

Table 11 Environmental Conditions at Application

Site Code/ Plot	Application Date	Temp °F		Soil Surface	Winds		RH%	Crop Stage
		Air	Soil ¹		(mph)	Direction		
ND01 Plot 2	07/21/03	72	75	Dry	4 5	N	57	BBCH 71 Water ripe
ND02 Plot 2	07/21/03	72	75	Dry	3 6	N	61	BBCH 69 End of flowering
IA01 Plot 2	06/13/03	77	80	Dry	2 2	E	62	At planting
IA01 Plot 3	07/24/03	78	76	Dry	2 5	SSW	43	R1 Early Flower

¹Soil temperature taken at 2

Table 12 Current and Historical Weather

Site Code	Parameter	Time Period	May	Jun	Jul	Aug	Sep	Oct
ND01	Mean Min Air Temp (°F)	2003 ¹	44	55	59	60	47	
		30-Year ¹	45	55	59	57	46	
		Difference	-1	0	0	3	1	
	Mean Max Air Temp (°F)	2003 ¹	68	76	82	85	70	
		30-Year ¹	70	77	82	81	70	
		Difference	-2	-1	0	4	0	
	Monthly Rainfall (inches)	2003 ²	5.27	4.05	1.80	1.17	1.05	
		30-Year ¹	2.61	3.51	2.88	2.52	2.18	
		Difference	2.66	0.54	-1.08	-1.35	-1.13	
Irrigation	2003	No irrigation applied						
ND02	Mean Min Air Temp (°F)	2003 ¹	44	55	59	60	47	
		30-Year ¹	45	55	59	57	46	
		Difference	-1	0	0	3	1	
	Mean Max Air Temp (°F)	2003 ¹	68	76	82	85	70	
		30-Year ¹	70	77	82	81	70	
		Difference	-2	-1	0	4	0	
	Monthly Rainfall (inches)	2003 ²	5.27	4.05	1.80	1.17	1.05	
		30-Year ¹	2.61	3.51	2.88	2.52	2.18	
		Difference	2.66	0.54	-1.08	-1.35	-1.13	
Irrigation	2003	No irrigation applied						
IA01	Mean Min Air Temp (°F)	2003 ³		58	64	63	49	41
		10-Year ⁴		61	66	64	52	43
		Difference		-3	-2	-1	-3	-2
	Mean Max Air Temp (°F)	2003 ³		80	86	88	76	67
		10-Year ⁴		81	87	85	76	65
		Difference		-1	-1	3	0	2
	Monthly Rainfall (inches)	2003 ³		4.09	3.92	3.03	3.38	1.85
		10-Year ⁴		5.07	3.70	4.14	3.05	3.14
		Difference		-0.98	0.22	-1.11	0.33	-1.29
Irrigation	2003	No irrigation applied						

¹2003 temperature and historical temperature and precipitation data for site ND01 and ND02 obtained from Fargo Hector Airport Station, located 20 miles from the test site

²2003 precipitation for site ND01 and ND02 was collected manually on site

³2003 temperature and precipitation data for site IA01 obtained from BARC On-Site Weather Station

⁴Historical temperature and precipitation data for site IA01 obtained from Midwestern Regional Climate Center Fairfield, Iowa Station, located approximately 12 miles southeast of the trial site

Table 13 Sampling

Site Code	Sample Number	Plot ID	Sample Collection Date	Sample Size (lb)	Time from Sampling to Freezer
ND01	23059 ND01-1	UTC Plot 1	08/20/03	35 lb	1 hr 15 min ¹
	23059 ND01-2	TRT Plot 2	08/20/03	35 lb	50 min ¹
ND02	23059 ND02-3	UTC Plot 1	08/20/03	35 lb	1 hr 5 min ¹
	23059 ND02-4	TRT Plot 2	08/20/03	35 lb	55 min ¹
IA01	23059 IA01-5	UTC Plot 1	10/14/03	15.4 kg	40 min ²
	23059 IA01-6	TRT Plot 2	10/14/03	15.0 kg	30 min ²
	23059 IA01-7	TRT Plot 3	10/14/03	15.2 kg	15 min ²

