



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

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MAR 28 1989

MEMORANDUM

SUBJECT: 89-OR-09. Section 18 Exemption for the use of Pendimethalin Herbicide (Prowl® 4E) on Onions to Control Weeds. EPA Reg. No. 241-243. (No MRID #, DEB # 5066).

From: Freshteh Toghrol Ph.D., Chemist
Special Registration Section II
Dietary Exposure Branch
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THRU: Francis B. Suhre, Acting Section Head
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To: D. Stubbs/Jim Tompkins, PM 41
Emergency Response Section
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and
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The Oregon Department of Agriculture requests a Section 18 exemption for the use of pendimethalin (trade name: Prowl) on onion for weed control.

Prowl® 4E pre-emergence Herbicide (EPA Reg. No. 241-243) is a registered pesticide of American Cyanamid Corporation; the product contains 4 lbs/gallon pendimethalin, [N-(1-ethyl-propyl)-3,4-dimethyl-2,6-dinitrobenzenamine], as its active ingredient.

A maximum of 3,000 acres of bulb onions will be treated with 3,000 lbs of active ingredient.

Tolerances are established (40 CFR 180.361(a)) for combined residues of pendimethalin and its metabolite 4-[(1-ethyl-propyl)amino]-2-methyl-3,5-dinitrobenzyl alcohol in or on several raw agricultural commodities (RAC), as follow: beans (lima, forage, and hay) at 0.1 ppm; corn (grains, fresh, fodder, and forage) at 0.1 ppm; cottonseed, peanuts (nut meats, forage, and hay) at 0.1 ppm; rice grain at 0.05 ppm; soybeans (beans, hay, and forage), and sunflower seeds at 0.1 ppm.

Tolerances are also established (40 CFR 180.361(b)) for combined residues of pendimethalin and its metabolites 4-[(1-ethyl-propyl)amino]-2-methyl-3,5-dinitrobenzyl alcohol and 3-[(1-ethyl-propyl)amino]-6-methyl-2,4-dinitrobenzyl alcohol in or on peanut hulls at 0.25 ppm.

No plant or animal metabolism studies were submitted with this request. According to the Pendimethalin Registration Standard, issued on 5/10/84, there are Residue Chemistry data gaps, including plant and animal metabolism.

However, for the purpose of this section 18 request only, we will consider the residues of concern in plants and animals to be pendimethalin and its metabolite 4-[(1-ethyl-propyl)amino]-2-methyl-3,5-dinitrobenzyl alcohol.

89-OR-09 calls for a single broadcast (ground) application of prowl 4E at 1.5 to 2 pts/A (0.75-1.0 lb ai/acre); the application is made when onions are at 1 to 5 true leaf stage of their development. A PHI of 60 days is proposed and a grazing restriction is stipulated.

Adequate analytical methods are available for enforcement purposes (see PAM vol. II Section 180.361).

No residue data were submitted with this Section 18, however, residue data were previously submitted in connection with PP#3G2857. The available data reflect higher application rates (1X and 2X) and longer PHI's 106-189 days (2 to 3 times) than those proposed for this Section 18 request. No residues of pendimethalin or its dinitrobenzyl alcohol metabolite were detected (<0.05 ppm). A temporary tolerance of 0.1 ppm for onions was previously established, based on postemergent ground application of 1 lb ai/A with a 100 days PHI (PP#3G2857).

Meat, Milk, Poultry and Eggs:

There are no feed items involved in this proposed use, therefore no secondary residues are expected to occur in meat, milk, poultry, and eggs as a result of this Section 18 request.

Conclusions:

1. For the propose of this section 18 only, we consider the residues of concern to be pendimethalin and its metabolites 3,5-dinitrobenzyl alcohol.
2. The analytical method described in PAM II, Section 180.361, is adequate for enforcement purposes. Analytical reference standards of pendimethalin and its metabolite are available from the EPA Repository, at RTP, NC.
3. Data are not available to estimate pendimethalin residues in or on onions 60 days after application. However, the available data do indicate that residues of pendimethalin/metabolite in or on onions will not exceed 0.1 ppm, provided a 100 days PHI is imposed.
4. No secondary residues of pendimethalin and its metabolite should appear in meat, milk, poultry and eggs, since no feed items are involved with this use.

Recommendations:

TOX considerations permitting, and provided a PHI of 100 days is imposed, DEB has no objections to this section 18. An agreement should be made with the FDA regarding the legal status of the treated ~~ONIONS~~ in commerce.

cc: Pendimethalin S.F., R.F., Section 18 S.F., Circ., F. Toghrol, PMSD/ISB, TAS (S. Stanton).
 RDI: F. B. Suhre Acting Section Head (3/28/89): E. Zager: Acting Deputy Chief (3/28/89):
 TS-H7509C:DEB:F.Toghrol:F.T.:RM:802:CM#2:3/28/89.