

US EPA ARCHIVE DOCUMENT

BAS 510 F  
Tree Nut Crop Group  
PMRA a.i. code (CHH)

Magnitude of the Residue  
OPPTS 860.1500  
DACO 7.4.1

PC Code: 128008  
MRIDs: 45405111 and 45405201  
Submission # 2001-1027, 1036, 1043



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

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

**MEMORANDUM**

Date: July 2, 2003

Reviewers:

William Cutchin Date: 8/25/03  
William Cutchin, Chemist  
Reviewer  
SIMB/HED (7509C)

Tamara Sheremata Date: 10/17/03  
Tamara Sheremata, Evaluator  
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FREAS, HED, PMRA

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RAB2/HED (7509C)

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FREAS, HED, PMRA

DP Barcode: D278386

Petition No.: 1F06313

Citations: 45405111 Haughey, D.; Abdel-Baky, S. (2000) The Magnitude of BAS 510 F Residues in Almonds: Final Report: Lab Project Number: 63902: 2000/5226: 99135. Unpublished study prepared by BASF Corporation. 53 p.

45405201 Haughey, D.; Abdel-Baky, S. (2001) The Magnitude of BAS 510 F Residues in Pecans: Final Report: Lab Project Number: 63900: 2000/5230. Unpublished study prepared by BASF Corporation. 47 p.

Sponsor: BASF Corporation

**Background**

The information contained herein was compiled by Dynamac Corporation (20440 Century Boulevard, Suite 100, Germantown MD 20874), contractor, under the supervision of RAB2/HED. This DER has undergone secondary review by RAB2, and reflects current HED and Office of Pesticide Programs (OPP) policies. This DER has also been peer-reviewed by PMRA/Canada.

## Executive Summary

BASF Corporation has submitted field trial data on the representative crops, almond and pecan, of the tree nuts crop group (Crop Group 14). Five almond trials were conducted in Region 10 (CA) and five pecan trials were conducted in Regions 2 (2 trials; GA), 4 (1 trial; MS), 6 (1 trial; OK), and 8 (1 trial; OK). The number and location of field trials satisfy EPA's data requirement for the tree nuts crop group.

At each test location, the 70% WG formulation of BAS 510 F was applied four times as a foliar spray at ~0.23 lb ai/A/application (~0.26 ka ai/ha/application), with a 6- to 8-day retreatment interval, for a total rate of 0.90-0.93 lb ai/A (1.01-1.04 kg ai/ha) using either concentrate (64-101 gal/A, or 717-1131 L/ha) or dilute (136-257 gal/A, or 1523-2878 L/ha) spray volumes. Mature samples were collected at the following posttreatment intervals: 108-148 days for almond (hulls and nutmeat) and 14 days for pecan nutmeat. In one almond field trial, samples of almond hulls and nutmeat were collected at 120, 127, 134, 148, and 155 days following treatment to evaluate residue decline.

In almond hulls, residues of BAS 510 F were 0.420-2.63 ppm (concentrate spray) and 0.824-2.81 ppm (dilute spray) in/on samples harvested 108-148 days following the last of four foliar spray applications of the 70% WG formulation at 0.222-0.236 lb ai/A/application, for a total rate of 0.90-0.93 lb ai/A (1.01-1.04 kg ai/ha). No significant differences in the residues were observed between the concentrate and dilute spray applications. The residue decline data for almond hulls indicated that BAS 510 F residues increased at longer posttreatment intervals, with maximum residues occurring at the 148- to 155-day posttreatment intervals.

In almond nutmeat, residues of BAS 510 F were 0.028-0.159 ppm (concentrate spray) and 0.019-0.202 ppm (dilute spray) in/on samples harvested 108-148 days following the last of four foliar spray applications of the 70% WG formulation at 0.222-0.236 lb ai/A/application (0.249-0.264 kg ai/ha), for a total rate of 0.90-0.93 lb ai/A (1.01-1.04 ka ai/ha). No significant differences in the residues were observed between the concentrate and dilute spray applications. The residue decline data for almond nutmeat indicated that residues of BAS 510 F generally did not increase at longer posttreatment intervals.

