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

FEB 14 1989

OFFICE OF  
PESTICIDES AND TOXIC SUBSTANCESMEMORANDUM

SUBJECT: EPA Reg. No. 100-628. Ridomil 5G (metalaxyl). Amended registration request to add use on spinach. MRID No. 407902-01. DEB No. 4809.

FROM: Linda S. Propst, Chemist  
Dietary Exposure Branch  
Health Effects Division (TS-769C) *Linda S. Propst*

THRU: Andrew R. Rathman, Section Head  
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TO: Lois Rossi, PM 21  
Fungicide-Herbicide Branch  
Registration Division (TS-767C)

Agricultural Division of Ciba-Geigy Corporation is requesting an amended registration for Ridomil 5G to allow for its use on spinach for control of Pythium damping-off and white rust.

Tolerances have been established for the combined residues of the fungicide metalaxyl [N-(2,6-dimethylphenyl)-N-(methoxyacetyl)alanine methyl ester] and its metabolites containing the 2,6-dimethylaniline moiety, and N-(2-hydroxy methyl-6-methyl)-N-(methoxyacetyl)-alanine methylester, each expressed as metalaxyl in or on spinach at 10 ppm [40 CFR 180.408 (a)].

The currently registered use for metalaxyl on spinach allows for 1-2 lb. ai./acre of Ridomil 2E to be applied broadcast or in a band using ground equipment at planting. Broadcast applications may be soil incorporated.

Ridomil<sup>®</sup> 5G is a granular formulation containing 5% metalaxyl.

The proposed use on spinach would allow for preplant incorporated or preemergence soil applications at rates of 20-40 lbs. Ridomil 5G (1-2 lbs. a.i.)/treated acre. For white rust control, two additional treatments using 5 lbs. Ridomil 5G (0.25 lb. a.i.) may be made as side dress applications. Make the first side dress application 40-50 days after planting or after the first cutting. One additional application may be made after the next

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cutting. Do not harvest spinach within 21 days of a Ridomil 5G application.

Ridomil 2E (EPA Reg. No. 100-607) and Ridomil 5G are registered on a number of the same crops. However, it has been shown (see J. Garbus memo dated 8/6/85) that average residues resulting from applications of the 5G formulation are approximately 2X (average) the average residues resulting from applications of the 2E formulation when both are applied at the same rate.

Residue data submitted with this amended registration request were from six field studies conducted in the states of California, Arkansas, Nebraska, New York, Texas, and North Carolina. The data reflect residues resulting from the maximum at plant treatment of 2 lb. a.i./acre plus one or two side dress applications using 0.25 lb. a.i./acre. PHI's ranged from 21 to 54 days. In addition, data from 2X applications (4 lb. a.i./acre preplant plus one 0.5 lb. a.i./acre side dress application) were submitted. While the registrant conducted six field studies, only three actually reflected the maximum proposed use of an at plant treatment using 2.0 lb. a.i./acre plus two side dress applications using 0.25 lb. a.i./acre with a 21-22 day PHI. The maximum residue reported from a 1X rate at plant treatment was 9.5 ppm found on spinach grown in California. This sample was taken 45 days after the at plant treatment with no side dress applications being made. The maximum residue reported from a 4.0 lb. a.i./acre at plant treatment was 15 ppm. This sample was taken 45 days after the at plant treatment and was from the same study as the high value from the 1X at plant treatment. Although, none of the residues exceeded the established tolerance, Dietary Exposure Branch is unable to make a conclusion concerning the adequacy of the established tolerance since the number of studies reflecting two side dress applications with a 21 day PHI is limited and the 9.5 ppm found on spinach grown in California 45 days after receiving only the at plant treatment.

#### Conclusions and Recommendations

In the absence of adequate residue data, Dietary Exposure Branch is unable to conclude that the 10 ppm tolerance established to cover residues of metalaxyl and its metabolites on spinach will not be exceeded as a result of the proposed amended registration of Ridomil 5G.

For a favorable recommendation, the registrant will need to generate more residue data reflecting the maximum proposed use of Ridomil 5G on spinach, i.e., an at plant treatment using 2.0 lb. a.i./acre plus two side dress applications using 0.25 lb. a.i./acre and a 21 day PHI. Some of this required residue data will need to be generated in California.

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cc: Reading File, Circulation, Subject File, Amended Use File,  
Metalaxyl Reg. Std. File, Reviewer, Branch Chief, PMSD/ISB  
RDI: A. R. Rathman, 2/14/89; E. Zager, 2/14/89  
TS-769C:DEB:LSP:lsp:CM-2:Rm803C:557-7324:2/14/89

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