

Joint Exhibit 89



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

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

MEMORANDUM

Date: December 9, 2022

SUBJECT: DCPA. Label Amendments for Plant Back Intervals (PBIs).

PC Code: 078701

Decision No.: NA

Petition No.: NA

Risk Assessment Type: NA

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Registration No.: NA

Regulatory Action: Label Amendment

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FROM: David Nadrchal, Chemist *David Nadrchal*
Risk Assessment Branch V
Health Effects Division (7509T)
Office of Pesticide Programs

THRU: Michael S. Metzger, Chief *William H. Donovan for*
Risk Assessment Branch V/VII
Health Effects Division (7509T)
Office of Pesticide Programs

TO: James Douglass, Chemical Review Manager
Jill Bloom, Team Leader
Pesticide Re-evaluation Division (7508M)
Office of Pesticide Programs

Executive Summary

AMVAC is seeking to waive certain data requirements for dimethyl tetrachloroterephthalate (DCPA) based on removing uses on livestock feedstuffs and increasing plant back intervals (PBIs) for livestock feedstuff commodities to reduce anticipated inadvertent residues. As part of a DCPA Generic Data Call In (GDCI-078701-1140) AMVAC was required to provide data on poultry metabolism (860.1300), residue analytical method for ruminant tissue and milk (860.1340), and a ruminant feeding study (860.1480) (D413176, D. Drew, 10/23/2013). AMVAC is seeking to reduce the anticipated dietary burden of DCPA and metabolites by

removing primary crop uses on livestock feedstuffs and increasing PBIs for rotational crops that may be fed to livestock to reduce anticipated secondary residues to the point that the aforementioned DCI data requirements may be waived.

AMVAC’s proposed label changes are summarized below are acceptable with a few recommended changes/additions. The HED recommended changes include.

1. Remove the statements “Do not rotate to wheat or barley if any part of that crop is to be used for animal feed.”, “Do not graze animals on green forage or field stubble. Do not use or harvest treated crops for animal feed.”, and “Do not use hay or straw for animal feed from areas treated with [dacthal end use product] within 365 days.” from PBI tables. Enforcement of such feeding restrictions is not considered practical, so contributions from rotational cereal crops were included in the dietary burden calculations. HED recommends removing these statements from DCPA labels.
2. Remove “Peas” and “Beans” specific PBIs from DCPA labels. Pea and bean commodities will be covered under “all other crops” with a 365-day PBI.
3. Remove “Carrots” from PBI tables and add the following label statement: “Do not rotate to carrots”.
4. Remove “Turnip” from PBI tables as turnip will be covered by the “all other crops” listing with a 365-day PBI.

The results of the updated dietary burden calculations with AMVAC’s proposed PBIs and HED’s recommended changes result in sufficiently low anticipated residues in poultry and dairy cattle that a poultry metabolism study, ruminant analytical method, and ruminant feeding study is not necessary.

Background

AMVAC is seeking to have several residue chemistry data requirements waived that have the potential to reduce the anticipated dietary burden through the removal of uses on livestock feedstuffs and a reduction in inadvertent residues by increasing plant back intervals (PBIs) for livestock feedstuff commodities. AMVAC has analyzed previously submitted data (D423450, D. Drew, 02/17/2015) in conjunction with grower feedback to propose PBIs and other label amendments. AMVAC’s proposed PBIs are listed in Tables 1 – 3.

Table 1: Rotational Crop Restrictions Following Onions (Crop Groups 3-07A, 3-07B), Brassica (Crop Group 5A), Leafy Vegetables (Crop Group 5B) and Radish:	
AMVAC’s Rotational Crop Listings	AMVAC’s Proposed Plant-Back Interval in Days
Crop Group 5A (brassica)	30
Crop Group 5B (leafy)	30
Crop Group 3-07A (dry bulb onion)	90
Crop Group 3-07B (green onion)	90
Crop Group 9-A (muskmelon)	90
Barley (for fall planting only)*	90
Carrots	300
Corn (field and sweet)	300

Cotton	180
Garlic	90
Grass grown for seed	90
Lettuce	60
Peas	300
Peppers	90
Potato	300
Radish	60
Safflower	300
Squash	90
Sudan grass	300
Sugar beet	300
Tomato	90
Turnip	180
Wheat (for fall planting only)*	90
All other labelled crops	240
All other crops	365

*AMVAC proposes to include the following label language on DCPA products registered for use on wheat or barley, “Do not rotate to wheat or barley if any part of that crop is to be used for animal feed.”