¹Samples were cleaned using a fanning mill before they were placed in the freezers

²Samples were immediately placed in coolers with substitute ice

Table 14 Sample Storage and Shipping

Site Code	Plot ID and Sample Number	Collection Date	Storage Interval (Days)	Test Site Storage Temp		Shipping Date
				Min °C	Max °C	
ND01	UTC Plot 1 23059-ND01-1	08/20/03	83	-29 1	-15 4	11/11/03
	TRT Plot 2 23059-ND01-2	08/20/03	83	-31 3	-13 5	11/11/03
ND02	UTC Plot 1 23059-ND02-3	08/20/03	83	-29 1	-15 4	11/11/03
	TRT Plot 2 23059-ND02-4	08/20/03	83	-31 3	-13 5	11/11/03
IA01	UTC Plot 1 23059-IA01-5	10/14/03	34	-26 39	-16 61	11/17/03
	TRT Plot 2 23059-IA01-6	10/14/03	34	-31 00	-19 28	11/17/03
	TRT Plot 3 23059-IA01-7	10/14/03	34	-31 00	-19 28	11/17/03

Table 15 Crop Destruct

Site Code	Date of Crop Destruct	Method
ND01	09/24/03	The treated plot was dropped down to the ground using a bushhog mower
ND02	09/24/03	The treated plot was dropped down to the ground using a bushhog mower
IA01	10/14/03	Remaining crop was harvested and extra seed material was placed on plot area to degrade naturally

