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HEALTH EFFECTS DIVISION
SCIENTIFIC DATA REVIEWS
EPA SERIES 361

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Id# 100-TEN. Ridomil®/Copper 70W Fungicide
[metalaxyl/copper hydroxide] "Me Too". For Foliar Use
on Carrots, Cucurbits, Peppers, Potatoes, Radishes,
Spinach, and Tomatoes. Accession Nos. 251021 and
262112, and MRID 417183-01; D169183. CBRS 8625.

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TO: Cynthia Giles-Parker, PM 22
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INTRODUCTION:

Agricultural Division of CIBA-GEIGY Corp. requests a "me too" registration of subject product, 100-TEN, containing 10% metalaxyl and 60% copper hydroxide in water soluble bags to replace EBDC/metalaxyl products for control of certain diseases in various fruits and vegetables. Proposed labeling dated 11/20/90, old metalaxyl residue data for peppers [262112] and spinach [251021], and a copper hydroxide Formulator's Exemption were provided. Also contained in the current package as received by CBRS is subject EP's Product Chemistry [61-1 through 63-20]. That study, 417183-01, should be referred to RD. We are asked whether existing tolerances support proposed uses.

Metalaxyl and copper hydroxide are List A chemicals; their Registration Standards issued in 1987 and 1986, respectively.

TOLERANCES:

Per 40 CFR 180.408(a), 185.4000, and 186.4000, existing relevant tolerances 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 ppm metalaxyl are listed below:

Cucurbit vegetables group	1.0
Fruiting " "	1.0
Potatoes	0.5
" , processed (+ chips)	4.0
" waste, dried, processed	4.0
Root & Tuber vegetables, roots	0.5
" , tops	15.0
Spinach	10.0
Tomato pomace (dry & wet)	20.0
Tomatoes, processed	3.0

Meat, milk, poultry, and egg metalaxyl tolerances also exist.

Copper hydroxide is exempt from the requirement of a tolerance. [180.1001(b)(1)]

REGISTERED & PROPOSED USES:

Cucurbits. The **registered**, 10% WP, and **proposed** Ridomil/Copper 70W uses are identical; multiple foliar applications at 14-day intervals are allowed at 0.15-0.20 lb ai/A/application with a 5-day PHI. In addition, a maximum of 4 applications per crop are now proposed.

Peppers. The **registered** 2E [25% ai] use allows a band spray soil application at 1.0 lb ai/A over rows at seeding followed at 30-day intervals with 2 post-directed [**non-foliar**] applications at 0.5 ai/A with a 7-day PHI. But, the **proposed** Ridomil/Copper 70W use would allow an at-planting soil application of 2E at an **unspecified** rate, followed by 3-4 **undefined** applications at 10-14 day intervals of the product at 0.25 lb ai/A with a 7-day PHI.

Tomatoes. The **registered** 9% WP use allows multiple foliar applications at 14-day intervals at 0.135-0.2 lb ai/A, not to exceed 3 lbs ai per season; no PHI is established. The **proposed** Ridomil/Copper 70W use would allow multiple foliar applications on a 5-7 day schedule at 0.15-0.25 lb ai/A, not to exceed 3 lbs ai/A/crop with a 7-day PHI.

Potatoes. The **registered** 10% WP use allows multiple foliar applications at 0.15-0.2 lb ai/A beginning when the plants are 6 inches high and then at 14-day intervals with a 7-day PHI. There is no maximum seasonal application rate or a maximum number of applications per season. The **proposed** Ridomil/Copper 70W use is disease-specific. For **Late Blight**: apply 0.15-0.25 lb ai/A when conditions are favorable for disease, but before infection, and continue at 14-day intervals. For **Tuber Rot, Pythium Leak & Pink Rot**: apply 0.20-0.25 lb ai/A at flowering and then repeat twice

at 14-day intervals. A 7-day PHI and a maximum of 4 foliar applications are noted.

Carrots and Radishes. The **registered** 2E uses allow a preplant or at-planting application of 1-2 lbs ai/A followed by up to 4 foliar applications at 0.15-0.20 lb ai/A beginning when conditions are favorable for disease but before infection and continuing at 14-day intervals with a 7-day PHI. The **proposed** uses of Ridomil/Copper 70W would allow an at-planting application of 2E at an unspecified rate, followed by 2-4 [foliar?] applications at 0.20 lb ai/A on a 14 day schedule with a 7-day PHI.

