



John Elias Baldacci
GOVERNOR

STATE OF MAINE
MAINE DEPARTMENT OF AGRICULTURE, FOOD & RURAL RESOURCES
BOARD OF PESTICIDES CONTROL
28 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0028

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SETH H. BRADSTREET
COMMISSIONER

ROBERT I. BATTEESE, JR.
DIRECTOR

March 7, 2006

To: Members, Board of Pesticides Control

From: Wes Smith, Pesticides Registrar *Wes*

RE: 24c Application for use of Devrinol 50-DF (EPA Reg. No 70506-36) on Cranberries to control annual grasses and broadleaf weeds.

Charles Armstrong, Cranberry Specialist with the University of Maine Cooperative Extension Service, requested that United Phosphorus, Inc. submit the above referenced 24c application. It would allow the preemergence application of Devrinol (Napropamide) herbicide on cranberry beds to control annual grasses and broadleaf weeds.

Attached is UPI's cover letter which details the use and effectiveness of this proposed use, the 24c application, list of endangered species for Maine, e-mail letter from Charles Armstrong letter of support, and the proposed label.

Massachusetts cranberry growers have had this use since 2005. We received this application on March 7th. Staff will review it and have any comments ready for the Board meeting. Also, Charles Armstrong will be at the meeting to answer questions.



United Phosphorus, Inc.

423 Riverview Plaza
Trenton, NJ 08611
(609) 392-8200 x 1018 (phone)
(609) 392-0808 (fax)

March 2, 2007

VIA: UNITED PARCEL SERVICE

Wesley Smith

Maine Department of Agriculture
Board of Pesticides Control
28 State House Station
Augusta, ME 04333-0028

**Re: Application for a Special Local Need Registration
DEVIRINOL 50-DF
EPA Reg. No 70506-36**

Dear Mr. Smith:

United Phosphorus, Inc. herein submits application for a section 24(c) Special Local Need registration for the use of the herbicide Devrinol 50-DF, containing the active ingredient napropamide, to control annual grasses and broadleaf weed on cranberries grown in Maine.

To remain economically competitive, Maine cranberry growers must streamline their farm operations and increase their cost efficiency. The substantial financial and time investment associated with the establishment of a new cranberry bed mandates the grower to minimize the negative effects of weed competition. Early control of weed populations is obviously advantageous. However, some weeds do establish on the bed, and long-term weed management is critical to long-term farm viability.

Napropamide (Devrinol) is the recommended preemergence herbicide for new plantings and also works well managing weeds on established beds. It is an effective herbicide that permits maximum vine colonization, which in turn leads to good yield production. Lack of effective weed control on new or established beds means less vigorous cranberry vines and lower yields. Increased labor costs associated with weed control, combined with lowered income from lost yield, can eventually lead to loss of net income and compromise the success of the farming operation.

Many cranberry growers currently use Devrinol 10G as part of their weed control program. Some application limitations exist with use of this granular compound. To achieve good weed control, applications must be made within a certain timeframe in the

spring. Specific conditions are needed for proper application: dry vines, warming soil temperatures, and most importantly, ample time to apply the material with a ground rig. New England springs are often cold and wet, making application of granular preemergence herbicides difficult. Lack of proper timing of granular herbicide applications leads to reduced weed management. Preemergence herbicides that can be chemigated offer many advantages to the Maine cranberry industry.

Devrinol 50-DF is a dry Flowable formulation that can be chemigated. It has been used in a variety of crops including fruit trees, ornamentals, and turf. Devrinol 50-DF will give cranberry growers more flexibility to obtain good weed management on their commercial farms. This formulation can be applied to wet vines, right before a rain, or at the end of a frost protection event. With chemigation, many acres can be treated in a short period of time. Worker exposure will be significantly decreased with chemigation applications as compared to ground rig applications.

Devrinol is widely used on specialty crops and will control common weeds in cranberries, including rice cutgrass, sedges such as nutsedge, and some broadleaf weeds such as devils beggarticks. Devrinol 50-DF is currently registered as a 24(c) for this same use in Massachusetts under EPA SLN No. MA-050001.

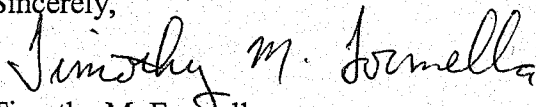
A tolerance of 0.1 ppm currently exists for residues of the active ingredient in Devrinol, nappropamide, on small fruits, including cranberries, (see 40 CFR part 180.328).