V FIGURES

Figure 1 Field Test Site Locations

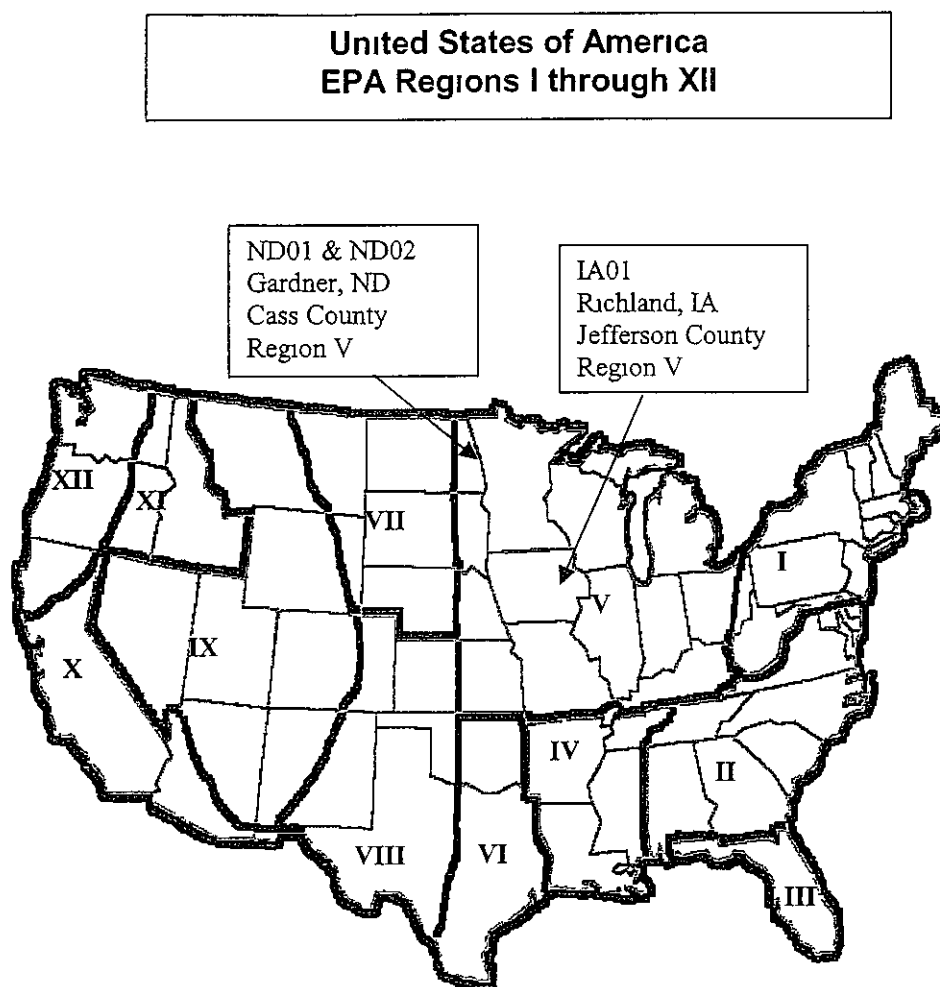


Figure 2 Plot Map – Site ND01 (Wheat), Gardner, North Dakota

