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

JUN 8 1987

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: EPA Reg. No. 8340-23. WHIP® (fenoxaprop-ethyl) Amended Label to reduce the PHI for Rice. MRID Nos. 401479-01 and 401479-02. RCB # 2151.

FROM: Kenneth W. Dockter, Chemist
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THRU: A.R. Rathman, Section Head
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TO: Richard Mountfort, PM#23
Registration Division (TS-767)

American Hoechst Corporation is submitting proposed labeling dated March 23, 1987 for WHIP® 1 EC Herbicide, EPA Reg. No. 8340-23 to permit a reduced PHI for rice.

Fenoxaprop-ethyl [(±)-ethyl 2-[4-[(6-chloro-2-benzoxazolyl)oxy] phenoxy]propanoate] formulated as WHIP® 1 EC contains 1 lb ai (equivalent)/gal.

No Registration Standard for fenoxaprop-ethyl has been issued as of this writing, and none is planned. (personal communication from B. Boodee, 4-24-87).

Permanent tolerances have been established for the combined residues of fenoxaprop-ethyl and its metabolites at 0.05 ppm on rice and soybeans (40 CFR §180.430; PP#6F3316). Previously, we had recommended for renewal of the corresponding temporary tolerance. (See R. Loranger memorandum of 1-27-86; PP#4G3035). These are based on a 90-day PHI use of 0.15-0.2 lb ai per acre for post-emergence grass control in rice depending upon the weed and its growth stage. Two applications and a maximum of 0.30 lb ai per acre are permitted per season. No applications are permitted after panicle initiation stage.

With the revised label, a PHI of 80 days is proposed; to accomadate its use on short-season, high yielding rice varieties (Bond, Newbonnet, Tebonnet, and Lemont) now being grown (due to severe

economic pressure) in three southern (unidentified) states. To expedite this use 24(c)s have been applied for in AR, LA, MI, and MO; but not TX, in which, "the situation is different". Though this difference is not explained, new residue data from Texas is offered in support of the proposed labeling. We also note that the revised label contains directions for application in California; a state, according to the accompanying letter by V.A. Dorr, in which Whip 1EC Herbicide is not registered for use.

No analytical method was provided with this request. Hoechst claims that the analytical methodology used to generate the current data is "identical to the methodology submitted to RCB on November 14, 1986". Reference is made to: "Determination of Fenoxaprop-ethyl [HOE-033171: Ethyl-2-(4-(6-chloro-2-benzoxazolyloxy)phenoxy) propanoate] and its metabolites [HOE-053022: 2-(4-(6-chloro-2-benzoxazolyloxy)phenoxy)propanoic acid and HOE-054014: 6-chloro-2,3-dihydrobenzoxazol-2-one] in Various Matrices", dated November 12, 1986, and now referred to as "HRAV Analytical Method: HRAV-1A (and/or) Hoechst Analytical Method: AL 48/86; issued November 12, 1986".

Though claimed by the registrant, a copy of the analytical method was not included in the current package as received by RCB. From the current raw analytical data (viz. field residue trial reports, sample preparation sheets, GC data sheets, gas chromatograms, results and recovery calculations, and linear plots), we do note that the cited, revised analytical method is quite similar to (if not the same as) the petitioner's submission in response to deficiencies 5b and 5c. (See N. Dodd memorandum of 12-30-86; PP#6F3316). The company also claims that, "this methodology has undergone a successful method trial by the appropriate EPA personnel".

The method involves acid cleavage of residues of fenoxaprop-ethyl on rice to the chlorobenzoxazole moiety. Recoveries of 60-102% (parent and metabolite (HOE-054014)) from rice grain and straw fortified at 0.05 and 0.10 ppm are reported. Some details of the methodology that are provided in the three current residue reports (Hoechst Report Nos.: HRAV-1R, HRAV-6R, and HRAV-8R; all contained in MRID No. 401479-02) will be discussed below with that data.

No metabolism data were provided with this current submission. The fenoxaprop-ethyl residues of concern (for rice only) are considered to be the parent compound, the free acid, fenoxaprop, as well as the chlorobenzoxazole metabolites. (See N. Dodd memorandum of 8-21-86; PP#6F3316).

The new residue data provided with this current submission consists of five tests (presented in the aforecited three reports) in which Whip 1 EC (EPA Reg. No. 8340-23) was used on existing vegetation in 1985 and 1986 EUP field trials (plot sizes of 3-15 acres) of growing rice (prior to panicle initiation stage) at rates of 0.15-0.25

lb ai/A. Both single and repeat (split) applications were made. Tests were carried out in: AR (one each in Harrisburg and Lake Village), LA (two in Oak Grove), and one in Anahuac, TX; all using aerial application at 10 gpa. We note that use of fenoxaprop-ethyl is prohibited in the Arkansas counties of Cross and St. Francis. We assume that these AR test sites are not in those counties. The residue data including some details of the tests are depicted below. below.