In support of this application for a 24(c) SLN registration of Devrinol 50-DF for use on cranberries enclosed please find the following:

- Completed US EPA Form 8570-25, Application for/Notification of State Registration of a Pesticide to meet a Special Local Need
- Listing of threatened and endangered species in Maine
- Letter from Dr. Charles Armstrong, Maine Cooperative Extension, providing support of this SLN registration
- Two (2) copies of the proposed SLN label for this use

If you have any questions on this application please call me at (610) 491-2813 or email at tim.Formella@cerexagri.com.

Sincerely,



Timothy M. Formella
Manager, Product Registrations



FOR DISTRIBUTION AND USE ONLY WITHIN THE STATE OF
MAINE

DEVIRINOL 50-DF SELECTIVE HERBICIDE

EPA REG NO. 70506-36

EPA SLN NO. _____

DIRECTIONS FOR USE ON CRANBERRIES

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Follow all applicable directions, restrictions and precautions on the EPA registered label. This label must be in the possession of the user at the time of pesticide application.

Established beds (over one year old): For control of nutsedge (*Cyperus dentatus*) and rice cutgrass (*Leersia oryzoides*) and purplestem beggarticks (*Bidens connata*). Apply Devrinol 50-DF at a rate indicated below to a weed free soil surface before spring growth begins or in the fall after harvest. Do not apply when beds are under winter flood.

In Peat Beds: Apply 12-18 pounds DEVIRINOL 50-DF per acre through ground application equipment or through the overhead sprinkler system. See use directions for application through sprinkler irrigation systems. Do not apply more than 18 pounds Devrinol 50-DF per acre per year.

In Beds with Sandy Soils: Apply 8-12 pounds of DEVIRINOL 50-DF per acre through ground application equipment or through the sprinkler irrigation system. Do not apply more than 12 pounds Devrinol 50-DF per acre per year.

New plantings: Apply 6 pounds DEVIRINOL 50-DF per acre to a weed free soil surface after planting using ground spray equipment or through the sprinkler irrigation system. Do not apply more than 6 pounds Devrinol 50-DF per acre per year.

APPLICATIONS THROUGH SPRINKLER IRRIGATION SYSTEMS

- Remove existing weed growth before application.
- Meter the DEVIRINOL 50-DF into the irrigation water during the entire period.
- Apply with sufficient water to wet the soil to a depth of 2-4 inches.
- Good agitation should be maintained during the entire application period.
- Avoid run-off.

USE PRECAUTIONS:

- A. Apply this product only through sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, microsprinkler, solid set, or hand move systems. Do not apply this product through any other type of irrigation system.
- B. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.
- C. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

DEVRIKOL 50-DF SELECTIVE HERBICIDE
EPA REG NO. 70506-36
EPA SLN NO. _____

- D. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
- E. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

FOR SPRINKLER IRRIGATION:

- 1. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- 2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- 4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- 5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- 6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- 7. Do not apply when wind speed favors drift beyond the area intended for treatment.

24(c) Registrant:



United Phosphorus, Inc.
423 Riverview Plaza
Trenton, NJ 08611

1-800-247-1557 • www.upi-usa.com

United States Environmental Protection Agency
Office of Pesticide Programs, Registration Division (7505C)
Washington, DC 20460



**Application for/Notification of State Registration
of a Pesticide To Meet a Special Local Need**
*(Pursuant to section 24(c) of the Federal Insecticide,
Fungicide, and Rodenticide Act, as Amended)*

For State Use Only
Registration No. Assigned
Date Registration Issued

1. Name and Address of Applicant for Registration United Phosphorus, Inc. 423 Riverview Plaza Trenton, NJ 08611	2. Product is (Check one)	
	EPA-Registered <input checked="" type="checkbox"/>	EPA Registration Number 70506-36
	New (not EPA-registered) <input type="checkbox"/> Attach EPA Form 8670-4, Confidential Statement of Formula for new products.	EPA Company Number
3. Active Ingredient(s) in Product napropamide		