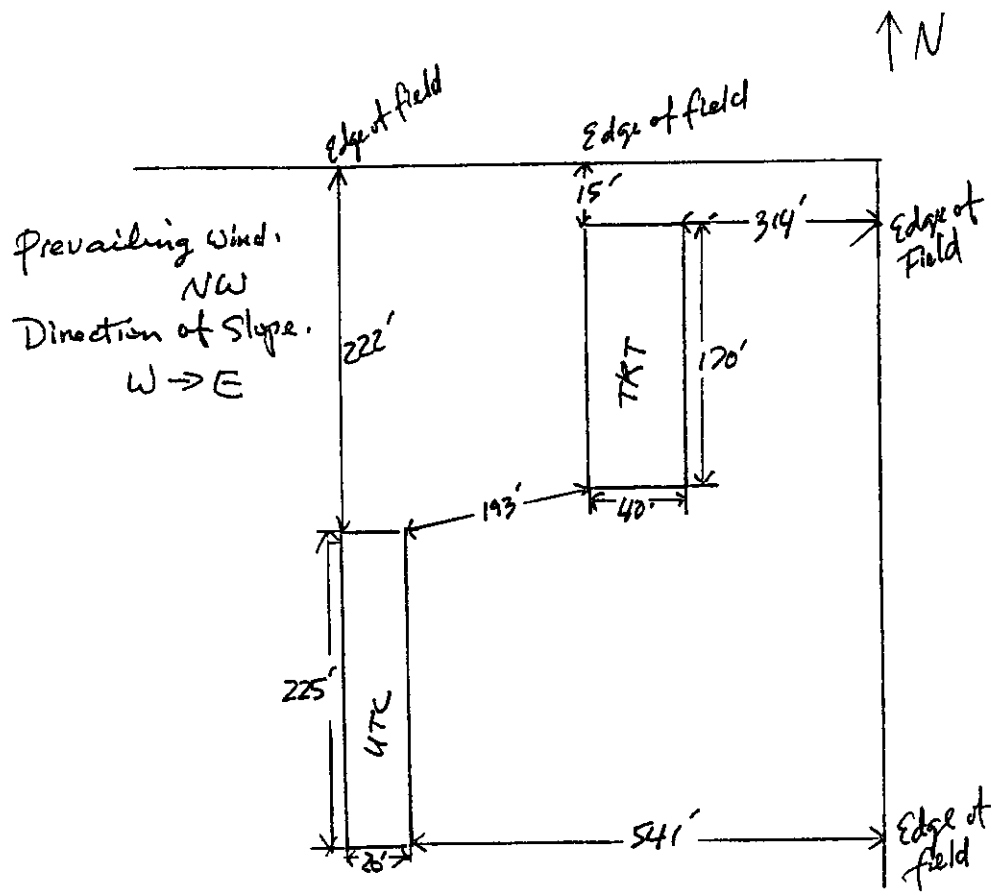


Figure 3 Plot Map – Site ND02 (Wheat), Gardner, North Dakota

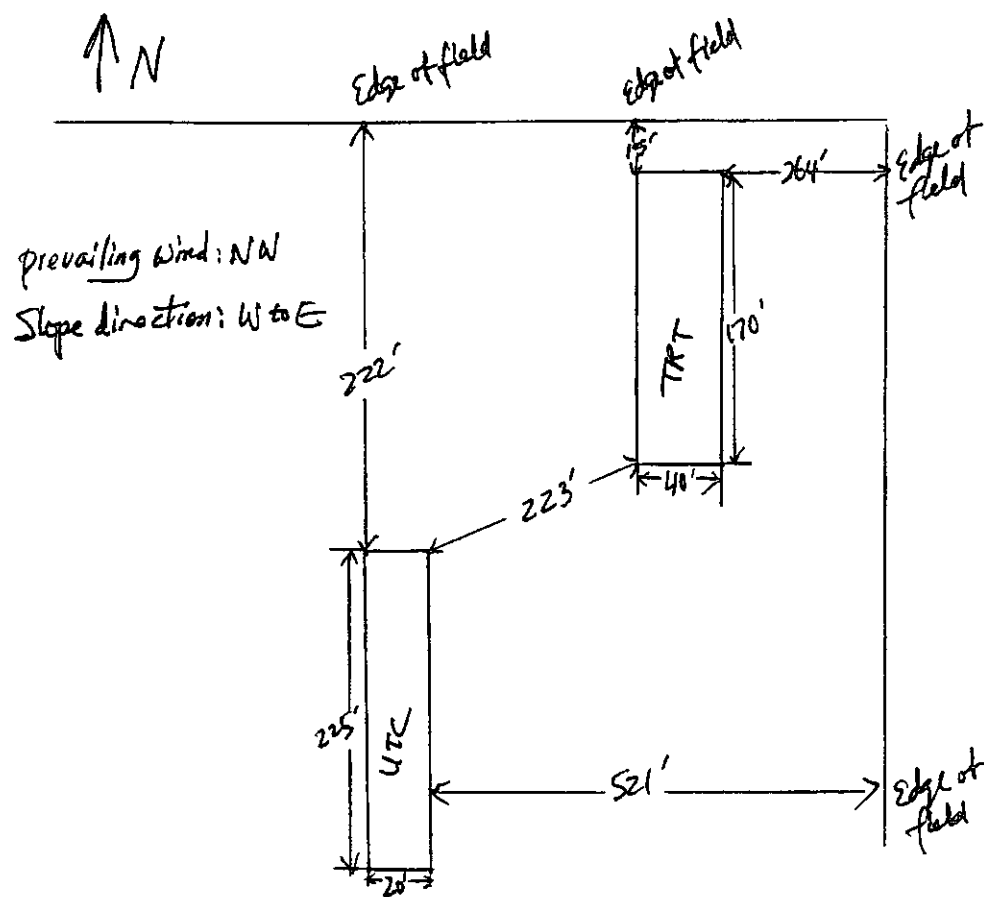
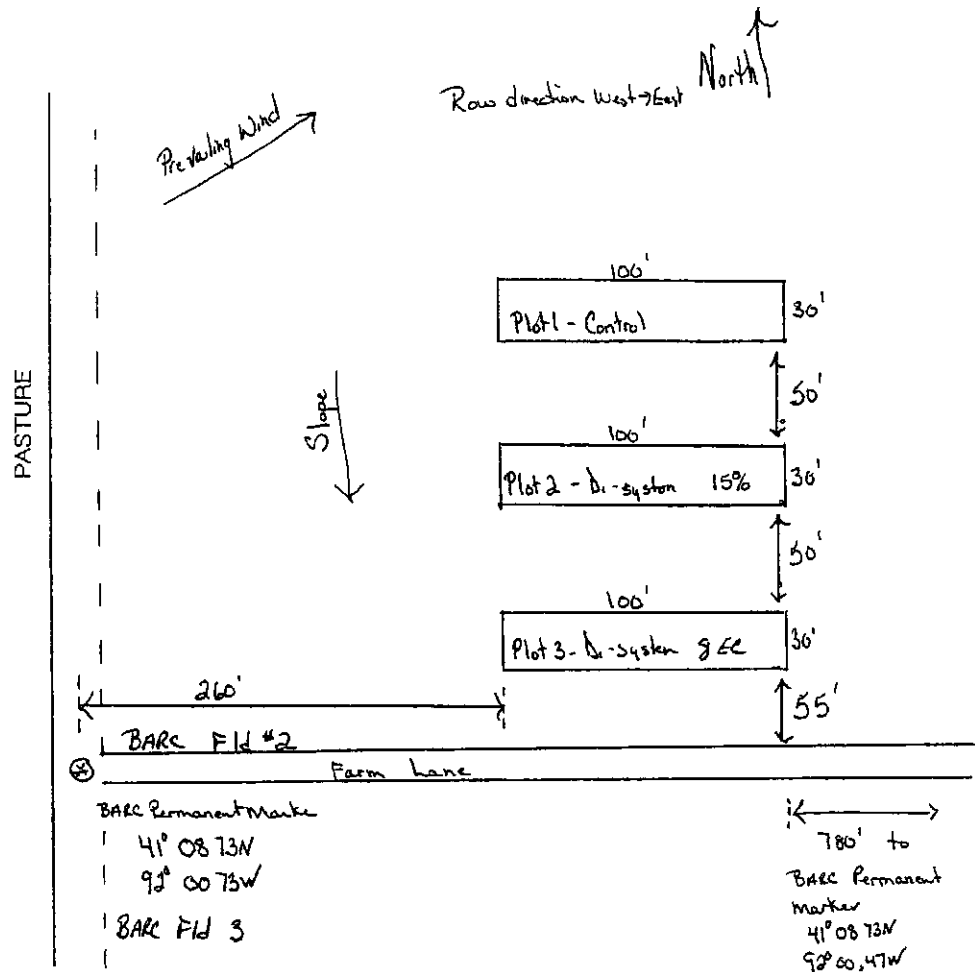


