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

AUG 12 1986

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: New Use of Lorsban 50W (Chlorpyrifos 50%) on Sour
Cherries. EPA Reg. No. 464-552; Tox. PN #1879;
Caswell #219AA

TO: Larry Schnaubelt (12)
Registration Division (TS-767C)

FROM: D. Stephen Saunders, Ph.D.
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TOX/HED (TS-769C) *DSD*
8/9/86

THRU: Laurence D. Chitlik, DABT
Head, Section V,
TOX/HED (TS-769C) *Quang Bui for LDC*
8/12/86
and
Theodore M. Farber, Ph.D.
Chief, Toxicology Branch
Hazard Evaluation Division (TS-769C) *M. Farber*
8/12/86

Action Requested

Review the proposed amended registration to include the use of Lorsban 50W (Chlorpyrifos 50% Wettable Powder) on sour cherries.

Recommendations

The existing tolerance calculation for chlorpyrifos includes sour cherries in the Theoretical Maximum Residue Contribution value. Thus, Toxicology Branch is unable to calculate the effect (i.e. % increase in the TMRC) of the proposed new use, as no distinction is made between types of cherries under the "Food Factor" system, and a tolerance has already been established for the use of chlorpyrifos on cherries (PP# 1E2529, see attached printout).

1/7353

Discussion

1. Inerts- Lorsban 50W is a currently registered pesticide formulation (EPA Reg. #464-552). The submitted label indicates that this formulation is registered for use on apples, almonds, walnuts, filberts and pecans. Although a Confidential Statement of Formulation was not included in the submission, it is assumed that inerts have been previously cleared under CFR 180.1001.

2. Calculation of Risk- The Acceptable Daily Intake (ADI) for chlorpyrifos is 0.003 mg/kg/day, and is based on a NOEL of 0.03 mg/kg/day obtained in a 20-day human dose study, with an uncertainty factor of 10. The current TMRC for published tolerances for chlorpyrifos is 0.0105 mg/kg/day, which is equivalent to 350.9% of the ADI. Since published tolerances include a tolerance of 2.0 ppm in or on cherries, Toxicology Branch is unable to calculate the effect of a new use on sour cherries, as this Raw Agricultural Commodity is included in the current tolerance calculation. Thus, no detectable increase in the TMRC will result from the proposed new use.

3. Data Gaps- Data gaps for chlorpyrifos technical include a two-year chronic feeding study in rats, a rat metabolism study, and a 90-day inhalation study. Toxicology Branch defers to IRB on the acceptability of existing acute toxicity data for Lorsban 50W.

4. Comments- Toxicology Branch does not support any new uses for chlorpyrifos which will result in an increase in the TMRC, which currently exceeds the ADI.

DSS:TOX/HED:8-9-86:FILE NEW219AA

TOXICOLOGY BRANCH ADI PRINTOUT

Date: 07/23/86

Chlorpyrifos 20d feeding- humans PADI = 0.003000 mg/kg/day
 Caswell #219AA NOEL = 0.0300 mg/kg Safety Factor = 10
 CFR No. 180.342 LEL = 0.1000 mg/kg
 Status: TOX ADI complete 2/21/86. ORD verified 3/11/86.

