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

SEP 14 1994

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Trifluralin Reregistration. Clarification of magnitude of the residue sample storage information requirement.

CBRS No.: None

DP Barcode No.: D207243

MRID No.: None

Chemical No.: 036101

Reregistration Case No.: 0179

Bonnie Cropp-Kohlligian

FROM: Bonnie Cropp-Kohlligian, Environmental Scientist
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Chemistry Branch II: Reregistration Support
Health Effects Division [7509C]

THRU: Paula A. Deschamp, Section Head
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TO: Walter Waldrop/ Connie Childress [PM-71]
Reregistration Branch
Special Review and Reregistration Division [7508W]

The Trifluralin Reregistration Standard Science Chapter dated 7/12/85 and the Trifluralin Product and Residue Reregistration Update completed 10/29/91 required sample storage information to validate existing crop field trial and processing data. These magnitude of the residue data comprise a substantial portion of the total magnitude of the residue data base available for tolerance and risk assessments and are primarily from older studies conducted ca.



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20-30 years ago. This additional required information remains outstanding. Receipt of this storage information is vital to tolerance reassessment and would dramatically increase our confidence with respect to risk assessment.

In preparation of the Residue Chemistry Chapter for the Trifluralin Reregistration Eligibility Decision (RED) Document, CBRS has prepared a very detailed summary of the magnitude of the residue data/submissions for which sample storage intervals and/or conditions information is/are required (see Appendix I). The registrant should submit the required sample storage information along with sufficient raw data or other evidence to substantiate the information. CBRS notes that since some of the available storage stability data reviewed in the Trifluralin Update (10/29/91) demonstrated the effects of elevated temperatures (4°C to room temperature) on trifluralin residues in/on stored "nonperishable" commodities (dried beans, field corn grain, cottonseed, flax seed, peanut nutmeats and hulls, soybeans, sunflower seeds, and wheat straw and grain), there is a distinct possibility that "nonperishable" magnitude of the residue test samples may have been stored under similar conditions/intervals. Information concerning any magnitude of the residue test samples which may have been stored at temperatures above freezing is of particular concern since available storage stability data indicate the potential for trifluralin residue instability in these cases and the need to correct for trifluralin residue decline during sample storage. //

CBRS recommends that this review should be forwarded to the registrant in its entirety. //

cc: BLCKohlligian (CBRS), Trifluralin Reg. Std. File, Trifluralin Update File, Trifluralin SF, RF, Circulate.

RDI: PDeschamp:9/8/94

MMetzger:9/12/94

EZager:9/12/94

7509C:CBRS:BLCKohlligian:CM#2:Rm 805B:703-305-7462:9/7/94.

APPENDIX I. SUMMARY OF AVAILABLE TRIFLURALIN STORAGE STABILITY DATA. [Note: **Bolded** references were reviewed in the Trifluralin Residue Chemistry Science Chapter of the Registration Standard dated 7/12/85 and denote those magnitude of the residue studies for which sample storage conditions/intervals information is required.]

Commodity	Field Trial/Processing Study	
	MRID	Range of Storage Interval (days); Conditions
Alfalfa forage and hay	00093637, 00105691, and 00105726	3-215; NS *
	00143667 00155395	26; frozen 211; frozen
	42466001-42466008	9-238 (forage); ≤-6 C 15-210 (hay); ≤-6 C
Alfalfa seed	42466001-42466008	135-155; ≤-6 C
Almond	00105675 00105726	4-127; NS NS
Apricots	00105675 and 00105677	24-130; NS
Asparagus	00105696 00105702	NS NS
Barley forage and straw	00070736 00105704	NS NS
Barley, grain	00070736 00105704	NS NS
Beans, dry	00022376 00105669 00105726	NS NS NS
Beans (including Adzuki, guar, and mung)	None; residue data from dry beans were translated.	
Beans (including lima)	00033086 00105669 00105726	NS frozen; NS NS
Beans (including snap)	00022376 00033086 00057547 00105669	4; frozen NS 489-500; frozen NS
Beans, forage and hay	00022376 00105669	NS NS
Broccoli	00105650 and 00105749	7-133; NS
Brussels sprouts	00105749	7 or 112; NS
Cabbage	00105650 and 00105749	8-91; NS

APPENDIX I (continued).

Commodity	Field Trial/Processing Study	
	MRID	Range of Storage Interval (days); Conditions
Cantaloupe	00093555 and 00105726	5-145; NS
Carrots	00093554 00033087	8-150; NS NS
Cauliflower	00105749	7-65; NS
Celery	00093549 00105670	NS 4-133; NS
Cherries	42430803	165-225; ≤ -10 C
Citrus fruits	00105677	3-76; NS
Collards	00105724	9-166; NS
Corn, forage and fodder	00032811 00105726 42472301	NS NS 252-321 (forage); ≤ -6 C 149-172 (fodder); ≤ -6 C
Corn, grain	00032811 00105726	NS NS
	42403201	550; 100 days at ≤ -10 C and 450 days at ≤ -20 C
	42448201	116-142; ≤ -10 C
Corn, silage	42472301	129-185; ≤ -6 C
Corn, processed fractions	42403201	450; ≤ -20 C
Cottonseed	00093190	250; -23 C
	00105669 00105713 00105726 00105729 00105751 00105780 00105781	9-560; NS
	00105731	51-197; NS
	42354501	243; ≤ -20 C
	42354501	177-331; ≤ -20 C
	42354501	177-331; ≤ -20 C
Cottonseed, processed fractions (hulls, meal, soapstock, crude oil, and refined oil)	42354501	177-331; ≤ -20 C
Cucumber	00093555	7-107; NS
Flax seed	00084581	NS
Garlic	00105678	29-630; NS
Grapes	00105678	5-149; NS

APPENDIX I (continued).

