

US EPA ARCHIVE DOCUMENT

108501
SHAUGHNESSY NO.

44
REVIEW NO.

EEB BRANCH REVIEW

DATE: IN 3-19-85 OUT 4-1-85

FILE OR REG. NO. _____

PETITION OR EXP. PERMIT NO. 85-OR-02

DATE OF SUBMISSION 3-8-85

DATE RECEIVED BY HED 3-15-85

RD REQUESTED COMPLETION DATE 4-12-85

EEB ESTIMATED COMPLETION DATE 4-12-85

RD ACTION CODE/TYPE OF REVIEW 510/Section 18

TYPE PRODUCT(S): I, D, H, F, N, R, S Herbicide

DATA ACCESSION NO(S). _____

PRODUCT MANAGER NO. D. Stubbs (41)

PRODUCT NAME(S) Prowl

COMPANY NAME Oregon Dept. of Agriculture

SUBMISSION PURPOSE Proposed Section 18 for use on onions
in Oregon

SHAUGHNESSY NO.	CHEMICAL & FORMULATION	% A.I.
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<u>108501</u>	<u>Pendimethalin</u>	
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Pesticide Name: Pendimethalin

100 Submission Purpose and Label Information

100.1 Submission Purpose and Pesticide Use

The Oregon Department of Agriculture is seeking a specific exemption under Section 18 (FIFRA) to use pendimethalin (Prowl Herbicide) on onions.

100.2 Formulation Information

Prowl 4 E

100.3 Application Methods, Directions, Rates

Prowl can be applied at the 1 to 5 true leaf stage of crop development. Uniformly apply Prowl treatments at 1.5 to 2.0 pts. of product (0.75-1.0 lbs. a.i./Acre) in 10 or more gallons of water per acre by ground or aerial equipment. Use the high rate on high organic soils and the low rate on low organic soils. Do not use on mineral soils or soils with less than 5% organic matter.

Do not make more than one application per season. Prowl treatments will not control emerged weeds. Destroy existing weeds before applying Prowl. Prowl treatments are most effective in controlling weeds when adequate rainfall or overhead irrigation is received within 7 days after application.

If there is a poor stand of onions, do not replant onions for one growing season. Do not plant winter wheat or winter barley as fallow crops in Prowl-treated land if the fallow crop is planted using no-tillage procedures, as crop injury may result.

100.4 Target Organisms

Pigweed	Shepherd's purse
Purslane	Chickweed
Lamb's quarters	Groundsel
Barnyardgrass	Prostrate spotted spurge
Yellow fox tail	Yellow nutsedge
Annual ryegrass	Carpet weed
Annual bluegrass	Smart weed

100.5 Precautionary Labeling

Environmental Hazards

This product is toxic to fish. Keep out of lakes, streams or ponds. Do not apply when weather conditions favor drift from target area. Do not contaminate water by cleaning of equipment or disposal of wastes.

101 Hazard Assessment

101.1 Discussion

A specific exemption for Prowl on onions is requested for the western Oregon counties of Washington, Clackamas, Multnomah and Marion. Of the total 3600 acres in these counties, it is expected that 2600 acres will require treatment. Applications will be made to soils of 5-60% organic matter. Onions in western Oregon are typically grown on old lakebeds. The request is to allow a maximum of 1 lb. a.i./Acre pendimethalin to be broadcast by air or ground.

101.2 Likelihood of Adverse Effects to Nontarget Organisms

Pendimethalin is only slightly toxic to birds and mammals ($LD_{50} > 1000$ mg/kg), but is highly toxic to aquatic organisms (Rainbow trout $LC_{50} = 0.14$ ppm; Daphnia $LC_{50} = 0.28$ ppm). Drift and runoff from treated areas could pose a risk to aquatic organisms, but this is considered slight, for several reasons:

1. Herbicide applications do not show a propensity for drift due to their large droplet size.
2. Runoff should be very small because of the flat lake beds of very high organic content where Prowl would be applied.
3. Pendimethalin is expected to bind heavily to the muck soils.
4. The use is limited to just 2600 acres.


Pendimethalin is somewhat persistent ($1/2$ -life > 90 days) and may bioaccumulate (BCF = 2200X). Therefore, pendimethalin could pose a chronic risk to nontarget organisms through repeated uses. This latter risk would need further evaluation if Sec. 3 registration of Prowl on onions was pursued.

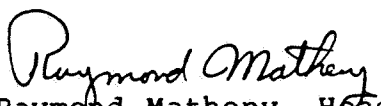
101.3 Endangered Species Considerations

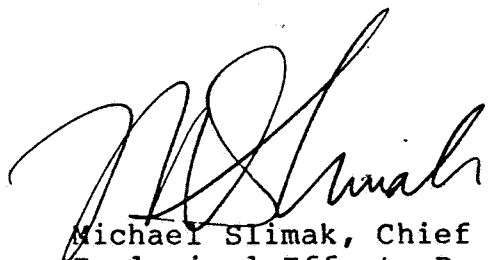
No endangered species have been identified which could be affected by this exemption.

103 Conclusions

The Ecological Effects Branch has completed a risk assessment of the proposed emergency exemption of Prowl for use on onions in Oregon. Based upon the available data, EEB concludes that the proposed use provides for minimal hazards to nontarget organisms.

 4/5/85
Les Touart, Fisheries Biologist
Sec. 1

 4/5/85
Raymond Matheny, Head
Sec. 1

 4/9/85
Michael Slimak, Chief
Ecological Effects Branch
Hazard Evaluation Division (TS-769)