In pecan nutmeat, residues of BAS 510 F were below the LOQ (<0.05 ppm) in/on samples harvested 14 days following the last of four foliar concentrated or dilute spray applications of the 70% WG formulation at 0.222-0.239 lb ai/A/application (0.249-0.268 kg ai/ha), for a total rate of 0.91-0.93 lb ai/A (1.02-1.04 kg ai/ha). No residue decline data were included in the submission for pecans. Because residues were below the LOQ in/on all samples, residue decline data for pecans will not be required.

Residues of BAS 510 F in/on almond hulls and nutmeat and pecan nutmeat were quantitated using a validated LC/MS/MS method D9908, the data collection method for plant commodities.

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Acceptable concurrent method validation data for almond and pecan commodities were included in the submission.

Storage stability data (refer to the DER for MRID 45405109) are available to support the 131 days (4.3 months) storage interval for the almond and pecan samples in this study.

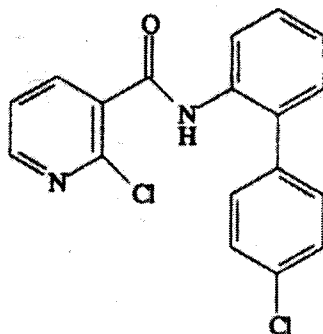
Residue data from the current submission are acceptable to fulfill EPA crop field trial data requirements for the tree nuts crop group (crop group 14).

### GLP Compliance

Signed and dated GLP, Quality Assurance, and Data Confidentiality statements were provided. No GLP deviations were reported which would impact the study results or their interpretation.

## 1. Materials and Methods

### 1.1. Test Substance



BAS 510 F

### Active Ingredient

Common Name: Nicobifen (ISO, proposed)

IUPAC Name: 2-Chloro-N-(4'-chlorobiphenyl-2-yl)nicotinamide

CAS Name: 3-Pyridinecarboxamide, 2-chloro-N-(4'chloro[1,1'-biphenyl]-2-yl)-

CAS Number: 188425-85-6

Company Name: BAS 510 F

Other Synonyms: BASF Registry No. 300355

TABLE B.1.2. Trial Numbers and Geographical Locations (Tree nut group crop <sup>1</sup> )								
Crop NAFTA Growing Regions	Almond				Pecan			
	Submitted		Requested					
	Canada	U.S.	Canada	U.S.	Canada	U.S.	Canada	U.S.
1								
1A								
2					na <sup>2</sup>	2	na <sup>2</sup>	2
3								
4					na <sup>2</sup>	1	na <sup>2</sup>	1
5								
5A								
5B								
6					na <sup>2</sup>	1	na <sup>2</sup>	1
7								
7A								
8					na <sup>2</sup>	1	na <sup>2</sup>	1
9								
10	na <sup>2</sup>	5	na <sup>2</sup>	5				
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
<b>Total Trials</b>	na <sup>2</sup>	5	na <sup>2</sup>	5	na <sup>2</sup>	5	na <sup>2</sup>	5

<sup>1</sup>The representative crops for the tree nut crop group (Crop Group 14) are almond and pecan.

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<sup>2</sup>There are no specific Canadian requirements for crop field trial studies for almonds and pecans (Dir 98-02).

Table 1.2.2. Crop and Field Trial Information.