4. Product Name DEVIRINOL 50-DF	5. If this is a food/feed use, a tolerance or other residue clearance is required. Cite appropriate regulations in 40 CFR Part 180, 185, and/or 186. 40 CFR 180.328
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6. Type of Registration (Give details in Item 13 or on a separate page, properly identified and attached to this form): a. To permit use of a new product. <input type="checkbox"/> b. To amend EPA registrations for one or more of the following purposes: <input checked="" type="checkbox"/> (1) To permit use on additional crops or animals. <input type="checkbox"/> (2) To permit use at additional sites. <input type="checkbox"/> (3) To permit use against additional pests. <input type="checkbox"/> (4) To permit use of additional application techniques or equipment. <input type="checkbox"/> (5) To permit use at different application rates. <input type="checkbox"/> (6) Other (specify below)	7. Nature of Special Local Need (check one) <input type="checkbox"/> There is no pesticide product registered by EPA for such use. <input checked="" type="checkbox"/> There is no EPA-registered pesticide product which, under the conditions of use within the State, would be as safe and/or as efficacious for such use within the terms and conditions of EPA registration. <input type="checkbox"/> An appropriate EPA-registered pesticide product is not available.
	8. If this registration is an amendment to an EPA-registered product, is it for a "new use" as defined in 40 CFR 152.37 <input type="checkbox"/> Yes (discuss in Item 13 below) <input checked="" type="checkbox"/> No

10. Has FIFRA section 24(c) registration for this use of the product ever, by another State, been (check appropriate box(es), if known): <input checked="" type="checkbox"/> Sought <input checked="" type="checkbox"/> Issued <input type="checkbox"/> Denied <input type="checkbox"/> Revoked If any of the above are checked, list States in Item 13 below. <input type="checkbox"/> No FIFRA section 24(c) Action	9. Has an EPA Registration or Experimental Use Permit for this chemical ever been (check applicable box(es), if known): <input checked="" type="checkbox"/> Sought <input checked="" type="checkbox"/> Issued <input type="checkbox"/> Denied <input type="checkbox"/> Cancelled <input type="checkbox"/> Suspended <input checked="" type="checkbox"/> Registration <input type="checkbox"/> Experimental Use Permit <input type="checkbox"/> No Previous Permit Action
	11. Endangered Species Act: (Give details in Item 13 or on a separate page, properly identified and attached to this form) Identify the counties where this pesticide will be used. If Statewide, indicate "all." Provide a list of Federally protected endangered/threatened species which occur in the areas of proposed use.

Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.	12. Indicate use status of Special Local Need, i.e., planned dates of use: From: <u>03/02/2007</u> To: <u>03/02/2012</u>
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Signature of Applicant or Authorized Representative <i>Timothy M. Jomella</i>	13. Comments (attach additional sheet, if needed) 1. Section 10, FIFRA sec 24(c) registration for this use is currently available in Massachusetts, SLN # MA-050001 2. Section 11, This proposed 24(c) has the potential to be used in all counties in the State of Maine. See attached list of federally endangered/threatened species in Maine.
Title Manager, Product Registration	
Telephone Number 610-491-2813	

Determination by State Agency
This registration is for a Special Local Need and is being issued in accordance with section 24(c) of FIFRA, as amended. To the best of our knowledge, the information above is correct, except as noted in "Comments" below or in attachments.

Name, Title, and Address of State Agency Official	Comments (by State Agency Only)	Received by EPA
Title		
Telephone Number		
Date		



U.S. Fish & Wildlife Service

USFWS Threatened and Endangered Species System (TESS)

TESS

Contact ECOS

Maine*Notes:*

- This report shows the listed species associated in some way with this state.
- This list does not include experimental populations and similarity of appearance listings.
- This list includes non-nesting sea turtles and whales in State/Territory coastal waters.
- This list includes species or populations under the sole jurisdiction of the National Marine Fisheries Service.
- Click on the highlighted scientific names below to view a Species Profile for each listing.

Listings and occurrences for Maine -- 17 listings

- 14 occurring in Maine
- 3 not occurring in Maine
- 0 species listed in some other state occurring in Maine

Animals -- 14 listings

- 11 occurring in Maine
- 3 not occurring in Maine
- 0 species listed in some other state occurring in Maine

Status Species listed in this state and that occur in this state

T	Eagle, bald lower 48 States (<i>Haliaeetus leucocephalus</i>)
T	Lynx, Canada lower 48 States DPS (<i>Lynx canadensis</i>)
T	Plover, piping except Great Lakes watershed (<i>Charadrius melodus</i>)
E	Puma (=cougar), eastern (<i>Puma (=Felis) concolor cougar</i>)
E	Salmon, Atlantic Gulf of Maine Atlantic Salmon DPS (<i>Salmo salar</i>)
E	Sea turtle, leatherback (<i>Dermochelys coriacea</i>)
E	Sturgeon, shortnose (<i>Acipenser brevirostrum</i>)
E	Tern, roseate northeast U.S. nesting pop. (<i>Sterna dougallii dougallii</i>)
E	Whale, finback (<i>Balaenoptera physalus</i>)
E	Whale, humpback (<i>Megaptera novaeangliae</i>)
E	Whale, right (<i>Balaena glacialis (incl. australis)</i>)

