



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR-21 1994

Kenneth W. Chisholm
NOR-AM CHEMICAL COMPANY
3509 Silverside Road
Wilmington, DE 19803

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Subject: Label Amendment Submission of 06/03/93 in Response to PR Notice 93-7
EPA Reg. No. 45639-68
PROGRASS EMULSIFIABLE CONCENTRATE

Dear Registrant:

The labeling cited above and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is accepted subject to the comments reflected on the enclosed sheet. A copy of your proposed labeling stamped "ACCEPTED WITH COMMENTS" is enclosed.

WHAT THIS ACCEPTANCE MEANS:

Based on your certification, the Agency has accepted the labeling changes that are necessary to comply with the Worker Protection Standard (WPS) labeling requirements of 40 CFR part 156, subpart K, described in PR Notices 93-7 and 93-11. Any other labeling changes submitted in connection with this amendment application but not directly related to compliance with the WPS have not been reviewed or accepted by the Agency. If you wish to make such changes, you must submit a separate amendment application proposing them. If your product is currently suspended, the acceptance of this labeling amendment does not affect the suspension in any way.

WHAT YOU NEED TO DO NEXT:

By the next label printing make all the specified changes to your labeling. Send to EPA one (1) copy of the final printed labeling:

- BEFORE selling or distributing any product bearing the final printed labeling
- AND
- WITHIN one year from date of this acceptance.



Recycled/Recyclable
Printed with Soy/Canola ink on paper that
contains at least 50% recycled fiber

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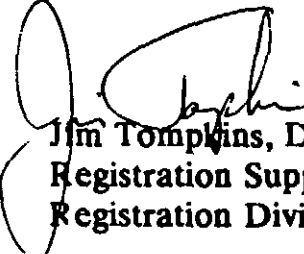
Submit the final printed labeling via the U.S. Postal Service to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs (7505C)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460-0001

Hand or courier deliveries of final printed labeling may be made to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs
Room 266A, Crystal Mall 2
1921 Jefferson Davis Highway
Arlington, VA 22202

Sincerely,


Jim Tompkins, Deputy Chief
Registration Support Branch
Registration Division (7505W)

Attachment

Kenneth Chisholm
NOR-AM CHEMICAL COMPANY

Comments for: EPA REG. NO. 45639-68
PROGRESS EMULSIFIABLE CONCENTRATE

The following specific comments pertain to your WPS labeling submission concerning the product cited above:

Add the chemical-resistant category statement to your label to state: "Some materials that are chemical-resistant to this product are listed below. If you want more options, follow instructions for category "?" on an EPA chemical-resistant category selection chart." The exact location is shown in Section A on Part 1 of the Product Worksheet.

SPECIMEN LABEL

ACCEPTED
with COMMENTS
In EPA Letter Dated

APR 21 1968

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

45639-68

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PROPOSED LABEL

Prograss®

EMULSIFIABLE CONCENTRATE

Selective Herbicide For Use By Professional Applicators On
Ornamental Turf Only

ACTIVE INGREDIENTS:

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

INERT INGREDIENTS:

This product contains 1.5 lb active ingredient per gallon

TOTAL

19%
81%
100%

EPA Reg. No. 45639-68

KEEP OUT OF REACH OF CHILDREN
DANGER—PELIGRO

have been drenched or heavily contaminated with this product concentrate. Do not reuse them. Follow manufactures instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROLS STATEMENT

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

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

Physical or Chemical Hazards—Do not use, pour, spill or store near heat or open flames.

STORAGE AND DISPOSAL

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

PESTICIDE DISPOSAL: Do not contaminate water, food or feed by storage or disposal. Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a

have been drenched or heavily contaminated with this product concentrate. Do not reuse them. Follow manufactures instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

annual grasses and broadleaf weeds. It may also be used, as directed, after overseeding specific grasses.

PROGRASS is intended for professional use only on the ornamental turf of sites such as golf courses, sod farms, parks, cemeteries, lawns of commercial establishments and homeowner lawns (see Use Precautions below).

PROGRASS has both preemergent and early (two-leaf stage) postemergent activity; it is used most effectively in programs emphasizing both approaches.

WEED SPECIES CONTROLLED PREEMERGENCE

Annual Grasses

Annual bluegrass	<i>Poa annua</i>
Large crabgrass	<i>Digitaria sanguinalis</i>
Barnyardgrass	<i>Echinochloa crus-galli</i>
Green foxtail	<i>Setaria viridis</i>
Yellow foxtail	<i>Setaria glauca</i>
Canarygrass	<i>Phalaris canariensis</i>

Annual Broadleaves

Burclover	<i>Medicago sp.</i>
Common chickweed	<i>Stellaria media</i>
Common purslane	<i>Portulaca oleracea</i>
Redroot pigweed	<i>Amaranthus retroflexus</i>

PROGRASS will also reduce competition from:

Yellow nutsedge	<i>Cyperus esculentus</i>
Purple nutsedge	<i>Cyperus rotundus</i>

