	4 mos.	8 mos.	3 mos.	4 mos.
500	6 mos.	12 mos.	6 mos.	8 mos.
750	12 mos.	18 mos.	9 mos.	12 mos.

LANDSCAPE ORNAMENTALS

This product is recommended for use on landscape ornamentals. Do not apply more than 375 lbs./Acre in any 60 day interval, and do not exceed the maximum rate per calendar year of 750 lbs./Acre. This product will not harm most established ornamental trees, shrubs, and flowers. The following species have shown tolerance to this herbicide.

Scientific Name	Common Name
Acer palmatum	Japanese Maple
Acer platanoides	Norway Maple
Actinidia chinensis	Kiwi
Agapanthus africanus	Lily-Of-the-Nile
Actostaphylos densiflora	Vine Hill Manzanita
Actinothera calendul	Cape Weed
Aucuba japonica	Japanese Aucuba
Barbena gladiolifera	·
B. julianae	Wintergreen Barberry
B. mentorensis	Mentor Barberry
B. thunbergii	Japanese Barberry
B. verticillata	Warty Barberry
Buxus microphylla	Japanese Boxwood
Callistemon viminalis	Weeping Bottlebrush
Calluna vulgaris	Scotch Heather
Carpobrotus edulis	Hotentot Fig(ice Plant)
Cassia artemisoides	Festive Cassia
Ceanothus rigidus	Wild Lilac
Chamaecyparis pisifera	False Cypress
Cleyera japonica	Cleyera
Cornus florida	Flowering Dogwood
C. stolonifera	American Dogwood
Cortaderia selloana	Pampas Grass
Cotoneaster apiculatus	Cranberry Cotoneaster
C. buschii	·
C. dammeri	Bearberry Cotoneaster
C. microphyllus	Rockspray Cotoneaster
Cupressus sempervirens	Italian Cypress
Delasperra alba	White Trailing Ice Plant
Dodonaea viscosa	Hop Bush
Elaeagnus pungens	Silverberry
Euonymus fortunei	Wintercreeper Euonymus
E. japonica	Evergreen Euonymus
E. kuischtschovica	Spreading Euonymus
Fatsia japonica	Japanese Aralia
Forsythia intermedia	Border Forsythia
F. viridissima	Greenstem Forsythia
Gardenia jasminoides	Gardenia, Cape Jasmine
Hedera helix	English Ivy
Hibiscus rosa-sinensis	Chinese Hibiscus
Ilex cornuta	Chinese Holly
I. crenata	Japanese Holly
I. opaca	American Holly
I. pernyi	·
Jasminum nudiflorum	Winter Jasmine
Juniperus chinensis	Chinese Juniper
J. conferta	Shore Juniper
J. horizontalis	Creeping Juniper
Juglans sp.	Walnut
Justicia brandegeana	Shrimp Plant
Lagerstromia indica	Cape Myrtle

ACCEPTED with COMMENTS
by EPA Letter Dated:

21 SEP 1993

Under the Federal Insecticide, Fungicide, and Rodenticide Act amended, for the pesticide registered under EPA Reg. No. 8378-38

BEST AVAILABLE COPY



TURF FOOD / CRABGRASS CONTROL

Barricade 20

For Selective Preemergence Control of Grass and Broadleaf Weeds in Established Turf Grasses (excluding golf course putting greens), Lawns and Landscape Ornamentals.

ACTIVE INGREDIENT: Proflumaric (N,N-Di-n-propyl-2,4-dinitro-6-(trifluoromethyl)-m-phenylene diamine) - 0.20%
INERT INGREDIENTS: 99.80%
Total 100.00%

KEEP OUT OF REACH OF CHILDREN CAUTION

See the following section, Precautionary Statements, Hazards to Humans and Domestic Animals, for additional information. Barricade 20 is a Registered Trademark of Dow Chemical Co.

EPA Reg. No. 8378- EPA Est. No. 8378-04-1

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 frequent repeated skin contact while handling the material may cause allergic reactions in some individuals.

First Aid: Flush thoroughly with water for several minutes. **Eye:** Flush thoroughly with water for several minutes. **Medical attention:** If irritation persists. **On Skin:** Wash with soap and water. Rinse thoroughly. Get medical attention if irritation persists. **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 areas. Do not contaminate water when disposing of equipment washwaters.

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 foodstuffs, 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:** Do not reuse empty bag. Completely empty bag into application equipment. Then dispose of empty bag 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.

DIRECTIONS FOR USE

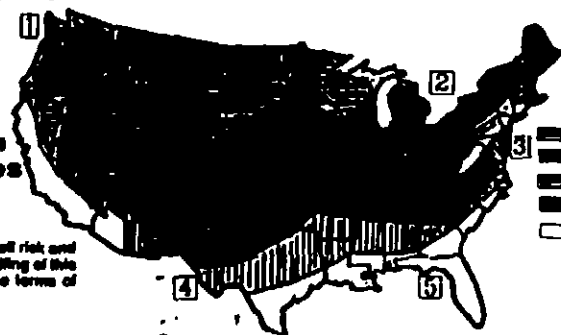
Read entire label and follow directions for use. In accordance with Federal law to use this product in a manner consistent with its labeling. This product is a turf fertilizer and a selective preemergence herbicide that provides residual control of many grass and broadleaf weeds in turf grasses and landscapes. It controls susceptible weeds by inhibiting weed seeds germination and root development. For most effective weed control it must be incorporated by 1/2 inch of rainfall, irrigation, or shallow mechanical incorporation. Incorporation should take place as soon as possible after application and should not be delayed more than 14 days from the date of application. Do not apply this product through any type of irrigation system. Do not apply aerially. Do not apply to golf course putting greens. **Not for use on areas being grown for:** (1) Sale or other commercial use; (2) for commercial seed production or (3) for research. For use on areas intended for aesthetic purposes or climatic modification and below crops in ornamental gardens, parks, on golf courses, tennis courts, etc.