Spinach. The **registered** 2E use allows a single broadcast or band soil application at planting at 1-2 lbs ai/A using ground equipment. The broadcast application may be soil incorporated. The **proposed** Ridomil/Copper 70W use would allow 1-3 [foliar?] applications at 0.25 lb ai/A at 14-day intervals beginning 40-50 days after the at-planting application of 2E at an unspecified rate, or immediately after each repeated cutting. A 21-day PHI and a maximum per crop application of 5 lbs of product are noted.

CBRS comment:

Since the proposed use on Cucurbit vegetables, in regard to expected residues, is identical to the registered use, the existing group tolerance is adequate.

Concerning the adequacy of the existing group tolerance on Fruiting vegetables for the proposed uses on peppers and on tomatoes, we note that:

1. Despite the cited label, foliar applications to growing peppers were used to generate the supporting residue data provided in PP#6F3387 [262112]. Consequently, **AND** provided the Registrant clarify the 2 ambiguities in the proposed use, available residue data indicates that the existing group tolerance is adequate. Those disparities are: a) specify the at-planting application rate as 1.0 lb ai/A, and b) define the subsequent applications as foliar.
2. Although the proposed maximum application rate to growing tomatoes is slightly greater than that which is registered, data available in PP#6F3387 [Acc. No. 262112] indicates that the new higher rate would not result in tolerance exceeding residues on tomatoes.

Concerning the adequacy of existing potato tolerances for the proposed use, residue data submitted in PP#9F3698 indicates that residues of metalaxyl on potatoes will not exceed the tolerance under this proposed use.

Concerning the adequacy of existing group tolerances on Root & Tuber vegetable roots & tops for the proposed uses on carrots and radishes, we note the following. Despite the cited label, foliar applications to growing carrots and radishes were used to generate the supporting residue data provided in PP#9F3698 [40838301-03]. Consequently, AND provided the Registrant clarify the 2 ambiguities in the proposed use, available residue data indicates that the existing group tolerance is adequate. Those disparities are: a] specify the at-planting application rate as 1-2 lbs ai/A, and b] define the subsequent applications as foliar.

Concerning the adequacy of the existing spinach tolerance for the proposed use, we note that the study cited, 251021, reflects an Agency-approved, still unregistered, use which includes foliar applications. Briefly, N. Dodd's 12/8/83 review of 251021 stated RCB had no objections to the proposed use provided the proposed metalaxyl tolerance of 10 ppm for spinach was established. That proposed use: an at-seeding, maximum soil application of Ridomil®2E at 2.0 lbs ai/A followed by multiple foliar applications at 14-day intervals at 0.125-0.25 lb ai [metalaxyl]/A of a 2E/[Dithane M-22 or Manzate] combination product; EPA Reg 100-607 with a 7-day PHI and a total, soil + foliar, maximum application amount of 2.75 lbs ai [metalaxyl]/A/season generated metalaxyl residues of 0.36-9.15 ppm. Residue data available in EPA Acc. No. 251012 indicates that, with a 21 day PHI, residues of metalaxyl on spinach will not exceed the present tolerance. The Registrant should clarify the proposed use by specifying the at-planting application rates and define the subsequent applications as foliar.

CONCLUSIONS and RECOMMENDATION:

The available data support the proposed use. The existing tolerances are adequate.

CBRS has no objections to the proposed "me too" registration of Ridomil®/Copper 70W Fungicide; Id# 100-TEN, for foliar use on carrots, cucurbits, peppers, potatoes, radishes, spinach, and tomatoes. Minor clarifications of the proposed labeling for spinach, fruiting vegetables, and root and tuber vegetables are needed (see p3 and above).

cc: K. Dockter (CBRS), Metalaxyl Amended Use File, Metalaxyl Reregistration Standard File, Metalaxyl Subject File, Copper Compounds: Group II Reregistration Standard File, Copper Hydroxide Subject File, J.Burrell/C. Furlow (PIB/FOD), RF, Circulation (7), P. Deschamp (Update File), and L. Rossi (RB/SRRD).

RDI:AARathman:RBPerfetti:DFEdwards:EZager: all 12/11/91
H7509C:CBRS:CM#2:RM802:77886:KWDockter/Kd:12/11/91

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