RESIDUE CONTRIBUTION OF PUBLISHED TOLERANCES

CROP	TOLERANCE (PPM)	PETITION NUMBER	FOOD FACTOR	MG/DAY
1 Almonds	0.200	3F2778	0.03	0.000090
2 Apples	1.500	2F2620	2.53	0.056925
5 Asparagus	5.000	2E2644	0.14	0.010500
7 Bananas	0.050	3F1370	1.42	0.001065
19 Broccoli	2.000	3E2819	0.10	0.003000
20 Brussel sprouts	2.000	3E2819	0.03	0.000900
22 Cabbage, sauerkraut	2.000	3E2819	0.74	0.022200
26 Cattle	2.000	3F1306	7.18	0.215400
27 Cauliflower	2.000	3E2819	0.07	0.002100
30 Cherries	2.000	1E2529	0.10	0.003000
33 Citrus fruits	1.000	1F2575	3.81	0.057150
37 Collards	2.000	3E2819	0.08	0.002400
38 Corn, all types	0.100	3F1306	2.51	0.003765
41 Cottonseed (oil)	0.500	6F1786	0.15	0.001125
44 Cranberries	1.000	282682	0.03	0.000450
46 Cucumbers, including pickles	0.100	9F2221	0.73	0.001095
54 Eggs	0.100	6F1673	2.77	0.004155
57 Figs	0.100	2E2668	0.03	0.000045
58 Filberts	0.200	4F2999	0.03	0.000090
62 Goats	1.000	9F2270	0.03	0.000450
66 Grapes, including raisins	0.500	2E2584	0.49	0.003675
69 Hogs	0.500	3F1306	3.43	0.025725
75 Kale	2.000	3E2819	0.03	0.000900
76 Kohlrabi	2.000	3E2819	0.03	0.000900
87 Macadamia nuts	0.200	4F2999	0.03	0.000090
93 Milk and dairy products	0.020	0F2281	28.62	0.008586
96 Molasses	15.000		0.03	0.006750
97 Mushrooms	0.050	3E2886	0.03	0.000023
99 Mustard greens	2.000	3E2819	0.06	0.001800
100 Nectarines	0.050		0.03	0.000023
106 Onions, dry bulb	0.500	0E2387	0.72	0.005400
114 Peaches	0.050	3F1306	0.90	0.000675
115 Peanuts	0.500	9F2193	0.36	0.002700
116 Pears	0.050	6F1786	0.26	0.000195
118 Pecans	0.200	4F2999	0.03	0.000090
120 Peppers	1.000	1E2523	0.12	0.001800
124 Plums, not including prunes	0.050	6F1786	0.09	0.000068
128 Poultry	0.500	6F1673	2.94	0.022050

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RESIDUE CONTRIBUTION OF PUBLISHED TOLERANCES

CROP	TOLERANCE (PPM)	PETITION NUMBER	FOOD FACTOR	MG/DAY
130 Prunes	0.050	6F1786	0.04	0.000030
131 Pumpkin, including squash	0.100	8E2038	0.11	0.000165
133 Radishes	3.000	8E2023	0.03	0.001350
139 Rutabagas	3.000	8E2023	0.03	0.001350
143 Seed and Pod vegetables	0.100	1E2529	3.66	0.005490
145 Sheep	1.000	9F2270	0.19	0.002850
147 Sorghum	0.750		0.03	0.000338
148 Soybeans (oil)	0.500	9F2270	0.92	0.006900
152 Strawberries	0.500	0E2283	0.18	0.001350
154 Sugar, cane and beet	1.000	2F2684	3.64	0.054600
156 Sunflower	0.250	2F2588	0.03	0.000112
157 Sweet potatoes	0.100	6F1786	0.40	0.000600
163 Tomatoes	0.500		2.87	0.021525
165 Turnips	3.000	0E2411	0.05	0.002250
166 Turnip greens	1.000	0E2411	0.03	0.000450
167 Walnuts	0.200	3F2778	0.03	0.000090
170 Wheat	0.150	1H5284	10.36	0.023310
173 Brazil nuts	0.200	4F2999	0.03	0.000090
175 Butter nuts	0.200	4F2999	0.03	0.000090
177 Chinese cabbage	2.000	3E2819	0.03	0.000900
193 Mint	1.000	9E2372	0.03	0.000450
197 All foods	0.025		100.00	0.037500
204 Kiwi fruit	2.000	3E2766	0.03	0.000900
206 Hickory nuts	0.200	4F2999	0.03	0.000090
208 Horses	1.000		0.03	0.000450
209 Cashews	0.200	4F2999	0.03	0.000090
214 Rest of Tree nuts	0.200	4F2999	0.03	0.000090
214 Rest of Brassicae	2.000	3E2819	0.03	0.000900

TMRC
0.010528 mg/kg/day (60kg BW, 1.5kg diet)

%PADI
350.924167

RESIDUE CONTRIBUTION OF TOX-APPROVED TOLERANCES

CROP	TOLERANCE (PPM)	PETITION NUMBER	FOOD FACTOR	MG/DAY
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No tox-approved tolerances are listed in the file.

