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EE BRANCH REVIEW

IN 8/27/80 OUT 8/28/80

FILE OR REG. NO. 241-243-AA

PETITION OR EXP. PERMIT NO. 9F2134

DATE DIV. RECEIVED _____

DATE OF SUBMISSION _____

DATE SUBMISSION ACCEPTED _____

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

DATA ACCESSION NO(S) . _____

PRODUCT MGR. NO. 25 Taylor

PRODUCT NAME(S) Prowl

COMPANY NAME American Cyanamid Co.

SUBMISSION PURPOSE Label amendment adding potatoes.

CHEMICAL & FORMULATION Pendimethalin 42.3%

Pesticide Name Prowl

100 Pesticide Label Information

100.1 Pesticide Use

Prowl is currently registered for use on field corn, cotton and soybeans as a post-emergence herbicide. The proposed registration would add the use of Prowl as a preemergence herbicide on potatoes.

100.2 Formulation Information

Pendimethalin -- 42.3%EC formulation, 4 pounds of pendimethalin/gallon.

100.3 Application Methods, Directions, Rates

See appendix.

101 Physical And Chemical Properties

See the EEB review by L. Touart (5/13/80).

102 Behavior in the Environment

See the EEB review by W. Rabert (10/23/79).

103 Toxicological Properties

See the EEB review by W. Rabert (10/23/79).

104 Hazard Assessment

104.1 Discussion

Potatoes are grown on over 1 million acres throughout the United States. The use of prowl on potatoes would be as a preemergence or a preemergence incorporated treatment. The maximum application rates would be 1.5 lb. active ingredient/acre.

104.2 Likelihood of Adverse Effects to Non-Target Organisms

The use of Prowl on potatoes should not pose an unreasonable adverse effect on terrestrial vertebrates. The toxicity data indicate that the active ingredient in Prowl, pendimethalin, is only slightly toxic to birds and mammals. The expected residues of pendimethalin should be well below toxic levels for the terrestrial animals.

On the other hand, pendimethalin is highly toxic to aquatic organisms. The proposed use, based on available data, may provide for potential chronic hazards (acute hazards appear unlikely) to aquatic organisms. Additional data are needed to fully evaluate this potential hazard.

104.3 Endangered Species Considerations

Additional studies are necessary to determine the hazard of Prowl, if any, to endangered species.

107 Conclusions

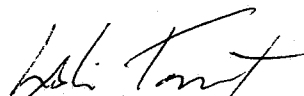
The Ecological Effects Branch concurs with the proposed conditional registration of Prowl for use on potatoes, where the registrant agrees to provide the required data (See 107.5 below) within a specified time.

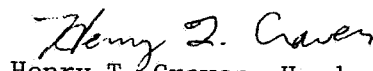
107.5 Data Requests

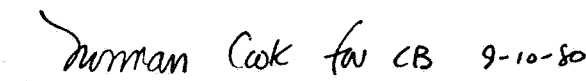
The following studies are required by the Ecological Effects Branch before an Environmental Hazard Assessment can be completed.

1. An aquatic invertebrate life-cycle toxicity study preferably with Daphnia magna for the technical of the Prowl active ingredient.
2. A field monitoring study to determine the concentrations of the Prowl active ingredient and degradates in the runoff water and sediment, leachate and groundwater, and in the water and sediment of receiving aquifers (i.e. lakes, ponds, etc.). An acceptable protocol for potato field situations should be verified through the Ecological Effects Branch.

Any questions concerning the above requests or for acceptable protocols should be directed to the Ecological Effects Branch.

 8/29/80
Leslie Touart, Fisheries Biologist, Section 4


Henry T. Craven, Head, Section 4

 9-10-80
Clayton Bushong, Chief, Ecological Effects Branch