EPA Region	Location (County, State, Year)	Crop/Variety	Formul.	Applic. Timing	Applic. Rate (lb ai/A) [kg ai/ha]	Retreat. Intervals (days)	No. of Applics.	Applic. Method/ Applic. Volume (GPA) [L/ha]	Total Applic. Rate (lb ai/A) [kg ai/ha]	Tank Mix Adjuvants	Harvest Procedures
<b>Almond</b>											
10	Tulare, CA, 1999	Almond/ Monterey	70% WG	Appl. 1 and 2: fruit set Appl. 3 and 4: mature	0.229-0.23 [0.257-0.258]	7	4	Concentrate foliar spray/ 82.58-87.98 [925-985]	0.919 [1.03]	Latron B-1956 (2pt/100gal)	Almond nutmeat and hulls harvested 148 days after last application (DALA).
					0.228-0.23 [0.255-0.258]			Dilute foliar spray/ 209.41-230.12 [2345-2577]			
10	Kern, CA, 1999	Almond/ Non-Pareil	70% WG	Appl. 1: nut set Appl. 2-4: fruit set	0.229-0.230 [0.257-0.258]	7	4	Concentrate foliar spray/ 74.84-77.85 [883-872]	0.919 [1.03]	Latron B-1956 (2pt/100gal)	Almond nutmeat and hulls harvested 108 DALA.
					0.229-0.23 [0.257-0.258]			Dilute foliar spray/ 196.18-202.09 [2197-2263]			
10	Fresno, CA, 1999	Almond/ Non-Pareil	70% WG	Appl. 1: post petal fall Appl. 2-4: small nuts	0.223-0.227 [0.250-0.255]	7	4	Concentrate foliar spray/ 97.08-98.92 [1087-1108]	0.903 [1.01]	Latron B-1956 (8oz/100gal)	Almond nutmeat and hulls harvested 116 DALA.
					0.227-0.230 [0.254-0.258]			Dilute foliar spray/ 246.87-251.6 [2765-2818]			

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EPA Region	Location (County, State, Year)	Crop/Variety	Formul.	Applic. Timing	Applic. Rate (lb ai/A) [kg ai/ha]	Retreat Intervals (days)	No. of Applics.	Applic. Method/ Applic. Volume (GPA) [L/ha]	Total Applic. Rate (lb ai/A) [kg ai/ha]	Tank Mix Adjuvants	Harvest Procedures
10	Madera, CA, 1999	Almond/ Non-Pareil	70% WG	Appl. 1: post petal fall Appl. 2-4: small nuts	0.222-0.231 [0.249-0.260] 0.228-0.236 [0.255-0.265]	7	4	Concentrate foliar spray/ 96.7-100.84 [1083-1129] Dilute foliar spray/ 247.86-256.9 [2776-2877]	0.911 [1.02] 0.925 [1.04]	Latron B-1956 (8oz/100gal)	Almond nutmeat and hulls harvested 115 DALA.



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EPA Region	Location (County, State, Year)	Crop/Variety	Formul.	Applic. Timing	Applic. Rate (lb ai/A) [kg ai/ha]	Retreat. Intervals (days)	No. of Applics.	Applic. Method/ Applic. Volume (GPA) [L/ha]	Total Applic. Rate (lb ai/A) [kg ai/ha]	Tank Mix Adjuvants	Harvest Procedures
10	Butte, CA, 1999 (decline study)	Almond/ Non-Pareil	70% WG	Appl. 1-4, respective: -2, 3, 4, and 5 weeks after petal fall	0.229-0.232 [0.257-0.260] 0.228-0.23 [0.255-0.258]	6-7 6-7	4 4	Concentrate foliar spray/ 67.5-70.6 [756-791] Dilute foliar spray/ 157.9-162.2 [1769-1817]	0.922 [1.03] 0.916 [1.03]	CS-7 (1pt/100gal)	Almond nutmeat and hulls harvested 120, 127, 134, 148, and 155 DALA.
<b>Pecan</b>											
2	Clark, GA, 1999	Pecan/ Stewart	70% WG	Appl. 1-4, respective: 30-40 days, 25-35 days, 18-28 days, and 12-22 days to maturity	0.225-0.230 [0.286-0.258] 0.222-0.231 [0.249-0.259]	6-7 6-7	4 4	Concentrate foliar spray/ 72.26-77.65 [809-870] Dilute foliar spray/ 167.10-180.1 [1872-2017]	0.913 [1.02] 0.908 [1.02]	Surf-AC 820 (0.25%, v:v)	Pecan nutmeat harvested 14 DALA.
2	Tift, GA, 1999	Pecan/ Summer	70% WG	Appl. 1-3: late kernel filling Appl. 4: early shuck split	0.231-0.232 [0.289-0.260] 0.230 [0.258]	6-8 6-8	4 4	Concentrate foliar spray/ 78.6-87.5 [880-980] Dilute foliar spray/ 183-205 [2050-2296]	0.925 [1.04] 0.920 [1.03]	Latron B-1956 (15oz/100gal) Latron B-1956 (6oz/100gal)	Pecan nutmeat harvested 14 DALA.