Figure 4 Plot Map – Site IA01 (Soybean), Richland, Iowa



付表 1-2

栽培管理報告書 ホスファミトン

STUDY TITLE

Magnitude of the Residue of Phosphamidon in Wheat, Rice and Soybean
Raw Agricultural Commodities

STUDY NUMBER

ERS23060

DATA REQUIREMENT

OPPTS 860 1000 Residue Chemistry Test Guidelines
OPPTS 860 1500 Crop Field Trials

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FIELD REPORT COMPLETION DATE

July 15, 2004

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GOOD LABORATORY PRACTICE STATEMENT

The field phase reported herein, "Magnitude of the Residue of Phosphamidon in Wheat, Rice and Soybean Raw Agricultural Commodities," was conducted and reported in compliance with EPA FIFRA Good Laboratory Practice Standards (GLP) as defined in 40 CFR Part 160, except for the items indicated below

- Supporting data such as field pesticide history, in-life and historical weather data, crop maintenance, irrigation data, plot slope and soil conservation service data, and quality assurance participation in the NSW01 trial

This did not affect the integrity of the study

Author Tim A Cooley 15 Jul 01
Date
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QUALITY ASSURANCE STATEMENT

Reviews conducted by the Quality Assurance Unit confirm that the field data and summary report reflects the raw data for the field phase of the study. The final field summary report was inspected by Vincella J. Erickson on July 12, 2004, and accurately reflects the study as it was conducted.

The following is a list of reviews conducted by Field Test Site Quality Assurance and Field Research Management Quality Assurance (Excel Research Services, Inc.) on the field phase of the study reported herein.