Commodity	Field Trial/Processing Study	
	MRID	Range of Storage Interval (days); Conditions
Grapes, processed fractions (raisins)	00105678	NS
Hops, green	00105678	68-162; NS
Kale	00105724	107-172; NS
Mustard greens	00105724	107-171; NS
Mustard, seed	00067371	NS
	42430801	270; \leq -10 C
Nectarines	None; residue data from apricots and peaches were translated.	
Okra	00105669	NS
Onions, dry bulb	00120263	NS
Onions, green	42448202	25-212; \leq -10 C
Oranges	42642601	304; -20 C
Orange, processed fractions (dried pulp, wet peel, molasses, oil, and juice)	42642601	303-367; -20 C
Peaches	00105675 and 00105667	6-148; NS
Peanuts, nutmeats, hay, and hulls	00026049	170-202; NS
	00059531	18-72; NS
	00067222	NS
	00105646	31-86; NS
	42430804	213; \leq -10 C
Peanuts, vines and hay	42472302	109-131 (hay); \leq -18 C 112-245 (vines); \leq -18 C
Peanuts, processed fractions (hulls, meal, soapstock, crude oil, and refined oil)	42430804	89-258; \leq -10 C
Peas, field	00105669	NS
Peas, succulent and dried	00105669	NS
	00105755	NS
Peas, vines	00105669	NS
Pecans	00105675	4-127; NS
Peppermint	00105683	69-227; NS
Peppers	00105750	9-50; NS
Plums	00105675 and 00105735	9-270; NS

APPENDIX I (continued).

Commodity	Field Trial/Processing Study	
	MRID	Range of Storage Interval (days); Conditions
Potatoes	00022257 00093574 00105733 00105734 00133939	4-507; NS (except four samples described as frozen)
Potatoes, processed fractions	42514501	Potato samples for processing were stored in a potato cellar for 40 days. ^b
Rape seed	00047639	≈ 300; frozen
Safflower seed	00067371	NS
	00105726 00105750	30-90; NS
Sorghum, forage and fodder	00105704	NS
Sorghum, grain	00105704 00105726 42325001	NS NS 187; ≤ -20 C
Sorghum, processed fractions (flour and starch)	42325001	113-119; ≤ -20 C
Soybeans	00022793	3-4; frozen
	00030932	NS
	00067433	NS; frozen
	00094410	NS; frozen
	00096361	NS
	00104423	NS
	00105655	NS
	00105669	NS
	00105717	NS
	00105720	NS
	00105725	NS
	00105746	NS
	00124904	NS
00128308	NS	
42448203	175; ≤ -20 C	

APPENDIX I (continued).

Commodity	Field Trial/Processing Study	
	MRID	Range of Storage Interval (days); Conditions
Soybeans, forage, hay, and straw	00022793 00030932 00067433 00096361 00105720	3-4; frozen with dry ice NS NS NS NS
Soybeans, processed fractions (hulls, meal, grain dust, soapstock, crude oil, and refined oil)	42448203	243; ≤ -10 C
Spearmint	00105683	70-213; NS
Squash, summer	42354502	146-210; ≤ -15 C
Sugar beets, roots	00057546 00105648 00105666 00105757 42448204	NS NS NS NS 97; ≤ -10 C
Sugar beets, tops	00057546 00105648 00105666 00105757	NS NS NS NS
Sugarcane	00105668 00105730 00105674 00105727 41306701	10-100; NS NS NS 6-50; NS 80; frozen
Sunflower seeds	00057545 00067371 00067430 00105673 42430805	137-614; NS NS 106-219; -30 C 30-58; NS 195; ≤ -10 C
Sunflower, processed fractions	42430805	141-317; ≤ -10 C
Tomatoes	00105710 00105726 00105750	127-162; NS 9-77; NS 9-77; NS
Turnip greens	00105724	NS
Turnips, roots	None; residue data from radishes and sugar beets were translated.	
Walnuts	00105675	4-127; NS
Watermelon	00105670	34-145; NS
Wheat forage and straw	00070736 00105681	NS 126-190; NS (forage) 41-239; NS (straw)

APPENDIX I (continued).

Commodity	Field Trial/Processing Study	
	MRID	Range of Storage Interval (days); Conditions
Wheat grain	00070736 00105681 00105726 42430806	NS 41-239; NS NS 234; ≤-10 C
Wheat, processed fractions (bran, middlings, shorts, and flour)	42430806	192-202; ≤-10 C

a NS = not specified. Information pertaining to storage interval/condition is either missing or lacking from the Trifluralin Science Chapter, 7/12/85 or the Trifluralin Product and Residue Chemistry Reregistration Standard Updates, 10/29/91.

b Storage stability data were not submitted. However, potato processed commodities had been processed according to typical commercial practices and residue levels reported for processed commodities were considerably higher than the theoretical maximum concentration of residues in potato commodities.