CAM COPY

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Jo Ann Miller

TILLER

MCPA
2,4-D | formulation exemption

235961
RECORD NO.

128701
SHAUGHNESSEY NO

REVIEW NO.

EEB REVIEW

DATE: IN 3-03-89 OUT APR 25 1990

FILE OR REG. NO. 8340-GI

PETITION OR EXP. NO.

DATE OF SUBMISSION 12-7-88

DATE RECEIVED BY HED 3-2-89

RD REQUESTED COMPLETION DATE 7-1-89

EEB ESTIMATED COMPLETION DATE 7-1-89

RD ACTION CODE/TYPE OF REVIEW 180

TYPE PRODUCT(S) herbicide

DATA ACCESSION NO(S)

PRODUCT MANAGER, NO. J. Miller (23)

PRODUCT NAME(S) TILLER HERBICIDE

COMPANY NAME HOECHST CELANESE CORPORATION

SUBMISSION PURPOSE Proposed registration of use on wheat (new formulation)

SHAUGHNESSEY NO.		CHEMICAL	% A.I.

EEB BRANCH REVIEW

Chemical: TILLER HERBICIDE (combination of fenoxaprop-ethyl, 2,4-D isooctyl ester, and MCPA-isooctyl ester)

100 Submission Purpose and Label Information

100.1 Submission Purpose and Pesticide Use

The registrant HOECHST CELANESE CORP has applied for registration of TILLER HERBICIDE for use on hard red spring, soft white spring and soft white winter wheat. No new data were submitted with this request.

100.2 Formulation information

ACTIVE INGREDIENT:

Fenoxaprop-ethyl: (±)-ethyl 2-[4-[6-chloro-2-benzoxazoly oxy]phenoxy] propanoate 8.85%

2,4-D, isooctyl ester: 2-ethylhexyl-2,4-dichlorophenoxyacetate . . . . . .10.27% **

MCPA, isooctyl ester: isooctylester-2-methyl-4-chlorophenoxyacetate . . . . . .32.03% ***

INERT INGREDIENT: 48.03%

* equivalent to 0.75 lbs ai/gallon
** equivalent to 0.58 lbs ae/gallon or .87 lb ai/gallon
*** equivalent to 1.75 lbs ae/gallon or 2.78 lb ai/gallon
Total 4.35 lbs ai per gallon

100.3 Application Methods, Directions, Rates

TILLER HERBICIDE is to be applied by ground application in a minimum of ten (10) gallons of water per broadcast acre. TILLER is applied one time in a growing season at a maximum of 1.7 pints per acre (.92 lb ai/A, see attached sheet for calculation). Flat fan or hollow cone nozzles are recommended. A minimum pressure of forty (40) lbs /sq. inch should be used.

The following restrictions apply:

- Do not apply this product aerially
- Do not apply this product through any irrigation system
- Do not apply more than one time in a growing season
- Do not apply more than 1.7 pints TILLER per acre per growing season.

For additional details on application specifics, rate information, tank mixes, etc. please see attached labeling.

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100.4 Target Organisms

The target organisms are grassy and broadleaf annual and perennial weeds. For listing of species controlled, see attached label.

100.5 Precautionary Labeling

Environmental Hazards: This pesticide is toxic to fish and aquatic invertebrates. Drift or runoff may adversely affect nontarget plants. Do not apply when weather conditions favor runoff or drift. Do not apply directly to water or wetlands (swamps, bogs, marshes, and potholes). Do not contaminate arable land and/or water when disposing of equipment washwaters.

101 Hazard Assessment

101.1 Discussion

The HOECHST CELANESE CORP. is proposing application for registration of TILLER HERBICIDE for use on wheat. It is a multiple active ingredient product containing 8.85% fenoxaprop-ethyl, 10.27% 2,4-D, isooctylester, and 32.85% MCPA, isooctyl ester. All three active ingredients are currently registered separately; 2,4-D and MCPA are registered for uses on wheat however; fenoxaprop-ethyl is not.