Fenoxaprop-ethyl residues in Rice

Test No.	Variety	Planted	Treatment	Plot	PHI	Storage	Analysis	Recovery	PPM
21-LA-85 (Oak Grove) HRAV-1R	Newbon-net	4-22-85	5-24 .15+ 7-16 .15 + 4.0 P (NG)	12	57	NG (1/86) frozen	10-8-86 AL 36/86 (Poly-tron) (P-22)	G80 (.05) G84 (.10) S74 (.05)	GNM SNM
11-TX-85 (Anahuac) dto	CB-801	5-13-85	7-11 .25 + 3.0 P (6-8-85)	10	75	NG (4/86) frozen	dto dto dto dto	dto dto dto	GNM SNM
21-AR-85 (Harris-burg) HRAV-8R	Newbon-net	5-22-85	7-8 .15+ 7-29 .20 + 3.0 P (6-10-85)	15	57	Box#2 (1/86) NG	3-17-86 AL 48/86 (no Po-lytron) (DB-1)	G77 (.05) G88 " G71 (.10)	GNM
86-LA-01 (Oak Grove) HRAV-6R	La(e)-mont (sic)	4-10-86	5-29 .20+ 6-13 .20 + 4.0 P (5-15-86)	5	77	0°F (10/86) NG	12-15-86 AL 36/86 (Poly-tron) (P-15)	G73 (.05) G94 (.05M) G80 (.10) G102 (.10M)	GNM
86-AR-01 (Lake Vilg.) dto	Le-mont (sic)	4-15-86	6-5 .20+ 6-20 .20 NG	3	88	32°F (10/86) NG	11-24-86 AL 36/86 NG NG	G60 (.05) G76 (.10)	GNM

Test No. is abbreviated; site in ().
Treatment in lbs/A; also for other pesticide used, P (for propanil). Date for P in (); with a 6-day interval (pre-Whip) required.
Plot size is given in acres.
Storage conditions include: storage temperature; shipment date in (); and arrival condition.
Analysis: date of; method used (both "aka HRAV-1A"); sample preparation and GC column no. are in (). ECD (^{63}Ni) used throughout.
Recovery in percent; ppm parent added in (); except as noted, M (for the metabolite [6-chloro-2,3-dihydrobenzoxazol-2-one]).
Residues - "not measurable" (NM) in rice grain (G) and straw (S) samples.

We note that despite the myriad of variations in the above tests and analyses, residue levels in all cases were found to be, "not measurable" (NM) in samples of rice grain (G) and straw (S), and assigned a value of <0.05 ppm; the limit of detection of the method being 0.05 ppm fenoxaprop-ethyl equivalents. Actually, the detection limit is 0.02 (See R. Loranger memorandum of 6-7-84; PP#4G3035).

Also, previously submitted residue data are re-presented in summary form only, in the current submission (MRID No. 401479-01). For comparison purposes, the old data are depicted in a similar fashion below.

Fenoxaprop-ethyl residues in Rice*

Test No.	Variety	Planted	Treatment		Plot	PHI	Storage	Analysis	Recovery	PPM
15-LA-83 (Rosa) A#072304 R#D-1-5	Saturn	NG	NG	.20	NG	80	NG	NG	NG	G<0.05
		"	"	.40	"	80	"	"	"	"
11-TX-83 (Louise) dto R#D-1-10	Labelle	"	"	.20	"	79	"	"	"	"
		"	"	.40	"	79	"	"	"	"
04-AR-84 (Tiller) A#073955 R#D-20	Newbonnet	"	"	.15+ .15	"	78	"	"	"	"

* These data were previously reviewed by RCB along with similar data all received as a part of PP#4G3055 (A#072304); R. Loranger memorandum of 6-7-84, and also part of PP#6F3316 (A#73955); N. Dodd memorandum of 2-4-86.

We concluded at that time that a temporary tolerance of 0.02 ppm was adequate to cover the proposed use with an 80-day PHI. Later, we concurred with increasing that to 0.05 to match the pending permanent tolerance. (See R. Loranger memorandum of 1-27-86, loc. cit.). Subsequently, we requested a 90-day PHI restriction (or additional residue data at a PHI of 75 days) for the permanent. (See N. Dodd memorandum of 12-30-86). At that time, the registrant chose to accept the longer PHI.

In sum, sufficient data are now available in support of the proposed reduced PHI.

Conclusion and Recommendation

RCB concludes that sufficient data are now available in support of the proposed, reduced PHI of 80 days. These data show that fenoxaprop-ethyl residues in rice will not exceed the established 0.05 ppm tolerance.

Therefore, we recommend in favor of the proposed labeling to change SPECIAL NOTES FOR RICE number ten (10) to read, "Do not apply Whip 1 EC Herbicide less than 80 days before harvesting rice".

PM NOTE: The status of proposed use vs. restriction in the state of California should be clarified, and this revised label corrected accordingly.

cc: Circu, RF, SF, Amended Use file (fenoxaprop-ethyl), Dockter, PMSD/ISB
RDI: AARathman:6/5/87:RDSchmitt:6/5/87
TS-769:RCB:CM#2:RM 802:77886:K.W. Dockter:edited by Kd:6/5/87