Status Species listed in this state that do not occur in this state

- E Beetle, American burying (*Nicrophorus americanus*)
- E Curlew, Eskimo (*Numerius borealis*)
- E Wolf, gray lower 48 States, except MN and where XN; Mexico (*Canis lupus*)

Plants -- 3 listings

- 3 occurring in Maine
- 0 not occurring in Maine
- 0 species listed in some other state occurring in Maine

Status Species listed in this state and that occur in this state

- E Lousewort, Furbish (*Pedicularis furbishiae*)
- T Orchid, eastern prairie fringed (*Platanthera leucophaea*)
- T Pogonia, small whorled (*Isotria medeoloides*)



Putting Knowledge to Work with the People of Maine

Wild Blueberry /
Cranberry Office

5722 Deering Hall
Orono, ME 04469

March 9, 2007

Maine Dept of Agriculture, Food & Rural Resources
Board of Pesticides Control
28 State House Station
Augusta, ME 04333-0028

RE: Support Letter for Special Local Needs (24c) Registration from United Phosphorus Inc. (UPI) for Devrinol 50DF in Maine Cranberries.

Dear Maine BPC Members:

I am writing in support of the Special Local Needs (24c) Registration from UPI for the use of the herbicide, Devrinol 50DF (napropamide), in Maine Cranberries. The product, which is being used on cranberries in Massachusetts, has also been used in a variety of other crops including fruit trees, ornamentals, and turf. Devrinol 50DF is a new and less expensive formulation (for cranberry growers) of an existing product that would give Maine growers more flexibility in their weed management program. Devrinol 50DF is a flowable that can be chemigated, thus yielding many benefits over the current Devrinol 10G (granular) alternative. It can be applied to wet vines, right before a rain, or just after a frost protection event, and of course many acres can be treated in a short period of time. The cranberry industry in Massachusetts obtained a Special Local Needs (24c) permit for this material halfway through 2003. I was not aware of this development until recently, when I was approached by the manager of our 2nd-most productive grower, Jasper Wyman & Son, Inc., which has 16 of Maine's 220 acres of cranberries, asking if we could obtain a permit for Maine as well.

Napropamide (Devrinol) is the recommended preemergence herbicide for new plantings (DeMoranville et al., 2001) and also works well managing weeds on established beds. It is an effective herbicide that permits maximum vine colonization, which in turn leads to good cranberry yields. Lack of effective weed control on new or established beds translates to less vigorous cranberry vines and lower yields. Increased labor costs associated with weed control, combined with lowered income from yield losses, can eventually lead to loss of net income and compromise the success of the farming operation. Since 2000, **Maine has lost six of its cranberry farms** [there are 29 remaining], due principally to the inability to make enough of a profit, if any at all, to offset the costs associated with raising cranberries. An additional grower of 4 acres of cranberries [*in Washington County where economic prosperity is arguably needed most*] currently has her entire farm up for sale. If our remaining cranberry growers are denied the ability to use this product as part of their weed management program, more growers could very well be driven out of the business. Net returns, though improving in recent years, are still so meager that many growers describe cranberry-growing as a *hobby* because it is so difficult to turn a profit, with an occasional exception of a small and/or organic operation.

The vast majority of Maine’s cranberry growers currently use Devrinol 10G regularly as part of their weed control program. The Devrinol 10G (granular) is expensive compared to the Devrinol DF (flowable) formulation. The granular costs from \$76 to \$114 per acre (at \$1.90 per pound and 40-60 pounds per acre recommended) whereas the flowable costs just \$58 to \$88 per acre (at \$7.30 per pound and 8 to 12 pounds per acre recommended), for a **savings of \$18 to \$26 per acre** just for the material itself. When one factors in equipment and labor, the savings are understandably even more substantial. A competent operator spends **an additional \$20 per acre** in equipment and labor when applying Devrinol 10G, and needs an entire day to cover about 12 acres (Sandler et al., 2004). The manager for Jasper Wyman & Son, Inc. touched on the aspect of labor, writing to me recently the following: *“Of course one of the reasons I’m interested is because I wouldn’t need any extra labor to apply it & it wouldn’t take all day (only a couple of hours) which I know would save money on the labor side of things.”*

Furthermore, some application limitations exist with use of the Devrinol **granular** compound. To achieve good weed control, applications must be made within a certain timeframe in the spring, and specific conditions are needed for proper application: *dry vines, warming soil temperatures*, and most importantly, ample *time to apply the material* with a ground rig. Spring conditions are often cold and wet in Maine, making application of granular preemergence herbicides a challenging endeavor. **Lack of proper timing of granular herbicide applications leads to reduced weed management.** Preemergence herbicides that can be chemigated, such as Kerb (pronamide), offer many advantages and their use has been widely accepted within the Massachusetts cranberry industry and presumably would be just as readily accepted here as well.