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EPA Region	Location (County, State, Year)	Crop/Variety	Formul.	Applic. Timing	Applic. Rate (lb ai/A) [kg ai/ha]	Retreat. Intervals (days)	No. of Applics.	Applic. Method/ Applic. Volume (GPA) [L/ha]	Total Applic. Rate (lb ai/A) [kg ai/ha]	Tank Mix Adjuvants	Harvest Procedures
4	Sharkey, MS, 1999	Pecan/ Kiowa	70% WG	Appl. 1 and 2: fruiting Appl. 3 and 4: cracking and maturing	0.223-0.235 [0.250-0.263] 0.228-0.235 [0.255-0.263]	6-8 6-8	4 4	Concentrate foliar spray/ 66-88.6 [739-989] Dilute foliar spray/ 136.2-144 [1525-1613]	0.918 [1.03] 0.923 [1.03]	Surf-Aid (0.25%, v.v)	Pecan nutmeat harvested 14 DALA.

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EPA Region	Location (County, State, Year)	Crop/Variety	Formul.	Applic. Timing	Applic. Rate (lb ai/A) [kg ai/ha]	Retreat. Intervals (days)	No. of Applics.	Applic. Method/ Applic. Volume (GPA) [L/ha]	Total Applic. Rate (lb ai/A) [kg ai/ha]	Tank Mix Adjuvants	Harvest Procedures
6	Stephens, OK, 1999	Pecan/ Seedling	70% WG	Appl. 1-4, respective: mature-nut hulls not cracking; no shuck split; ~1/2 trees starting shuck split; most trees in shuck split	0.224-0.239 [0.251-0.268]	7-8	4	Concentrate foliar spray/ 63.6-66.0 [712-739]	0.920 [1.03]	Hi Yield 90/10 (8oz/100gal)	Pecan nutmeat harvested 14 DALA.
					0.23-0.24 [0.258-0.269]						
8	Tillman, OK, 1999	Pecan/ Natives	70% WG	Appl. 1-4, respective: mature-just prior to cracking; mature; some in shuck split; ~2/3 trees in shuck split	0.226-0.236 [0.253-0.264]	6-7	4	Concentrate foliar spray/ 74.5-77.8 [834-871]	0.920 [1.03]	Hi Yield 90/10 (8oz/100gal)	Pecan nutmeat harvested 14 DALA.
					0.229-0.233 [0.257-0.261]						

### 1.3. Post-harvest Procedures

A single untreated and duplicate treated (one sample from each treatment plot) samples of commercially mature almond RAC (hulls and nutmeat) and pecan RAC (nutmeat) were harvested from each field trial. Specific harvesting procedures were not described; however, each almond sample weighed  $\geq 2.2$  lbs ( $\geq 1.0$  kg). (Pecan sample weights were not specified). Additional samples of almond hulls and nutmeat were collected from the CA trial (Butte County) at various time intervals for residue decline samples. Samples were bagged and stored frozen (temperature not specified) on the day of harvest. Samples were shipped frozen within 0-19 days of harvest to BASF Agricultural Products Center (Research Triangle Park, NC) for analysis.