POSTEMERGENCE

Annual Grasses

Annual bluegrass	<i>Poa annua</i>
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Annual Broadleaves

Common chickweed	<i>Stellaria media</i>
White clover	<i>Trifolium repens</i>

PREEMERGENCE/EARLY POSTEMERGENCE

Annual Grasses

Smooth crabgrass	<i>Digitaria ischaemum</i>
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USE PRECAUTIONS

- **PROGRASS should be used only for recommended purposes and at the recommended rates (DO NOT OVERTREAT).**
- **Avoid overlapping when spraying since turf injury may result.**
- **Avoid applications with flood jet nozzles and hand-held sprayers, since treatments may not be uniform.**
- **Do not apply this product through any type of irrigation system.**
- **PROGRASS application is most effective on healthy, vigorously growing turf. A soil fertility test is the best method to determine fertility needs prior to PROGRASS treatment.**
- **PROGRASS may be applied to homeowner lawns by licensed or certified applicators. PROGRASS is not intended for use by homeowners.**
- **When overseeding, use the rate of PROGRASS recommended for the overseeded species. In mixed stands of established turfgrasses, use the rate recommended for the least tolerant species.**
- **Do not apply PROGRASS within 8 weeks following the application of a Plant Growth Regulator.**
- **PROGRASS application is recommended for golf course fairways, roughs, and tees but at fairway-height only. Do not apply on greens.**
- **Do not apply PROGRASS to zoysiagrass and hard or fine fescue; serious injury may result.**

DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. Do not graze livestock on treated turf. Do not feed treated grass clippings to livestock. Read entire Use Precautions, Directions for Use, and Disclaimer of Warranties before using this product.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency in your State responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains

specific instructions and exceptions pertaining to the statements on this label about personal protective equipment and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves such as barrier laminate or Viton
- Shoes plus socks
- Protective eyewear

SPRAY EQUIPMENT, APPLICATION, AND PRECAUTIONS

Apply PROGRASS using standard, low pressure (20–50 psi) spray equipment. Spray equipment should be carefully calibrated before use and checked frequently during application. Addition of a spray indicator may improve treatment uniformity. The tank and line should be cleaned and rinsed before and after using PROGRASS.

VARIETAL TOLERANCE

The following turfgrass cultivars have shown tolerance to PROGRASS; however, 1 species and varieties have not been tested. PROGRASS has been used safely on the following turfgrass cultivars, but its use is not strictly limited to these. Before large scale use of PROGRASS on other cultivars, a tolerance test on a small area is recommended.

- **PERENNIAL RYEGRASS**—Acclaim, Blazer, Dasker, Derby, Elka, Fiesta, Goalie, Hunter, Linn, Loretta, Manhattan II, Palmer, Pennfine, Regal, Yorkdown
- **KENTUCKY BLUEGRASS**—Adelphi, American, Aspen, Asset, Challenger, Classic, Emundi, Huntsville, Georgetown, Glade, Haga, Julic, Liberty, Merit, Midnight, Monopoly, Mystic, Parade, Rugby, Sydsport, Touchdown, P-104, Ba 69–82
- **CREeping BENTGRASS**—Carmen, National, Normarc 101, Penncross, Providence, Putter, Tamu 88-1, 88 CBE, and 88 CBL have shown excellent tolerance to PROGRASS. Injury has been noted on Penneagle and Pennlinks occasionally. PROGRASS may cause serious injury to Cohansey, Colonial and south German varieties.
- **TURF-TYPE TALL FESCUE**—America, Arid, Mustang
- **ST. AUGUSTINE GRASS**—Raleigh
- **DORMANT BERMUDAGRASS**—common, Tifgreen, Tidwarf

RECOMMENDATIONS

I. COOL SEASON GRASSES

Fall applications to cool season grasses to control *Poa annua* are most effective if application is initiated during the period of maximum weed germination and ended as close to the first killing freeze as possible. Spring applications may be made during the period of maximum weed germination. Consult the university extension service or weed science specialist for these dates in your locality.

**SEE CHART FOR USE RATES AND TIMINGS.
READ TEXT BELOW FOR SPECIFIC RECOMMENDATIONS FOR EACH TYPE OF GRASS!**

II. PERENNIAL RYEGRASS

Application to perennial ryegrass in early to mid-fall or mid-spring is recommended during the primary period of annual bluegrass germination in early fall or late spring, and up to 30 days after annual bluegrass emergence. Spring applications should be used in conjunction with a fall application. Consult Extension Service or University weed specialists for date(s) annual bluegrass germinates in your area.

When overseeding with perennial ryegrass, apply PROGRASS to the seeded area 1 to 2 weeks after emergence of the ryegrass seedlings, when the seedlings are approximately 1" tall or after the first cutting. For overseeding, the soil should be prepared according to recommended horticultural practice. Remove or thoroughly work thatch, as it can reduce the effectiveness of the PROGRASS treatment. Delay application of straw or other mulch until after PROGRASS application. Application to overseeded perennial ryegrass in the fall or spring will also reduce competition from selected broadleaf weeds and crabgrass.