Table 2: Rotational Crop Restrictions Following Muskmelons (Crop Group 9-A)	
AMVAC’s Rotational Crop Listings	AMVAC’s Proposed Plant-Back Interval in Days
Crop Group 5A (brassica)	180
Crop Group 5B (leafy)	180
Crop Group 3-07A (dry bulb onion)	180
Crop Group 3-07B (green onion)	180
Crop Group 9-A (muskmelon)	60
Barley (for fall planting only)*	90
Beans	180
Carrots	300
Corn (field and sweet)	300
Cotton	180
Garlic	180
Lettuce	180
Potato	300
Radish	180
Safflower	300
Sudan grass	300
Sugar beet	300
Turnip	180
Wheat (for fall planting only)*	90
All other labelled crops	240
All other crops	365

*AMVAC proposes to include the following label language on DCPA products registered for use on wheat or barley, “Do not rotate to wheat or barley if any part of that crop is to be used for animal feed.”

Table 3: Rotational Crop Restrictions Following all other labelled crops (Eggplant, Horseradish, Strawberry, Sweet potato, Tomatillo, Tomato)
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AMVAC's Rotational Crop Listings	AMVAC's Proposed Plant-Back Interval in Days
All other labelled crops	240
All other crops	365

Turnip use is proposed to be removed from the label as it is the last remaining animal feedstock with direct treatment on the label. In addition, AMVAC is proposing the following restrictions will be added to the label:

- “Do not graze animals on green forage or field stubble. Do not use or harvest treated crops for animal feed.”
- “Do not use hay or straw for animal feed from areas treated with [dacthal end use product] within 365 days.”
- “Do not rotate to soybeans.”

With the removal of direct treatment to turnip and the proposed plant-back intervals AMVAC believes that the resulting dietary burden for poultry and ruminants would be sufficiently low that secondary residues in livestock would not be expected and guideline studies (860.1300, 860.1340, and 860.1480) recommended in HED memo (D413176, D. Drew, 10/23/2013) would no longer be necessary.

Detailed Information

Crop specific and translated rotational data was used from HED memo (D423450, D. Drew, 02/17/2015) and is summarized in Appendix A. The rotational data were used in determining the anticipated dietary burden levels. The residue inputs included DCPA, monomethyltetrachloroterephthalate (MTP), and tetrachloroterephthalic acid (TCA; TPA is an alternate abbreviation) as these are the currently listed residues of concern for both tolerance enforcement and risk assessment.

To calculate dietary burden the calculations did not include soybean as the label language restricting rotation of soybeans is proposed on the label. In addition, pea and bean commodities were not included in the calculation as rotational data for those crops are not available. Without this information HED is recommending a PBI of 365 days for pea and bean commodities. If AMVAC wishes to continue with the proposed PBIs, additional rotational data (860.1900) are needed.

HED recommends a label restriction on crop rotation to carrots. The recommendation is made because carrot rotational data show potential residues of DCPA within a 365-day PBI (0.012 ppm DCPA in carrot roots and tops). Rotation to carrots after prior treatment with DCPA may result in detectable residues in carrot commodities when no current tolerance exists. Therefore, additional restrictions to rotation are recommended and dietary burden calculations did not include carrot, culls.

AMVAC indicated in their submission they are open to additional rotational restrictions in order to waive the need for ruminant feeding and analytical method studies. HED recommendation is to increase the turnip PBIs to 365 days.

The expected dietary burdens were calculated using PMRA Dietary Burden Calculator Version 2.8. The updated dietary burden with these amendments the expected dietary burden of dairy cattle is 0.24 ppm and poultry at 0.02 ppm as indicated in Table 4.

Table 4. Livestock Burden of DCPA, MTP, and TCP With Additional Restrictions (PMRA Dietary Burden Calculator Version 2.8)