Matrix	RAC or Extract	Storage Temperature (°C) (Analytical Laboratory)	Duration
Almond	hulls	<-10	80-131 days (2.6-4.3 months)
	nutmeat	<-10	69-116 days (2.3-3.8 months)
Pecan	nutmeat	<-10	39-49 days (1.3-1.6 months)

### 1.4. Analytical Methods

Samples of almond hulls and nutmeat, and pecan nutmeat were analyzed for residues of BAS 510 F using LC/MS/MS method D9908, the data collection method for plant commodities. Briefly, samples of almond hulls and nutmeat, and pecan nutmeat were extracted with methanol:water (70:30, v:v) and filtered. An aliquot of the filtrate was cleaned up using C18 solid phase extraction (SPE). Residues were eluted with dichloromethane (DCM) and cleaned up further using silica gel SPE. Residues were eluted with 4% ethyl acetate in DCM. The eluate was evaporated and residues were redissolved in ammonium formate:formic acid for analysis by LC/MS/MS; refer to the DER for MRID 45405027 for a complete description of the quantitation procedures. The limit of detection (LOD) was 0.025 ppm, and the validated limit of quantitation (LOQ) was 0.05 ppm for the residues of BAS 510 F in/on almond nutmeat and hulls, and pecan nutmeat. Concurrent recoveries for a range of spiking levels are summarized below (Table 2.1).

## 2. Results

Table 2.1. Summary of Concurrent Analytical Method Validation.

Crop Matrix	Fortification Level (ppm)	Recoveries (%)	Mean Recovery ± SD
Almond hulls	0.05, 1.0	77, 78, 84	80 ± 4
Almond nutmeat	0.05, 1.0	87, 90	89 ± 2
Pecan nutmeat	0.05, 1.0	73, 76, 80, 82	78 ± 4

Table 2.2. Residue Data from Crop Field Trials in Tree Nuts (Almonds and Pecans) with BAS 510 F.

Location (County, State, Year)	Crop Variety	Commodity	Formulation	Total Rate (lbs ai/A) [kg ai/ha]	Spray volume	PHI (days)	BAS 510 F residues (ppm)
<b>Almond</b>							
Tulare, CA, 1999	Monterey	hulls	70% WG	0.920 [1.03]	concentrate	148	1.36
				0.915 [1.03]	dilute	148	2.35
Kern, CA, 1999	Non-Pareil	hulls	70% WG	0.919 [1.03]	concentrate	108	2.10
				0.919 [1.03]	dilute	108	1.62
Fresno, CA, 1999	Non-Pareil	hulls	70% WG	0.904 [1.01]	concentrate	116	1.10
				0.917 [1.03]	dilute	116	1.36
Madera, CA, 1999	Non-Pareil	hulls	70% WG	0.912 [1.02]	concentrate	115	0.42
				0.925 [1.04]	dilute	115	0.82
Butte, CA, 1999 (decline study)	Non-Pareil	hulls	70% WG	0.922 [1.03]	concentrate	120	1.65
						127	1.72
						134	1.86
						148	2.63
						155	1.43
				0.916 [1.03]	dilute	120	1.97
						127	2.22
						134	2.40
148	2.81						

