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

SEP 25 1987

MEMORANDUM

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

SUBJECT: EPA Reg # 7001-259. Dicofol Registration Standard Response. Residue Study Protocols for Succulent Beans and Hops. No MRID #. RCB # 2579.

FROM: Leung Cheng, Chemist
Special Registration Section II
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THRU: Edward Zager, Section Head
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TO: Dennis Edwards, PM #12
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Registration Division (TS-767)

In response to the Dicofol Registration Standard (issued 12/30/83), J. R. Simplot Company has submitted protocols for collecting dicofol residues on succulent beans and hops. Simplot's product Dicofol 4EC (EPA Reg # 7001-259) contains 4 lbs active per gallon.

Dicofol is 1,1-bis(chlorophenyl)-2,2,2-trichloroethanol, an alcohol analog of DDT.

According to the label, registered uses of dicofol on beans and hops are listed below.

Crop	lb ai/A	PHI	Limitations
beans (CA only)	0.75-1.5	45 d	do not feed fresh hay or spent hay to dairy or meat animals
beans (other than CA)	0.33-0.5	7 d	do not feed fresh hay or spent hay to dairy or meat animals
	0.5-1.5	21 d	
hops	0.5-1.0	7 d	no feeding restriction

Maximum numbers of applications on each crop are not listed.

Established tolerances are 5 ppm on beans succulent and 30 ppm on hops [40CFR180.163]. The tolerances are expressed in terms of the parent compound. No tolerances have been established on meat, milk, poultry, or eggs. Also, there are no food or feed additive tolerances.

Bean Protocol

Simplot has proposed succulent bean residue trials be conducted in CA, OR, WI, and NY. Separate protocols for each state have been attached. These are summarized below.

Formulation: Emulsifiable concentrate, Dicofol 4EC
Crop: Snap bean, succulent
Treatments: 0.75 lb ai/A, 1.5 lbs ai/A, and untreated
Application Timings: 1 application at 28 days post plant (ca at time of bloom sets) plus 1 at 14 to 28 days later by ground
GPA: 30 to 50 gallons water per acre
Replicates: 3 or 4 per treatment
Method: Commercially simulated; one row per treatment with buffer row in between to prevent contamination
Residue Sample Intervals: 21, 28, and 45 (CA only) days after last treatment
Sampling Procedure: 2 to 4 lbs of beans per sample; samples properly labeled; frozen as soon as possible after harvest; samples shipped packed in dry ice
Quality Assurance: All work conducted and documented according to accepted standards of the Good Laboratory Practices

The registrant also intends to conduct a residue study on succulent lima beans in CA at treatment rates of 0.75 lb ai/A and 1.5 lbs ai/A and sampling intervals of 21 and 28 days after the second treatment.

RCB comments concerning the proposed bean protocol

1) The protocol is intended to collect residue data resulting from a maximum of 2 applications of 4EC at 1.5 lbs ai/A. If the registrant intends to allow more than 2 applications per season, then the plants need to be treated at the same frequency as allowed on the label. If only 2 treatments per season are to be supported, then the label must be amended to allow only 2 applications per season at a 14-day interval.

2) Residue data resulting from aerial applications are needed if treatments by aerial equipment are also allowed.

3) The protocol is intended to reflect residue data at 21-day PHI

and does not support the current minimum 7-day PHI. Simplot must either amend the label to show a 21-day minimum PHI or amend the protocol to sample residues at 7 days after the last application.

4) Simplot must add a field residue study on lima beans each in FL and TN/VA/NC (in addition to CA) in order to satisfy succulent bean residue data requirement (representative succulent beans and geographic representation).

5) Residue analysis should be conducted on the whole seed and pod.

6) Residue data on bean vine are needed unless feeding of bean vine is restricted on the label.

7) A cannery processing study is also necessary since feeding of hay is restricted. In lieu of a cannery processing study, residue data on bean vine and hay may be submitted.

Hops Protocol

Formulation: Emulsifiable concentrate, Dicofol 4EC
Crop: Hops grown in WA
Treatments: 1 or 3 x 1 lb ai/A, and untreated check
Application Timings: at 3-week intervals - 1st end of June, 2nd fourth week of July, and 3rd second week of August;
GPA: 30 to 50 gallons water per acre
Replicates: 2 or 3 per treatment
Method: Commercially simulated
Residue Sample Intervals: 7 days after last treatment
Sampling Procedure: 1 lb of cones from 4 individual plants per sample; separate samples of green and dried cones; samples properly labeled; frozen as soon as possible after harvest; samples shipped packed in dry ice
Quality Assurance: All work conducted and documented according to accepted standards of the Good Laboratory Practices

RCB comments concerning the proposed hops residue protocol

1) The protocol implies that the hops label allows a maximum of 3 applications at 1 lb ai/A. The current label has no such limitation. The label must include a limit on the number of applications consistent with the available residue data.

2) Residue data resulting from aerial applications are needed if treatments by aerial equipment are also allowed.

3) We consider the green (fresh) cones to be the raw agricultural commodities and the dried cones to be the processed commodities. Dried cones should contain ca 10% moisture prior to analysis.

4) Residue analysis of spent hops (from hops extract) is also

required since a feeding restriction would not be considered practical.

CONCLUSIONS

The proposed protocols on beans and hops are not adequate.

The metabolic fate of dicofol in beans and plants in general has not been completely elucidated (S. Hummel's review of 5/27/87, Rohm and Haas Response to Registration Standard). Simplot should be aware that additional residue analysis may be necessary for residues other than dicofol in beans and hops.

RECOMMENDATION

RCB recommends the comments be forwarded to Simplot with instructions to revise the protocols and the labels as suggested in our comments.

Simplot should be aware that copies of appropriate Standard Evaluation Procedure and Data Reporting Guidelines (crop field trials in this case) are available as guides for conducting these field trials.

cc:Circu, RF, SF, Dicofol Sp Rev (Hummel), Reg Std (Boodee), Cheng, SIS, PMSD/ISB
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