APPLICATION DIRECTIONS

Apply uniformly through suitable, calibrated commercial application equipment. (cont. next column).

FOR 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 1/2 inch of rainfall or irrigation within 14 days after application and prior to weed germination. See map below for approximate crabgrass germination dates.



Crabgrass Seed Germination Approximate Dates

NOTICE: Buyer and user assume all risk and liability of use, storage and/or handling of this product not in accordance with the terms of this label.

- 1. Mid-north & northwestern After May 30
- 2. Upper mid-states & northeast After May 10
- 3. Lower mid-states After April 20
- 4. Upper southern states After May 20
- 5. Warm season states Jan 1 to Mar 20

USE PRECAUTIONS

The following use precautions apply to the use of this product in turf grasses and lawns. Application of this product may kill emerged annual bluegrass and newly overseeded grasses. Do not apply this to OVERSEEDED TURF for 60 days after seeding or until after the 2nd mowing whichever is longer. Injury to desirable seedlings is likely if this product is applied before seeding. Secondary roots are in the second inch of soil, not the top soil. Do not apply to newly set seed and soil the following year. Application to turf stressed by drought, low fertility, or soil damage may result in turf injury. Disrupting the herbicide barrier with cultural practices such as dethatching may result in reduced weed control. Do not apply this product to putting greens, or areas where dandelion, colonial brome, velvet brome or annual bluegrass (Poa annua) are desirable species.

Net Weight 25/50 Pounds

838R-020/PMA/08-01-83

Use the following Overseeding / Reseeding Intervals for 60 days for each situation.

Table with 2 columns: 'No./Acres of product' and 'Overseeding/Reseeding Interval (Months) Based Upon Seeding Method and Production Goal'. Rows include 200, 300, 400, 500, 600, 700 lbs/Acre.

LANDSCAPE ORNAMENTALS

This product is recommended for use on landscape ornamentals. Do not apply more than 375 lbs./acre in any 60 day interval, and do not exceed the maximum rate per calendar year of 750 lbs./acre. This product will not harm most established ornamental trees, shrubs and vines. The following species have shown tolerance to it:

Table with 2 columns: 'Scientific Name' and 'Common Name'. Lists various plant species such as Acer palmatum, Acer platanoides, Acunaria chinensis, Agave attenuata, etc.

MAXIMUM ANNUAL RATES

This product should not be applied above a maximum annual rate of 750 lbs. per acre or 17 lbs. per 1,000 sq. ft.

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 Date Map). Select maximum use rate based on turfgrass species. All applications must be made prior to germination of the target weed species. This product will not control established weeds. The rates listed in the table below are for weed control of approximately 2 to 8 months.

Turf Species and Rates Table

Table with 2 columns: 'Turf Species' and 'Maximum Rate of product for Calendar Year lbs./acre (lbs./1,000 sq. ft.)'. Rows include Bermudagrass (750 lbs./A), Centipede grass, St. Augustinegrass, etc.

*May be used on newly sprigged or plugged Bermudagrass at rates not to exceed 200 lbs. product/acre (5.9 lbs./1,000 sq. ft.). Newly sprigged or plugged Bermudagrass often rooting may be temporarily retarded. Suppressant only of Foxtail, Goosegrass and Rescuegrass due to reduced product rates used in sprigging situations. Do not apply more than 375 lbs. per application nor more than 750 lbs. per calendar year. If making more than one application, do not apply more than 375 lbs. within any 60 day period. Use higher rates 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 the following weeds:

- Crabgrass (Large, Smooth) Carpetweed
- Annual Bluegrass (Poa Annua) Common Chickweed
- Goosegrass (1) Common Lambquarters
- Annual Foxtail - Yellow Common Purslane
- Bermudagrass Henbit
- Broadleaf Signalgrass Knotweed
- Johnsongrass (from seed) Pigweed
- Rescuegrass (3) Prostrate Spurge
- Sheepspurge (2) Yellow Savant (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. (1) In many areas a single application of 330 to 375 lbs./A will control Goosegrass. However under heavy pressure and/or an extended growing season, apply an initial treatment of 375 lbs./A followed after 60 days with a second treatment of 120 to 375 lbs./A for season long Goosegrass control. (2) Water weeds are best controlled by applications made prior to germination: late summer, fall or winter timings. (3) Suppressant only.

OVERSEEDING/RESEEDING

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

GUARANTEED FERTILIZER ANALYSIS

Table with 2 columns: 'Total Nitrogen (N) 32%', 'Available Phosphoric Acid (P2O5) 4%', 'Soluble Potash (K2O) 8%'. Includes ingredients: Urea, Ammonium Phosphate, Moisture of Potash.

Knox Fertilizer Co. Inc. P.O. Box 248 - Knox, IN 46534

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