More Balanced Diet (MBD)							
Crop	Commodity	Type ¹	Residue ²		%DM	%Diet	Dietary Contribution ppm
			ppm	input			
Beef Cattle							
Corn, field	Forage	R	0.12	HAFT	40	15	0.05
Beet, sugar	Molasses	CC	0.143	Median	75	10	0.02
Corn, field	Milled byproducts	CC	0.01	Median	85	50	0.006
Grain	Aspirated grain fractions	CC	0.01	Median	85	5	0.0006
Sorghum, grain	Grain	CC	0.01	Median	86	15	0.002
Cotton	Meal	PC	0.07	Median	89	5	0.004
Total	NA	NA	NA	NA	NA	100	0.08
Dairy Cattle							
Wheat	forage	R	0.16	HAFT	25	20	0.13
Corn, field	Forage	R	0.12	HAFT	40	25	0.08
Beet, sugar	Molasses	CC	0.143	Median	75	10	0.02
Corn, sweet	Cannery waste	CC	0.01	Median	30	10	0.003
Corn, field	Milled byproducts	CC	0.01	Median	85	25	0.003
Cotton	Meal	PC	0.07	Median	89	10	0.008
Total	NA	NA	NA	NA	NA	100	0.24
Poultry							
Barley	Grain	CC	0.01	Median	88	75	0.008
Cotton	Meal	PC	0.07	Median	89	20	0.01
Untreated feed	NA	NA	NA	NA	NA	5	0
Total	NA	NA	NA	NA	NA	100	0.02
Swine							
Barley	Grain	CC	0.01	Median	88	20	0.002
Corn, field	Grain	CC	0.01	Median	88	65	0.007
Cotton	Meal	PC	0.07	Median	89	15	0.01
Total	NA	NA	NA	NA	NA	100	0.02

¹ R = Roughage, CC = Carbohydrate Concentrate, PC = Protein Concentrate

² HAFT = highest average field trial residue (equivalent to HR for OECD/European Standards) Median is also referred to as STMR/Supervised Trial Median Residue

* Note alternative feedstuffs (in red), included at evaluator's discretion. Only one alternative feed item should be included

Transfer coefficients were calculated from a metabolism study for dairy cattle (D282838, W. Hazel, 05/15/2002 and D208554, W. Smith, 03/17/1995) and a DCPA feeding study for poultry (MRID 00058378). The results for the ruminant commodities were summarized in the MARC memo D282838. This study has limitations as the total radioactive residues in milk may include residues that are not of concern. In addition, the feeding dose level in the study is much higher

than the anticipated dietary burden. The calculated transfer coefficients for ruminant commodities are summarized in Table 5.

Tested Commodity	Level Detected (ppm)	Transfer Coefficient ¹
Milk	0.01	0.001
Muscle	0.01	0.001
Liver	0.033	0.0033
Kidney	0.1	0.01
Fat	0.018	0.0018

¹ Transfer Coefficient = Level Detected / Dose Level

The poultry feeding study was conducted with a control sample and three different feeding levels (4 ppm, 12 ppm, and 40 ppm). The results for DCPA, MTP, and TCP at the highest transfer coefficient were selected as the highest anticipated secondary residues, as shown in Tables 6-8.

Tested Commodity	Feeding Level (ppm)	DCPA Residue Detected in Control (ppm)	Max DCPA Level Detected (ppm)	Transfer Coefficient ¹
Egg, Whites	4	0.03	0.04	0.0025
Egg, Yolks	4	0.01	0.02	0.0025
Egg, Shells	4	0	0.02	0.005
Meat	4	0	0	0
Liver	4	0	0	0
Kidney	4	0.01	0.1	0.0225
Fat	4	0.01	0.02	0.0025

¹ Transfer Coefficient = Level Detected / Dose Level

Tested Commodity	Feeding Level (ppm)	DCPA Residue Detected in Control (ppm)	Max DCPA Level Detected (ppm)	Transfer Coefficient ¹
Egg, Whites	4	0	0.01	0.0025
Egg, Yolks	4	0	0.05	0.0125
Egg, Shells	40	0.01	0.02	0.0025
Meat	40	0	0.06	0.0015
Liver	40	0	0.02	0.0005
Kidney	40	0	0.13	0.00325
Fat	4	0.03	0.04	0.0025

¹ Transfer Coefficient = Level Detected / Dose Level

Tested Commodity	Feeding Level (ppm)	DCPA Residue Detected in Control (ppm)	Max DCPA Level Detected (ppm)	Transfer Coefficient ¹
Egg, Whites	40	0	0.01	0.00025
Egg, Yolks	4	0	0.02	0.005
Egg, Shells	NA	NA	NA	NA
Meat	40	0	0.03	0.00075
Liver	40	0	0.02	0.0005
Kidney	40	0	0.06	0.0015

Fat	4	0.02	0.04	0.0025
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¹ Transfer Coefficient = Level Detected / Dose Level
NA = Not Analyzed

With the anticipated dietary burden and transfer coefficients anticipated residues can be calculated and are in shown in Table 9. For poultry commodities the highest of the three transfer coefficients was used.

