

US EPA ARCHIVE DOCUMENT

1-4-85



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

JAN 4 1985

OFFICE OF  
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: PP#0F2413/FAP#0H5275 and PP#3F2793/FAP#3H5378.  
Thiodicarb on Cotton and Soybeans. Tolerances/  
Residue Levels of Thiodicarb Plus Methomyl and  
Acetamide on Cotton, Soybeans, and Animal Com-  
modities (Accession Numbers 136929, 136930,  
136931, 136933).

FROM: Michael P. Firestone, Ph.D., Chemist *M. P. Firestone*  
Tolerance Petition Section II  
Residue Chemistry Branch  
Hazard Evaluation Division (TS-769)

THRU: Charles L. Trichilo, Ph.D., Chief  
Residue Chemistry Branch  
Hazard Evaluation Division (TS-769)

TO: Jay S. Ellenberger, Product Manager No. 12  
Insecticide-Rodenticide Branch  
Registration Division (TS-767)

and

Toxicology Branch  
Hazard Evaluation Division (TS-769)

Union Carbide Agricultural Products Company, Inc. is requesting  
the establishment of thiodicarb tolerances on cotton and soybean  
commodities.

In order for TOX to complete its toxicology ~~risk~~ assessment, RCB  
has been requested (see C. Chaisson memo of 12/12/84 re: PP#0F2413/  
FAP#0H5275/PP#3F2793/FAP#3H5378) to complete the following chart:

R.A.C.	Food Commodity	Proposed Tolerance <sup>a</sup> or Maximum Expected Residue Level Thiodicarb + Methomyl (ppm) (Acetamide (ppb))		
cotton	cottonseed oil	0.02	NDS <sup>b</sup>	
	cottonseed meal	0.4	NDS <sup>b</sup>	
	seeds			
	hulls			
	meal			
	soapstock	cattle:		
		meat	NDR <sup>c</sup>	0.1
		meat by-products	NDR <sup>c</sup>	1.8
		milk	NDR <sup>c</sup>	0.3
	feeds	eggs	NDR <sup>c</sup>	0.07
		poultry:		
		meat	NDR <sup>c</sup>	0.01
		meat by-products	NDR <sup>c</sup>	0.06
	soapstock			
	meal			
hulls				
beans				
soybeans	soybeans	0.2 <sup>a</sup>	NDS <sup>b</sup>	
	soybean oil	0.02	NDS <sup>b</sup>	
	soybean flour:			
	full fat	0.05	NDS <sup>b</sup>	
	low fat	0.05	NDS <sup>b</sup>	
	defatted	0.05	NDS <sup>b</sup>	
bean sprouts	0.2	NDS <sup>b</sup>		

- a) proposed tolerance
- b) NDS - no data submitted - RCB is unable to estimate a level
- c) NDR - no detectable residues - Union Carbide has not reported a limit of detection.

(Note - RCB has previously evaluated the likely level of secondary carbamate residues in animal commodities resulting from the ingestion of soybean commodities (i.e., soybeans, soybean meal and soapstock, soybean hulls) (see A. Smith memo of 3/7/83 re: PP#3F2793/FAP#3H5378). This evaluation, however, did not consider the possible 1:4 ratio of acetamide/acetonitrile in milk).

With regard to carbamate (thiodicarb plus methomyl) residues in animal commodities resulting from the proposed uses on cotton and soybeans, RCB considers the likelihood of detectable levels to fall under 40 CFR 180.6a (3):

"That it is not possible to establish with certainty whether finite residues will be incurred, but there is no reasonable expectation of finite residues."

Although the petitioner has not submitted acetamide residue data generated on soybean or cottonseed commodities, RCB also has no reasonable expectation of finite acetamide residues on cottonseed meal and oil, soybeans, and soybean oil, flour and sprouts because of the following reasons:

- a. Acetamide residue levels resulting from the proposed thiodicarb uses are expected to be considerably less than the carbamate residue levels in/on plant commodities. Since the proposed tolerances (i.e., maximum expected carbamate residue levels) in/on the r.a.c.'s cottonseed (0.4 ppm) and soybeans (0.2 ppm) are low, the acetamide residue levels should be insignificant.
- b. Refining such commodities as cottonseed oil and soybean oil is expected to result in lowering the level of acetamide residues.

Thus, RCB considers it unlikely that detectable acetamide residues in/on cottonseed and soybean commodities will result from the proposed uses.

However, should the petitioner wish to alter the proposed uses on cotton and soybeans in such a way as to result in higher residues, or if the petitioner proposes thiodicarb tolerances in excess of those proposed here, RCB will require acetamide residue data on plant commodities so that TOX can be provided with the data they require to perform a toxicology risk assessment.

cc:R.F., Circu, Reviewer, TOX, EEB, EAB, FDA, PP#4F3050,  
Robert E. Thompson (RTP)  
RDI:Section Head:JHOnley:12/24/84:RDSchmitt:12/27/84  
TS-769:RCB Reviewer:MPFirestone:557-7484:Hampton/1/4/84

3