Table 2.2. Residue Data from Crop Field Trials in Tree Nuts (Almonds and Pecans) with BAS 510 F.							
Location (County, State, Year)	Crop Variety	Commodity	Formulation	Total Rate (lbs ai/A) [kg ai/ha]	Spray volume	PHI (days)	BAS 510 F residues (ppm)
						155	2.84
Tulare, CA, 1999	Monterey	nutmeat	70% WG	0.920 [1.03]	concentrate	148	0.028
				0.915 [1.03]	dilute	148	0.019
Kern, CA, 1999	Non-Pareil	nutmeat	70% WG	0.919 [1.03]	concentrate	108	0.159
				0.919 [1.03]	dilute	108	0.202
Fresno, CA, 1999	Non-Pareil	nutmeat	70% WG	0.904 [1.01]	concentrate	116	0.126
				0.917 [1.03]	dilute	116	0.158
Madera, CA, 1999	Non-Pareil	nutmeat	70% WG	0.912 [1.03]	concentrate	115	0.047
				0.925 [1.04]	dilute	115	0.038
Butte, CA, 1999 (decline study)	Non-Pareil	nutmeat	70% WG	0.922 [1.03]	concentrate	120	0.044
						127	0.049
						134	0.078
						148	0.074
						155	0.047
				0.916 [1.03]	dilute	120	0.094
						127	0.081
						134	0.110
						148	0.110
						155	0.084
<b>Pecan</b>							
Clark, GA, 1999	Stewart	nutmeat	70% WG	0.913 [1.02]	concentrate	14	<0.05
				0.909 [1.02]	dilute	14	<0.05
Tift, GA, 1999	Sumner	nutmeat	70% WG	0.925 [1.04]	concentrate	14	<0.05
				0.920 [1.03]	dilute	14	<0.05

Table 2.2. Residue Data from Crop Field Trials in Tree Nuts (Almonds and Pecans) with BAS 510 F.

Location (County, State, Year)	Crop Variety	Commodity	Formulation	Total Rate (lbs ai/A) [kg ai/ha]	Spray volume	PHI (days)	BAS 510 F residues (ppm)
Sharkey, MS, 1999	Kiowa	nutmeat	70% WG	0.918 [1.03]	concentrate	14	<0.05
				0.923 [1.03]	dilute	14	<0.05
Stephens, OK, 1999	Seedling	nutmeat	70% WG	0.920 [1.03]	concentrate	14	<0.05
				0.934 [1.05]	dilute	14	<0.05
Tillman, OK, 1999	Natives	nutmeat	70% WG	0.920 [1.03]	concentrate	14	<0.05
				0.922 [1.03]	dilute	14	<0.05

Table 2.3. Summary of Residue Data from Crop Field Trials in Tree Nuts with BAS 510 F.

Commodity	Total Applic. Rate (lb ai/A) [kg ai/ha]	Spray volume	PHI (days)	Residue Levels (ppm)				
				Minimum	Maximum	HAFT	Mean [Median]	Std. Dev.
Almond hulls	0.904-0.922 [1.01-1.03]	concentrate	108-155 <sup>1</sup>	0.420	2.63	2.45	1.59 [1.65]	0.624
	0.915-0.925 [1.03-1.04]	dilute	108-155 <sup>1</sup>	0.824	2.84		2.05 [2.22]	0.675
Almond nutmeat	0.904-0.922 [1.01-1.03]	concentrate	108-155 <sup>1</sup>	0.028	0.159	0.181	0.076 [0.049]	0.043
	0.915-0.925 [1.03-1.04]	dilute	108-155 <sup>1</sup>	0.019	0.202		0.100 [0.094]	0.056
Pecan nutmeat	0.913-0.925 [1.02-1.04]	concentrate	14	<0.05	<0.05	<0.05	<0.05 [<0.05]	0
	0.909-0.934 [1.02-1.05]	dilute	14	<0.05	<0.05		<0.05 [<0.05]	0

<sup>1</sup> The results for all samples from the residue decline studies have been included in the calculations for the summary of data for the almond field trials.