Table 9. Anticipated Residues for Livestock Commodities with Additional Turnip Restrictions			
Commodity	Anticipated Dietary Burden of DCPA, MTP, and TCA (ppm)	Transfer Coefficient	Anticipated Residue of DCPA, MTP, and TCA (ppm)¹
Milk	0.24	0.001	0.00024
Muscle	0.24	0.001	0.00024
Liver	0.24	0.0033	0.000792
Kidney	0.24	0.01	0.0024
Fat	0.24	0.0018	0.000432
Egg, Whites	0.02	0.0025	0.00005
Egg, Yolks	0.02	0.0125	0.00025
Egg, Shells	0.02	0.005	0.0001
Meat	0.02	0.0015	0.00003
Liver	0.02	0.0005	0.00001
Kidney	0.02	0.0225	0.00045
Fat	0.02	0.0025	0.00005

¹ Anticipated Residue = Anticipated Dietary Burden x Transfer Coefficient.

* Bold Values are greater than 10x the Limit of Quantitation (LOQ = 0.01 ppm).

Conclusions:

As noted above, AMVAC is seeking to have several residue chemistry data requirements waived that have the potential to reduce the anticipated dietary burden through removal of some uses on certain livestock feedstuffs and reduction of inadvertent residues by increasing PBIs for livestock feedstuff commodities. As part of the DCPA Generic Data Call In (GDCI-078701-1140) it was required that AMVAC provide data on poultry metabolism (860.1300), residue analytical method for ruminant tissue and milk (860.1340), and a ruminant feeding study (860.1480) (D413176, D. Drew, 10/23/2013).

AMVAC’s proposed label changes are summarized above and require changes. The PBIs and label statements proposed by AMVAC are acceptable with a few exceptions/additions to be made for dietary burden assumptions. The HED recommended changes include.

- Remove the statements “Do not rotate to wheat or barley if any part of that crop is to be used for animal feed.”, “Do not graze animals on green forage or field stubble. Do not use or harvest treated crops for animal feed.”, and “Do not use hay or straw for animal feed from areas treated with [dacthal end use product] within 365 days.” from PBI tables. Enforcement of such feeding restrictions is not considered practical, so

contributions from rotational cereal crops were included in the dietary burden calculations. HED recommends removing these statements from DCPA labels.

6. Remove “Peas” and “Beans” specific PBIs from DCPA labels. Pea and bean commodities will be covered under “all other crops” with a 365-day PBI.
7. Remove “Carrots” from PBI tables and add the following label statement: “Do not rotate to carrots”.
8. Remove “Turnip” from PBI tables as turnip will be covered by the “all other crops” listing with a 365-day PBI.

The statement “*Do not rotate to soybeans*” is acceptable label language. This restriction was necessary for estimation of anticipated secondary residues in livestock as no soybean commodities were used in calculations.

The results of the updated dietary burden calculations with AMVAC’s proposed PBIs and HED’s recommended changes result in sufficiently low anticipated residues in poultry that **a poultry metabolism study is not necessary if the proposed label changes are implemented.**

For ruminant commodities, the anticipated residues are higher than 0.001 ppm only for kidney: 0.0024 ppm. While this level is not considered sufficiently low, goat metabolism studies reported that 98% of the kidney residue was metabolite MTP (D208554, W. Smith, 03/17/1995). This metabolite is expected to be rapidly excreted in the urine due to polarity considerations. Since kidney is the only commodity with anticipated residues higher than 0.001 ppm and because the residue is rapidly excreted, **a ruminant analytical method and feeding study is not needed with AMVAC’s proposed PBIs and HED’s recommended changes to the label.**

AMVAC is also proposing the following statement will be removed from the label:

“**Replanting:** Replanting crops other than those included on this label in DACTHAL FLOWABLE treated soil within 8 months of application may result in crop injury. If replanting is required because of an early crop failure, the planting of onions, seeded cucurbits, potatoes, tomatoes, eggplants or peppers at this time may result in crop injury. However, all crops on this label may be planted following harvest of a DACTHAL FLOWABLE treated crop.”

This change is acceptable as specific PBIs are provided for several commodities that have inadvertent tolerances and those that do not are covered by rotational crop PBIs.