Site	Phase	Inspection Date	Inspected By	Date Reported to Study Director	Date Reported to Management
	Protocol Audit	08/11/03	VJE	08/19/03	08/19/03
NSW01 Wheat	Calibration/Application	12/19/03	MH	12/19/03	12/19/03
	Field Logbook	07/08/04	VJE	07/15/04	07/15/04
NSW02 Wheat	Sampling	12/11/03	MH	12/12/03	12/12/03
	Field Logbook	07/10/04	VJE	07/15/04	07/15/04
CA01 Rice	Field Logbook	02/16/04	DCW	02/18/04	02/18/04
	Field Logbook	03/02/04	VJE	03/16/04	03/16/04
AR01 Rice	Calibration/Application	09/15/03	CC	09/17/03	09/17/03
	Sampling	10/16/03	CC	10/17/03	10/17/03
	Field Logbook	12/30/03	CC	12/31/03	12/31/03
	Field Logbook	01/06/04	VJE	02/24/04	02/24/04
IA01 Soybean	Calibration/ Application No. 2	09/23/03	PEJ	09/26/03	09/26/03
	Field Logbook	02/03/04	VJE	02/24/04	02/24/04
IA02 Soybean	Calibration/ Application No. 2	09/23/03	PEJ	09/26/03	09/26/03
	Field Logbook	02/04/04	VJE	02/24/04	02/24/04

QUALITY ASSURANCE STATEMENT (Continued)

Vincella J Erickson
Vincella J Erickson
Quality Assurance Officer
A² Regulatory Professionals

15 July '04
Date

Quality Assurance Personnel

VJE = Vincella J Erickson, A² Regulatory Professionals
MH = Michael Hood, Agrisearch Services Pty Ltd
DCW = Duke C Wiley, GLP Research and Consulting, contracted by Research 2000
CC = Cathy Caldwell, Mid-South Ag Research, Inc
PEJ = Patricia E Johnston, Quality Assurance Services, contracted by Bennett Ag Research

CERTIFICATION OF AUTHENTICITY

This report is an accurate and authentic representation of the conditions and results of the field phase of this study

Author Tim A Cooley Date 15 July 04
Tim A Cooley
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TABLE OF CONTENTS

GOOD LABORATORY PRACTICE STATEMENT	2
QUALITY ASSURANCE STATEMENT	3
CERTIFICATION OF AUTHENTICITY	5
I SUMMARY	7
II INTRODUCTION	8
III FIELD PROCEDURES	8
A TEST SUBSTANCE DESCRIPTION	8
B TEST SYSTEM	8
C FIELD TEST SITES	9
1 Overview	9
2 Plot Size, Site Descriptions, Crop Growth, and Development	9
3 Test Substance Treatment Rate and Application Timings	10
4 Application Procedures	10
5 Weather Data	10
6 Sampling and Sample Shipment	11
7 Crop Destruction	11
D DEVIATION	11
E QUALITY CONTROL	12
F STORAGE OF RAW DATA	12
IV TABLES	13
Table 1 Site Codes, Crop, Locations and Field Principal Investigators	14
Table 2 Field Pesticide History	15
Table 3 Soil Type	16
Table 4 Field Test Site Layout	16
Table 5 Field Test Site Preparation and Maintenance	17
Table 6 Crop	19
Table 7 Test Substance Shipping and Storage	19
Table 8 Equipment Calibration and Application	20
Table 9 Application	21
Table 10 Product Rate Determination	24
Table 11 Environmental Conditions at Application	31
Table 12 Current and Historical Weather	33
Table 13 Sampling	36
Table 14 Sample Storage and Shipping	37
Table 15 Crop Destruct	38
V FIGURES	39
Figure 1 Field Test Site Locations NSW01 and NSW02	40
Figure 2 Field Test Site Locations CA01, AR01 IA01, IA02	41
Figure 3 Plot Map – Site NSW01 (Wheat), Bathurst, NSW, Australia	42
Figure 4 Plot Map – Site NSW02 (Wheat), Manildra, NSW, Australia	43
Figure 5 Plot Map – Site CA01 (Rice), Glenn, California	44
Figure 6 Plot Map – Site AR01 (Rice) Proctor, Arkansas	45
Figure 7 Plot Map – Site IA01 (Soybean), Richland, Iowa	46
Figure 8 Plot Map – Site IA02 (Soybean), Richland, Iowa	47

