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

8-8-83

AUG 8 1983

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

AMENDED REGISTRATION FOR ...

SUBJECT: Registration No. 677-313. [REDACTED] for chlorothalonil on dry beans.

FROM: Linda S. Propst, Chemist
Residue Chemistry Branch
Hazard Evaluation Division (TS-769) *Linda S. Propst*
6/30/83

THRU: Charles L. Trichilo, Chief
Residue Chemistry Branch
Hazard Evaluation Division (TS-769) *[Signature]*

TO: Henry Jacoby, Product Manager #21
Fungicide - Herbicide Branch
Registration Division (TS-767)

Diamond Shamrock Corporation is requesting an amended registration for the chlorothalonil formulation Bravo[®] 500 to reduce the preharvest interval from 42 days to 7 days on dry beans.

A tolerance has been established to cover residues of the fungicide chlorothalonil (tetrachloroisophthalonitrile) and its metabolite 4-hydroxy-2,5,6-trichloroisophthalonitrile in or on dry beans at 0.1 ppm (40 CFR 180.275).

The currently registered use for chlorothalonil on dry beans allows for 3 pts. of Bravo[®] 500 (1.56 lb ai/A) per application. Begin applications during early bloom stage and repeat at 7 to 10 day intervals. Do not apply within 6 weeks of harvest. Do not graze treated areas or feed treated plant parts to livestock. Do not make more than 3 applications per year.

The proposed use allows for an unspecified number of applications using 3 pts. Bravo[®] 500 (1.56 lb. ai/A) per application at 7 to 10 day intervals. Do not apply within 7 days before harvest. Do not allow livestock to graze in treated areas or feed treated plant parts to livestock.

Bravo® 500 contains 4.17 lbs. chlorothalonil per gallon. Trace amounts of hexachlorobenzene (HCB) and pentachlorobenzonitrile (PCBN) can sometimes be found in this formulation.

Residue data on dry beans from six studies conducted in Colorado, Delaware, Nebraska, North Dakota, Michigan and Tennessee have been submitted with this request. Bean plants were treated with 3 to 5 applications of Bravo® 500 using a maximum rate of 1.56 lb ai/A/application. Preharvest intervals ranged from 0 to 29 days. Samples were analyzed for residues of chlorothalonil, the 4-hydroxy metabolite, HCB, and PCBN. Residues of chlorothalonil ranged from non-detectable to 0.07 ppm. No residues of the 4-hydroxy metabolite (<0.01 ppm), HCB (<0.003 ppm) and PCBN (<0.005 ppm) were found.

However, data submitted in conjunction with PP#8E2065 indicate that the 0.1 ppm tolerance will not be adequate to cover all residues of chlorothalonil which may occur as a result of the proposed amended registration. Navy beans receiving 3 applications of 1.5 lb active/acre/application at 6-8 day intervals had initial residues of 0.23 ppm for chlorothalonil and 1.04 ppm for the 4-hydroxy metabolite. Seven days later samples showed residues of 0.09 ppm for chlorothalonil and 0.18 ppm for the 4-hydroxy metabolite. In another study navy beans receiving 3 applications of 1.5 lb active/acre/application at 10 day intervals showed residues of 0.18 ppm for chlorothalonil and <0.01 ppm for the 4-hydroxy metabolite 7 days after treatment. We recommended for the 0.1 ppm tolerance (see memos of P.V. Errico 5/15/81 and 2/16/81) providing the petitioner limit the use to 3 applications of 1.56 lbs active/A/application and increase the PHI from the originally proposed 14 days to 6 weeks.

From this data we conclude that the 0.1 ppm tolerance on dry beans will be exceeded as a result of the proposed amended use.

Conclusions and Recommendations.

The 0.1 ppm tolerance will not be adequate to cover residues of chlorothalonil and its 4-hydroxy metabolite which may occur on dry beans as a result of the proposed amended use.

Therefore, we recommend against the proposed amended registration.

cc: R.F.
Circu
Reviewer
Subject S.F
Amended use file

RDI:Section Head-RJH:Date-6/23/83:RDS:Date-6/23/83:DCR-11057
TS-769:RCB-26:Reviewer-LindaPropst:efs:Rm810:CM#2:6/28/83
REVISED:DCR-11647:LindaPropst:jad:RCB-26:6/28/83