EEB previously performed a hazard assessment of fenoxaprop-ethyl (as a single ai) and its proposed use on wheat, peanuts, and cotton in 1989 (see review by A. Vaughan, dated 5-3-89). In that review EEB concluded that minimal acute and chronic risks existed for endangered and non-endangered organisms based on data available for fenoxaprop-ethyl as a single active ingredient. However, the presently proposed use on wheat concerns three active ingredients for which:

1) No data are available for the isooctyl esters of MCPA and 2,4-D (see published registration standards).

2) Sufficient data appear to be available on Fenoxaprop-ethyl for EEB to assess the proposed use. (However, with submission of all pertinent data for 2,4-D and MCPA esters, EEB will reexamine the available data base in light of the new information.)

EEB concludes, therefore, that because of these data gaps a complete and accurate risk assessment cannot be made. EEB has identified the following data requirements that must be fulfilled before EEB can perform a hazard assessment and registration of this product can be considered:

WITH TECHNICAL PRODUCT OF ISOOCTYL ESTER OF 2,4-D:

71-1 Avian acute oral LD_{50} with mallard duck or bobwhite quail

71-2 (2) Avian dietary LC_{50} studies with mallard duck and bobwhite quail

72-1 (2) Freshwater fish LC_{50} studies with Bluegill sunfish and rainbow trout

72-2 Freshwater invertebrate LC_{50} with Daphnia magna

123-1 Seed germination/seedling emergence

123-1 Vegetative Vigor

123-2 Aquatic plant growth

WITH TECHNICAL PRODUCT OF ISOOCTYL ESTER OF MCPA:

71-1 Avian acute oral LD_{50} with mallard duck or bobwhite quail

71-2 (2) Avian dietary LC_{50} studies with mallard duck and bobwhite quail

72-1 (2) Freshwater fish LC_{50} studies with Bluegill sunfish and rainbow trout

72-2 Freshwater invertebrate LC_{50} with Daphnia magna

123-1 Seed germination/seedling emergence

123-1 Vegetative vigor

123-2 Aquatic plant growth

For fenoxaprop-ethyl, 2,4-D isooctyl ester, or MCPA isooctyl ester note that further data may be required (e.g., avian reproduction, fish early life stage study) depending on results of above and review of all pertinent environmental fate data and presently available data for fenoxaprop-ethyl.

An alternative to conducting the above studies would be to do the following studies with the formulated product of TILLER HERBICIDE.

71-1 Avian acute oral LD_{50} with mallard duck or bobwhite quail

71-2 (2) Avian dietary LC_{50} studies with mallard duck and bobwhite quail

71-4 Avian reproduction study with mallard duck or bobwhite quail (reserved depending on results of acute studies and review of environmental fate data for each a.i.)

72-1 (2) Freshwater fish LC_{50} studies with Bluegill sunfish and rainbow trout

72-2 Freshwater invertebrate LC_{50} with Daphnia magna (reserved see note for 71-4)

72-4 Fish early life stage or Daphnia magna life stage

72-3 (3) Estuarine and Marine organism LC_{50}
a. shrimp
b. oyster
c. fish
(reserved depending on results of other acute aquatic studies)

123-1 Seed germination/seedling emergence

123-1 Vegetative vigor

123-2 Aquatic plant growth

The registrant should be notified of one caveat regarding the above formulation testing; an EEB hazard assessment would be based on the formulation tested (which must be constant in all studies). If the registrant changes the formulation of TILLER, the studies would have to be redone reflecting the change in the concentration ratio of the three active ingredients.

103 Conclusions

The HOECHST CELANESE CORP. is proposing application for registration of TILLER HERBICIDE for use on wheat. It is a multiple active ingredient product containing 8.85% fenoxaprop-ethyl, 10.27% 2,4-D, isooctylester, and 32.85% MCPA, isooctyl ester. All three active ingredients are currently registered separately; 2,4-D and MCPA are registered for uses on wheat; however, fenoxaprop-ethyl is not. EEB has identified data gaps and thus a complete risk assessment was not done. See section 101.1 above concerning these data gaps.

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