### 3. Discussion

#### 3.1. Methods

Two plots were treated at each field site. In each test location, the 70% WG formulation of BAS 510 F was applied four times as a foliar spray at ~0.23 lb ai/A/application (~0.26 kg ai/ha/application), with a 6- to 8-day retreatment interval, for a total rate of 0.90-0.93 lb ai/A (1.01-1.04 ka ai/ha) using either concentrate or dilute spray volumes. Applications were made using ground equipment in either a concentrated spray volume (63.6-100.84 gal/A, or 712-1129 L/ha, of water) or a dilute spray volume (136.2-256.9 gal/A, 1525-2877 L/ha, of water) with a spray adjuvant added. After treatment, mature samples were collected at the following posttreatment intervals: 108-148 days for almond (hulls and nutmeat) and 14 days for pecan nutmeat. In one almond field trial, samples of almond hulls and nutmeat were collected at 120, 127, 134, 148, and 155 days following treatment to evaluate residue decline.

Five almond trials were conducted in Region 10 and five pecan trials were conducted in Regions 2 (2 trials), 4 (1 trial), 6 (1 trial), and 8 (1 trial). For the EPA, the number and location of field trials conducted for almonds and pecans are in accordance with the guidance requirements (OPPTS 860.1500, Tables 2 and 5).

Residues of BAS 510 F in/on almond hulls and nutmeat and pecan nutmeat were quantitated using LC/MS/MS method D9908, the data collection method for plant commodities.

Maximum storage intervals of crop samples from harvest to analysis were 131 days (4.3 months) for almond hulls, 116 days (3.8 months) for almond nutmeat, and 49 days (1.6 months) for pecan nutmeat. Adequate storage stability data in five diverse matrices (refer to the DER for MRID 45405109) are available to support the storage conditions and intervals of samples from the submitted almond and pecan field trials.

#### 3.2. Results

In almond hulls, residues of BAS 510 F were 0.420-2.628 ppm (concentrate spray) and 0.824-2.806 ppm (dilute spray) in/on samples harvested 108-148 days following the last of four foliar spray applications of the 70% WG formulation at 0.222-0.236 lb ai/A/application (0.249-0.264 kg ai/ha/application), for a total rate of 0.90-0.93 lb ai/A (1.01-1.04 kg ai/ha). No significant differences in the residues were observed between the concentrate and dilute spray applications. Apparent residues of BAS 510 F were less than the method LOQ (<0.05 ppm) in/on five samples of untreated almond hulls. The residue decline data for almond hulls indicated that BAS 510 F residues increased at longer posttreatment intervals, with maximum residues occurring at the 148- to 155-day posttreatment intervals.

In almond nutmeat, residues of BAS 510 F were 0.028-0.159 ppm (concentrate spray) and 0.019-0.202 ppm (dilute spray) in/on samples harvested 108-148 days following the last of four foliar spray applications of the 70% WG formulation at 0.222-0.236 lb ai/A/application (0.249-0.264



BAS 510 F  
Tree Nut Crop Group  
PMRA a.i. code (CHH)

Magnitude of the Residue  
OPPTS 860.1500  
DACO 7.4.1

PC Code: 128008  
MRIDs: 45405111 and 45405201  
Submission # 2001-1027, 1036, 1043

kg ai/ha/application), for a total rate of 0.90-0.93 lb ai/A (1.01-1.04 kg ai/ha). No significant differences in the residues were observed between the concentrate and dilute spray applications. Apparent residues of BAS 510 F were less than the method LOQ (<0.05 ppm) in/on five samples of untreated almond nutmeat. The residue decline data for almond nutmeat indicated that residues of BAS 510 F generally did not increase at longer posttreatment intervals.

In pecan nutmeat, residues of BAS 510 F were below the LOQ (<0.05 ppm) in/on samples harvested 14 days following the last of four foliar concentrated or dilute spray applications of the 70% WG formulation at 0.222-0.239 lb ai/A/application (0.249-0.268 kg ai/ha/application), for a total rate of 0.91-0.93 lb ai/A (0.1.02-1.04 kg ai/ha). No residue decline data were included in the submission for pecans. Because residues were below the LOQ in/on all samples, residue decline data for pecans will not be required.

#### 4. Deficiencies

None

#### 5. References

None