6-16-77

EEE BRANCH REVIEW

DATE: IN _____ OUT _____ IN _____ OUT _____ IN 6/3 OUT 6/16/77

FISH & WILDLIFE ENVIRONMENTAL CHEMISTRY EFFICACY

Accession Nos. 229388 & 229389

FILE OR REG. NO. 241-243

PETITION OR EXP. PERMIT NO. _____

DATE DIV. RECEIVED 4/7/77

DATE OF SUBMISSION 4/6/77

DATE SUBMISSION ACCEPTED _____

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

PRODUCT MGR. NO. Bob Taylor (25)

PRODUCT NAME(S) Prowl

COMPANY NAME American Cyanamid Company

SUBMISSION PURPOSE Amend use to soybeans in tank mixtures or sequential application with lorox or amiben.

CHEMICAL & FORMULATION N-(1-ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzeneamine-43.8% EC (4 lb. a.i./gal.)

200.0 Introduction

200.1 Uses

See attached use sheets.

200.2 Background Information

The American Cyanamid Company is requesting amended registration of Prowl/Lorox and Prowl/Amiben tank mixtures or sequential applications for weed control in soybeans. Each of the three herbicides is presently registered for use on several crops including soybeans (EPA Reg. Nos. 241-243; 351-270; and 264-138 for Prowl, Lorox, and Amiben respectively).

The proposed use patterns (PPI and PRE) and claims are consistent with those in the registered labels. Recommended dosages, however, are reduced to almost 1/2 that of each herbicide when used alone to soybeans. For example: Prowl/Amiben approved dosages are 1-3 and 2-3 lb. a.i./A respectively, whereas, the proposed rates in tank mixtures or sequential applications are 0.5-1.25 lb a.i./A of each herbicide. In the proposed label amendment, the company is claiming control of all 16 weed species presently approved on the Prowl Label by elevating velvetleaf and smartweed from the partially controlled to controlled species. Additionally, the company wishes to add partial control of common ragweed for all proposed use patterns as well as control of wild mustards when Lorox is used with Prowl.

It should be noted here that with the exception of signalgrass, Amiben alone controls all 18 weed species claimed for the tank mixture or sequential application including common ragweed. Similarly, with the exception of signalgrass, johnsongrass seedlings and annual spurge; Lorox alone controls all 18 species including common ragweed.

201.0 Data Summary

201.1 Abstract of Test Reports

Company Summary tables were too numerous to duplicate.

201.2 Brief Description of Tests

Prowl/Lorox tank mixture: Data were from 38 test trials from 12 soybean growing states where Prowl/Lorox tank mixture was applied by ground equipment preemergence to the crop. At

label recommended rates and directions, this tank mixture provided acceptable weed control of 11 weed species and partial control of one weed species. No data were submitted on the remaining 6 weed species. Acceptable weed control was evident in: Barnyardgrass, crabgrass, panicum, foxtails (green, yellow, giant), pigweed, lambsquarter, velvetleaf, smartweed, and wild mustard. Partial control was evident in common ragweed. With the exception of one test in which crop injury was reported at 45%, the remaining trials reported acceptable crop tolerance. Crop yields were also acceptable, although in about 5% of the tests, Prowl treated plots showed higher yield than Prowl/Lorox by about 20%.

Prowl/Lorox Sequential Application: Data were from 23 test trials from 11 soybean growing states where Prowl was applied PPI and Lorox was applied premergence to the crop. At label recommended rates and directions, this use pattern provided acceptable control of the same eleven weed species ~~acceptable~~ when both products were used in tank mixture except for wild mustard on which data were insufficient to ascertain control levels. Additionally, sequential application of Prowl followed by Lorox provided acceptable partial control of common ragweed. No data were submitted on the remaing 6 weed species. Crop yield and crop injury data were satisfactory when compared with data from control trials.

Prowl/Amiben Tank Mixture: Data were from 51 test trials from 13 soybean growing states where Prowl/Amiben tank mixture was applied by ground equipment preemergence to the crop. At label recommended rates and directions, this tank mixture provided acceptable weed control of 10 weed species and partial control of one weed species. No data were submitted on the remaining 6 weed species. Acceptable control was evident in: Barnyardgrass, crabgrass, panicum, foxtails (green, giant, yellow), pigweed, lambsquarter, velvetleaf, and smartweed. Partial control was evident in common ragweed. Data on crop injury and crop yields were in the acceptable range except for one test in which crop injury was 18% and the same plot yielded 70% when compared with Prowl-treated plot.

* → over please

Tank-Mix Compatibility Data: A letter from Plant Industry Formulations (copy in file) stated that Prowl showed good compatibility with Lorox or Amiben when each tank mix was tested at the highest rates in minimum spray volume.

(was not typed)

* Prowl/Amiben sequential application: Data were from 18 test trials from 8 soybean growing states where Prowl was applied PPI and Amiben was applied preemergence to the crop. At Label recommended rates and directions, this use pattern provided acceptable control of the same 10 weed species when both products were used in tank mixture except for Crabgrass on which data were insufficient to ascertain control levels. Additionally, sequential application of Prowl followed by Amiben provided acceptable partial control of Common ragweed. No data were submitted on the remaining 6 weed species. Data on crop yields and crop injury were in the acceptable range when compared with those from control plots.

Tank-Mix Compatibility Data: A letter from Plant Industry Formulations (copy in

Note: Reduced rates of Prowl, Lorox, and Amiben in the proposed use patterns did not affect the herbicidal activities of each use discussed above. Additionally, crop phytotoxicity and crop yields were acceptable. Therefore, additional data will not be requested.

201.3 Data Summary:

Performance Summary tables (3) are filed in the EEEB.

202.1 Claims Supported by the Data Submitted:

202.2 Data submitted support use of Prowl/Lorox 50 W tank mixture or sequential application for control of the following weed species in soybeans: Barnyardgrass, crabgrass, goosegrass, signalgrass, Johnsongrass seedlings, panicum, foxtails (green, giant, yellow), pigweed, lambsquarter, purslane, carpetweed, spurge, velvet leaf, smartweed, and mustards. Partial control of common ragweed is also acceptable.

202.3 Data submitted support use of Prowl/Amiben tank mixture or sequential application for control of the following weed species in soybeans: Barnyardgrass, crabgrass, goosegrass, signalgrass, Johnsongrass seedlings, panicum, foxtails (green, giant, yellow), pigweed, lambsquarter, purslane, carpetweed, spurge, velvetleaf, and smartweed. Partial control of common ragweed is also acceptable. Use must be restricted to the following Northeastern and North Central states: Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Nebraska, New York, North Dakota, Ohio, Pennsylvania, South Dakota, Wisconsin and Missouri (except the "Bootheel Region").

203.0 Label Comments:

1. Statements regarding sequential applications; the word "plus" must be replaced by "followed by."

2. Label claim for "mustards" must be identified by "wild mustard."

3. Proposed label amendments must recommend application to planting intervals in days for Prowl when used in a sequence with either Lorox or Amiben.

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4. Proposed label amendments may add the following statement "Refer to respective labels for any additional directions and limitations."

204.0 Recommendations:

Proposed label amendments for Prowl/Lorox and Prowl/Amiben to soybeans are acceptable after resolving the above label comments.

Sami Malak

Sami Malak
Herbicide Efficacy Section
Efficacy & Ecological Effects Branch

June 16, 1977

WSW

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