Appendix A. Residues of DCPA, MTP, and TPA (TCP) in/on rotational crops following a single application to soil of the 75% WP at 10.5 lb ai/A (1x to the primary crop).

Crop Grouping/ Representative Rotational Crop	MRID (Location)	Commodity	PBI ^a (days)	PTT ^b (days)	Residues Found (ppm) ^e			
					DCPA	MTP	TCP (TPA)	HCB
Root and Tuber Vegetables Carrot	42155504 (GA)	Roots	30	128	0.33 (0.33) ^d	ND ^c (ND)	0.57 (0.56)	0.0012 (0.0014)
			220	342	0.027 (0.030)	ND (ND)	0.11 0.13	ND (ND)
			365	458	0.012 (0.012)	ND (ND)	ND ND	0.0005 (0.0006)
	42298303 (LA)	Roots	29	112	1.03 (0.87, 0.96)	ND (0.011)	0.13 (0.15)	0.0015 (0.0016)
			103	242	ND (ND)	ND (ND)	0.31 (0.26)	ND (ND)
			355	449	ND (ND)	ND (ND)	ND (ND)	ND (ND)
Radish	42155504 (GA)	Roots	30	59	0.24 (0.25)	0.020 (0.021)	0.054 (0.052)	ND ND
			220	248	ND (ND)	ND (ND)	ND (ND)	ND ND
			365	414	ND (ND)	ND (ND)	ND (ND)	ND 0.0006
Turnip	42298303 (LA)	Roots	29	89	0.041 (0.045)	ND (ND)	ND (ND)	ND (ND)
			90	130	0.042 (0.045)	ND (ND)	0.13 (0.14)	ND (ND)
			355	428	ND (ND)	ND (ND)	ND (ND)	ND (ND)
Leaves of Root and Tuber Vegetables Carrot	42155504 (GA)	Leaves	30	128	0.25 (0.25)	0.014 (0.019)	2.30 (2.13)	0.0009 (0.0008)
			220	342	0.014 (ND)	ND (ND)	ND (ND)	ND (ND)
			365	458	0.012 (0.013)	ND (ND)	ND (ND)	ND (0.0006)
	42298303 (LA)	Leaves	29	112	0.17 (0.19)	ND (ND)	0.15 (0.15)	0.0005 (0.0005)
			103	204	0.012 (ND)	ND (ND)	0.090 (0.11)	ND (ND)
			355	449	ND (ND)	ND (ND)	ND (ND)	ND (ND, 0.0008, 0.0006)
Radish		Leaves	30	59	0.67	0.13	0.28	ND

Crop Grouping/ Representative Rotational Crop	MRID (Location)	Commodity	PBI ^a (days)	PTI ^b (days)	Residues Found (ppm) ^e			
					DCPA	MTP	TCP (TPA)	HCB
	42155504 (GA)				(0.74)	(0.13)	(0.27)	(ND)
			220	248	ND (ND)	ND (ND)	ND (ND)	ND (ND)
			365	414	ND (ND)	ND (ND)	ND (ND)	ND (ND)
Turnip	42298303 (LA)	Leaves	29	89	0.070 (0.071)	ND (ND)	0.030 (0.026)	ND (ND)
			90	130	0.020 (0.018)	ND (ND)	0.16 (0.10)	0.0007 (ND)
			355	428	ND (ND)	ND (ND)	0.013 (ND)	ND (ND)
Leafy Vegetables (Except Brassica) Lettuce	42155504 (GA)	Leaves	30	80	0.53 (0.47)	0.47 (0.48)	1.60 (1.73)	ND (ND)
			220	380	ND (ND)	ND (ND)	ND (ND)	ND (ND)
			365	437	ND (ND)	ND (ND)	ND (ND)	ND (ND)
	42298303 (LA)	Leaves	29	81	1.32 (1.28)	0.058 (0.057)	0.038 (0.047)	0.0005 (0.0005)
			103	162	0.021 (0.025)	ND	0.65	ND (ND)
			355	396	ND (ND)	ND (ND)	ND (ND)	ND (ND)
Brassica Leafy Vegetables Mustard	42155504 (GA)	Leaves	30	73	0.19 (0.21)	0.18 (0.18)	0.38 (0.34)	ND (ND)
			220	248	ND (ND)	ND (ND)	ND (ND)	ND (ND)
			365	414	ND (ND)	ND (ND)	ND (ND)	ND (ND)
	42298303 (LA)	Leaves	29	80	0.17 (0.17)	0.012 (0.014)	0.027 (0.027)	ND (ND)
			103	141	0.013 (0.014)	ND (ND)	0.080 (0.067)	ND (ND)
			355	410	ND (ND)	ND (ND)	ND (ND)	ND (ND)
Cereal Grains Field Corn	42155504 (GA)	Grain	30	152	ND (ND)	ND (ND)	ND (ND)	ND (ND)
			91	205	ND (ND)	ND (ND)	ND 0.010	ND (ND)
			365	512	ND (ND)	ND (ND)	ND (ND)	ND (ND)
			Grain	29	167	ND	ND	ND