Another factor to support the special local need for the 50DF formulation is the probability that the manufacturer plans to limit or discontinue future production of the 10G formulation. Devrinol is a product that provides very good weed control on new and established plantings and its loss would cause serious economic consequences for the industry. Weed control has been our #1 overall pest problem since the rebirth of the cranberry industry here in 1989.

Last, but certainly not least, worker exposure would be significantly decreased with chemigation applications as compared to ground rig applications.

Alternative Controls Available:

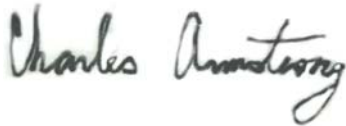
List of pesticides which have been or are presently being used on cranberry beds to attempt to control the same pests: grasses such as rice cutgrass (<i>Leersia oryzoides</i>), sedges such as nutsedge (<i>Cyperus dentatus</i>), some broadleaf weeds such as devils beggarticks (<i>Bidens frondosa</i>), the latter of which has been particularly troublesome for many of Maine’s growers.				
Pesticide Product	Active Ingredient	Approx Application Rate of Product and lbs. a.i per acre	Method of Application	Comments on Efficacy
Casoron	dichlobenil	Up to 100 lb. product and 4 lb a.i. per acre	Ground rig	Gives variable control of weed species; cannot be used on young plantings
Evital	norflurazon	Up to 160 lb product and 8 lb a.i per acre	Ground rig	Does not control broadleaf species; cannot be used on young plantings
Devrinol 10G	napropamide	Up to 90 lb product and 9 lb. a.i. per acre	Ground rig	Best control when applied to weed-free bed; can be used on new plantings

EFFICACY OF USE.

Hilary Sandler, IPM Specialist at the UMass Cranberry Experiment Station, ran demonstration tests in 2005 at Rock Pond in Miles Standish State Forest, Plymouth, MA using 75 lb of the 10G, 15 lb of the 50DF and untreated plots. The 50DF worked as well as the 10G and saved application costs (Hilary Sandler, personal communication). Hilary also gave the 50DF product to 4 growers in 2005 and they reported good to excellent control using it at 14-16 lb/A. (Hilary Sandler, personal communication).

In conclusion, I hope we can help to keep Maine's cranberry industry competitive with other cranberry-growing states, particularly Massachusetts, by approving this 24c application by UPI for the use of Devrinol 50DF on Maine cranberry beds. I also suspect that the use and application advantages afforded by the Devrinol 50DF formulation over the conventional 10G (granular) will help to advance the University of Maine Cooperative Extension's goal of reduced pesticide use, shared by countless others including the Maine Department of Agriculture.

Sincerely,



Charles Armstrong – Cranberry Professional
University of Maine Cooperative Extension
5722 Deering Hall, Room 410
Orono, ME 04469-5722.

Phone: 207-581-2940 or 269-3535. FAX: 207-581-2941. email: charlesa@umext.maine.edu

QUALIFIED EXPERT: David Yarborough, Blueberry Specialist, University of Maine Cooperative Extension, 5722 Deering Hall, Orono, ME 04469-5722. Phone: 207-581-2923. FAX: 207-581-2941. email: davidy@maine.edu

DeMoranville, C.J., H.A. Sandler, and F.L. Caruso. 2001. Planting new cranberry beds. UMass Amherst Cranberry Sta. Ext. Publ. East Wareham, MA.

Sandler, H.A. 2004. Factors influencing the colonization and establishment of plant species on cranberry bogs. Ph.D. Diss. Dept. of Plant and Soil Sciences. University of Massachusetts-Amherst, Amherst, MA. 271 pages.

Sandler, H.A., C.J. DeMoranville, and W.R. Autio. 2004. Economic comparison of initial vine density, nitrogen rate, and weed management strategy in commercial cranberry. HortTechnology 14(2):267-274.