I SUMMARY

This magnitude of the residue study was conducted to provide raw agricultural commodity (RAC) samples of wheat, rice and soybeans following applications of Dimecron 50 SCW (phosphamidon). Samples will be analyzed for the effect of processing on pesticide residues.

The intent of this study was to follow the requirements under OPPTS Test Guidelines 860.1000 Residue Chemistry Test Guidelines and 860.1500 Crop Field Trials. This study will closely follow EPA, FIFRA, Good Laboratory Practice Standards (GLP), 40 CFR, Part 160 (October 1989). Because the Sponsor is not the manufacturer of and has no control over the test substances used (for example, certificate of analysis availability), this study will be done following GLP Standards in intent, but is not considered to be fully GLP compliant.

This study was conducted to determine residue levels on wheat, rice and soybean raw agricultural commodity (RAC) samples following applications of Dimecron 50 SCW. At Sites NSW01 and NSW02, Dimecron 50 SCW was applied once at 10 days pre-harvest interval (PHI) to wheat at the 1X target rate (0.4 kg ai/ha) on Plot 2, and at the 5X target rate (2.0 kg ai/ha) on Plot 3. At Sites CA01 and AR01, Dimecron 50 SCW was applied once at 7 days PHI to rice at the 1X rate (1.5 kg ai/ha) on Plot 2, and applied four times at 8 to 12 day intervals (the last application at 7 days PHI) at the 1X rate (1.5 kg ai) on Plot 3. At Sites IA01 and IA02, Dimecron 50 SCW was applied four times at 7 to 9 day intervals to soybean at the 1X rate (1.0 kg ai/ha) on Plot 2, and 4 times at 7 to 9 day intervals at the 5X rate (5.0 kg ai/ha) on Plot 3. At Sites IA01 and IA02, the last application was made at 6 days PHI. The actual application rates on wheat ranged between 100 and 103 percent of target, actual application rates on rice ranged between 98.2 and 102 percent of target, and actual application rates on soybean ranged between 97.6 and 102 percent of target. Phosphamidon was applied at spray rates of approximately 13 gallons per acre (GPA) on wheat, a range between 20 to 21 GPA on rice, and a range between 22 to 23 GPA on soybean.

The field phase of this study was conducted from September 15, 2003, through February 16, 2004, corresponding to the first application through the last date of sample shipment. This study was conducted at six sites representing United States EPA Region 4, 5, and 10 and New South Wales, Australia, typical wheat, rice, and soybean-growing areas.

Weather conditions during the trial period were typical for the regions. If rainfall was not adequate for normal growth and development, irrigation was applied as needed. Agronomic practices, including fertilizer use and maintenance practices, were typical for wheat, rice, and soybean production at each site.

Wheat, rice, and soybean samples were successfully collected at all sites. Samples were stored frozen and shipped on dry ice via FedEx International Priority.

II INTRODUCTION

Dimecron 50 SCW is formulated as a liquid, which contains 500 grams per liter of phosphamidon C 570. Phosphamidon is an insecticide/acaricide organophosphate. This study was conducted to provide raw agricultural commodity samples of wheat, rice and soybean following applications of Dimecron 50 SCW as follows:

- Wheat (two sites) 1 application at 10 days pre-harvest interval (PHI) at the 1X target rate (0.4 kg ai/ha) on Plot 2, and 1 application at the 5X target rate (2.0 kg ai/ha) on Plot 3
- Rice (two sites) 1 application at 7 days PHI at the 1X rate (1.5 kg ai/ha) on Plot 2, and four applications at 8 to 12 day intervals (the last application at 7 days PHI) at the 1X rate (1.5 kg ai) on Plot 3
- Soybean (two sites) four applications at 7 to 9 day intervals at the 1X rate (1.0 kg ai/ha) on Plot 2, and 4 applications at 7 to 9 day intervals at the 5X rate (5.0 kg ai/ha) on Plot 3. The last applications were made at 6 days PHI