TMRC
0.010528 mg/kg/day (60kg BW, 1.5kg diet)

%PADI
350.924167

RESIDUE CONTRIBUTION OF NEW (PENDING) TOLERANCES

CROP	TOLERANCE (PPM)	PETITION NUMBER	FOOD FACTOR	MG/DAY
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No new tolerances are listed in the file.

	TMRC			
0.010528	mg/kg/day (60kg BW, 1.5kg diet)			

%PADI
350.924167

LIST 1

List of Inerts of Toxicological Concern (List of 57)

<u>Chemical</u>	<u>CAS No.</u>
1. Aniline	62-53-3
2. Asbestos	1332-21-4
3. Benzene	71-43-2
4. 1,4-Benzenediol	123-31-9
5. Betabutyrolactone	96-48-0
6. Cadmium compounds	7440-43-9
7. Carbon disulfide	75-15-0
8. Carbon tetrachloride	56-23-5
9. Chlorobenzene	108-90-7
10. Chloroform	67-66-3
11. p-Dichlorobenzene*	106-46-7
12. 2,2-Dichlorovinyl dimethyl phosphate (Dichlorvos, DDVP)	62-73-7
13. Diethylhexylphthalate	117-87-7
14. 1,1-Dimethylhydrazine	57-14-7
15. 1,2-Dimethylhydrazine	540-73-8
16. Dinitro-o-cresol	534-52-1
17. Dinitrophenol	51-28-5
18. Dioxane	123-91-1
19. Epichlorohydrin	106-89-8
20. Ethylene dichloride	107-06-2
21. Ethanol, 2-ethoxy- (cellosolve)	110-80-5
22. Ethanol ethoxy acetate	111-15-9
23. Ethanol, 2-methoxy- (Methyl cellosolve)	109-86-4
24. Ethyl acrylate*	140-88-5
25. Ethylene thiourea	96-45-7
26. Ethyl methyl phenylglycidate	77-83-8
27. Formaldehyde	50-00-0
28. Hexachlorophene	70-30-4
29. n-Hexane	110-54-3
30. Hydrazine	302-01-2
31. Isophorone	78-59-1
32. Lead compounds	7439-92-1
33. Malachite green	568-64-2
34. Mercury oleate	1191-80-6
35. Methyl-n-butyl ketone*	591-78-6
36. Methyl chloride	74-87-3
37. Methylene chloride	75-09-2
38. 2-Nitropropane	79-46-9
39. Nonylphenol	25154-52-3
40. Paraformaldehyde*	30525-89-4

LIST 1

List of Inerts of Toxicological Concern (continued)

<u>Chemical</u>	<u>CAS No.</u>
41. Pentachlorophenol	87-86-5
42. Perchloroethylene	127-18-4
43. Phenol	108-95-2
44. o-Phenylphenol	90-43-7
45. Propylene dichloride (1,2-Dichloropropane)	78-87-5
46. Propylene oxide	75-56-9
47. Pyrethrins and Pyrethroids*	8003-34-5
48. Rhodamine B	81-88-9
49. Sodium dichromate	10588-01-9
50. Sodium pentachlorophenate*	131-52-2
51. Thiourea	62-56-6
52. Toluene diisocyanate*	26471-62-5
53. Tributyl tin oxide (TBTO)	56-35-9
54. 1,1,2-Trichloroethane*	79-00-5
55. Trichloroethylene	79-01-6
56. Tri-o-cresyl phosphate	1330-78-5
57. Tri-o-cresyl phosphate	78-30-8

* Subject to SAP review and approval. Actions on applications containing these inerts should be postponed until final SAP approval is obtained (anticipated date of approval 2/20/87).

NOTE: Formaldehyde, paraformaldehyde, hexachlorophene, 2,2-dichloro vinyl dimethyl phosphate, and pyrethrins/pyrethroids are scheduled to be reclassified as active ingredients in those formulations where pesticidal activities of these inerts is demonstrated.