III. KENTUCKY BLUEGRASS

Apply PROGRASS to bluegrass not less than 8 weeks after germination. Bluegrass overseeded with ryegrass may be treated one to two weeks after ryegrass emergence.

Do not re-seed with Kentucky Bluegrass until six (6) weeks after the last PROGRASS application. For fall application programs of PROGRASS, alternatives are to seed dormant bluegrass in the late fall or to delay re-seeding until the spring.

IV. CREEPING BENTGRASS

For golf course use, PROGRASS may be applied safely to bentgrass cut at fairway height. Well-drained bentgrass sites are less prone to injury; application to poorly drained sites, even those cut at fairway height, may result in bentgrass injury.

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A spring application of PROGRASS following fall applications is useful in further reducing populations of annual bluegrass. The application should follow a spring overseeding program and should occur no earlier than three to four weeks after overseeding with creeping bentgrass.

Do not apply PROGRASS to renovated or overseeded bentgrass fairway turf less than three-four weeks after seedling emergence.

Do not overseed with creeping bentgrass until three (3) to four (4) weeks after the last PROGRASS application.

V. TURF-TYPE TALL FESCUE

Apply PROGRASS to turf-type tall fescue in the fall. If turf is overseeded with turf-type tall fescue, the initial PROGRASS application and the seeding may be simultaneous.

VI. ST. AUGUSTINE GRASS (ESTABLISHED TURF)

Apply PROGRASS to St. Augustine grass in the spring and early summer to suppress Bermudagrass seedhead formation or control annual bluegrass. Best results are achieved if three applications are made. Make the initial application after Bermudagrass dormancy is broken. St. Augustinegrass sod that has been recently harvested may show increased sensitivity to PROGRASS. Therefore, use the lower rate (1 gal/A) until the sod is established.

PROGRASS also suppresses the development of actively-growing Bermudagrass in established St. Augustine grass sod. Multiple, sequential applications are suggested for the longest suppression. Growth of Bermudagrass may resume after application is discontinued.

VII. OVERSEEDED DORMANT BERMUDAGRASS

Apply PROGRASS to dormant bermudagrass in the fall one to two weeks after emergence of overseeded perennial ryegrass to control annual bluegrass. Treatment to turf that is not fully dormant may cause injury. One or two supplemental applications at 21 to 28 day intervals may be required to maintain control through the winter months. The final PROGRASS application should be made to bermudagrass prior to the breaking of winter dormancy. Late applications to turf that has broken dormancy may temporarily delay resumption of active growth of bermudagrass in the spring. The breaking of winter dormancy will vary according to location and yearly weather.

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RECOMMENDED RATES AND TIMINGS¹

Turf Type	Main Target Pests	Start	# Apps	Spray INT (Days)	Use Rate ²		Overseeding Safety Interval ³ (Weeks After Emergence)
					Gal/Acre	Oz/1000sq. Ft	
Ryegrass (Est. Turf)	Annual Bluegrass & Common Chickweed	Fall Spring ⁴	2-3 1-2 ⁵	21-28 —	½-1½	2-4	1-2
Ryegrass (New Seedlings) (Sandy Soils)	Annual Bluegrass & Common Chickweed	Fall	2-3	21-28	1	3	
Ryegrass (New Seedlings) (Silt or Clay Loam Soils)	Annual Bluegrass & Common Chickweed	Fall	2-3	21-28	1½	4	
Kentucky Bluegrass	Annual Bluegrass	Fall	2-3	21-28	½	1½	6
Creeping Bentgrass	Annual Bluegrass	Fall Spring ⁴	2-3 1	21-28 —	½ ½	1½ 1½	3-4
Turf-Type Tall Fescue	Annual Bluegrass	Fall	2-3	21-28	½-1½	2-4	0
St. Augustine Grass (Est. Turf)	Bermudagrass Suppression & Seedhead Suppression	Spring	1-3	21-28	1-2	3-6	N/A
Overseeded Dormant Bermudagrass	Annual Bluegrass, Common Chickweed	Fall	2-3	21-28	½-1½	1½-4	N/A

¹Refer to label text for further instructions regarding each grass species

²Apply ½ to 2 gallons of PROGRASS in 20 to 60 gallons of water or 1½ to 6 ounces of PROGRASS in 1 to 3 gallons of water

³Interval applies to overseeding specific grass on same type of grass after PROGRASS treatment

⁴Use Spring application after previous fall treatments only

⁵If overseeding in the spring with ryegrass, use 1-2 applications of PROGRASS

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.

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

LIMITATIONS OF LIABILITY: THE EXCLUSIVE REMEDY OF THE USER OR BUYER FOR ANY AND ALL LOSSES, INJURIES, OR DAMAGE RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER IN CONTRACT WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE PAID, OR AT NOR-AM'S ELECTION, THE REPLACEMENT OF PRODUCT.

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