Crop Grouping/ Representative Rotational Crop	MRID (Location)	Commodity	PBI ^a (days)	PTI ^b (days)	Residues Found (ppm) ^e				
					DCPA	MTP	TCP (TPA)	HCB	
	42298303 (LA)				(ND)	(ND)	(ND)	(ND)	
			90	201	ND (ND)	ND (ND)	ND (0.011)	ND (ND)	
			374	533	ND (ND)	ND (ND)	ND (ND)	ND (ND)	
Oats	42155504 (GA)	Grain	213	437	ND (ND)	ND (ND)	ND (ND)	ND (ND)	
	42298303 (LA)	Grain	375	473	ND (ND)	ND (ND)	ND (ND)	ND (ND)	
Sorghum	42155504 (GA)	Grain	91	192	ND (ND)	ND (ND)	0.012 (0.014)	ND (ND)	
			365	510	ND (ND)	ND (ND)	ND (ND)	ND (ND)	
	42298303 (LA)	Grain	103	201	ND (ND)	ND (ND)	ND (ND)	ND (ND)	
Forage, Fodder, and Straw of Cereal Grains Field Corn	42155504 (GA)	Fodder	30	152	ND (ND)	ND (ND)	ND (ND)	0.0006 (0.0009)	
			91	205	ND (ND)	ND (ND)	0.033 (0.035)	ND (ND)	
			365	512	ND (ND)	ND (0.010)	ND (ND)	ND (ND)	
			Silage	30	128	ND (ND)	ND (ND)	0.10 (0.10)	ND (ND)
				365	463	ND (ND)	ND (ND)	0.017 (ND)	ND (ND)
				42298303 (LA)	Fodder	29	167	ND (ND)	ND (ND)
	90	201	ND (ND)	0.010 (0.010)		0.11 (0.094)	0.0008 (0.0006)		
	374	564	ND (ND)	ND (ND)		ND (ND)	ND (ND)		
			Silage	29	116	ND (ND)	ND (ND)	0.046 (0.044)	ND (ND)
				90	167	ND (ND)	ND (ND)	0.11 (0.10)	ND (ND)
				374	481	ND (ND)	ND (0.012)	ND (ND)	ND (ND)
	Oats	42155504 (GA)	Forage	213	364	ND (ND)	0.015 (0.020)	ND (ND)	ND (ND)
Straw			213	437	ND (ND)	ND (ND)	ND (ND)	ND (ND)	
42298303 (LA)		Forage	29	74	0.095 (0.095)	0.010 (ND)	0.43 (0.39)	ND (ND)	

Crop Grouping/ Representative Rotational Crop	MRID (Location)	Commodity	PBI ^a (days)	PTI ^b (days)	Residues Found (ppm) ^e			
					DCPA	MTP	TCP (TPA)	HCB
			375	410	ND (ND)	ND (ND)	0.079 (ND, ND, ND)	ND (ND)
		Straw	29	106	0.18 (0.16)	0.015 (0.010)	1.20 (0.82)	ND (ND)
			375	473	ND (ND)	ND (ND)	ND (ND)	ND (ND)
Sorghum	42155504 (GA)	Fodder	91	192	ND (ND)	ND (ND)	0.14 (0.16)	ND (ND)
			365	510	ND (ND)	ND (ND)	ND (ND)	ND (ND)
	42289303 (LA)	Fodder	103	201	ND (ND)	ND (ND)	0.036 (0.046)	ND (ND)

^a PBI=plant back interval.

^b PTI=post treatment interval.

^c ND=below the limit of detection (<0.0005 ppm for HCB; <0.01 ppm for each DCPA, MTP, and TPA).

^d Numbers listed parenthetically represent duplicate extraction and analysis of a single field sample.

^e DCPA, MTP, and TCP (TPA) are the only residues of concern. HCB is not a residue of concern.