This study is designed to support the application for pesticide label registration under the Environmental Protection Agency's Residue Chemistry Test Guidelines, OPPTS 860.1000 and 860.1500, Crop Field Trials, in accordance with EPA FIFRA Good Laboratory Practice (GLP) Standards, 40 CFR, Part 160. This report summarizes the procedures and data generated in the field phase of the study.

III FIELD PROCEDURES

A Test Substance Description

Trade Name	Dimecron 50 SCW
Product Formulation	Soluble concentrate
Common Name	Phosphamidon
Active Ingredient (nominal)	500 grams per liter phosphamidon C570 Insecticide/Acaricide, Organophosphate
Code Number	A-4111 E
Bulk Identification No	099548 9
Expiration Date	Not given

The receipt of the test substance by each Field Principal Investigator was recorded in the field notebooks.

B Test System

The test system was wheat, rice, and soybean grown in typical growing regions.

C Field Test Sites

1 Overview

The field phase of this study was comprised of six sites located in the major wheat, rice, and soybean-producing areas representing United States EPA Regions 4, 5, 10 and New South Wales, Australia

Field Principal Investigators for each site were chosen for their capabilities in conducting regulatory field trials and for their ability to obtain trial sites in wheat, rice and soybean-growing regions. The site codes, locations, and Field Principal Investigators are listed in Table 1. Maps of the Australia and the United States listing the test site locations are presented in Figures 1 and 2

Each site contained a single untreated plot and two treated plots. Wheat, rice, and soybean samples were successfully collected at all sites.

2 Plot Size, Site Descriptions, Crop Growth, and Development

For each test site, field pesticide histories, including crops grown and pesticides used, were obtained for the previous year. Field pesticide history information is presented in Table 2

Soil types in New South Wales, Australia, were sandy loam and rocky loam. Soil types in the United States were silty clay loam, and silty clay. Soil types were typical of the soils in the major wheat, rice, and soybean-growing areas representative of New South Wales, Australia and United States EPA Region 4, 5, 10. Soil type information is presented in Table 3

The untreated and treated plots were 26.2 x 65.6 feet at Site NSW01 and NSW02, 26.6 x 100 feet at Site CA01, 24 x 50 feet at Site AR01, 30 x 50 feet at Sites IA01 and IA02. At all sites, the untreated plot was positioned at least 100 feet from the treated plot. The treated and untreated plots were identified by uniquely coded flags. Plot maps are presented in Figures 3 to 8. Field test site layout information is presented in Table 4

Test site preparation and maintenance (including pesticides used, agronomic practices employed, and fertilizers applied) were recorded. Test site preparation and maintenance information is presented in Table 5

Crop variety and planting information is presented in Table 6

3 Test Substance Treatment Rate and Application Timings

The test substance was applied at target rates as follows

- Wheat 1X rate 0.4 kg ai/ha, 5X rate 2.0 kg ai/ha
- Rice 1X rate 1.5 kg ai/ha
- Soybean 1X rate 1.0 kg ai/ha, 5X rate 5.0 kg ai/ha

The actual application rates on wheat ranged between 100 and 103 percent of target, actual application rates on rice ranged between 98.2 and 102 percent of target, and actual application rates on soybean ranged between 97.6 and 102 percent of target. Dimecron 50 SCW was applied at spray rates of approximately 13 gallons per acre (GPA) on wheat, a range between 20 to 21 GPA on rice, and a range between 22 to 23 GPA on soybean. Test substance shipping and storage information is presented in Table 7

4 Application Procedures

At all sites, the application equipment was calibrated prior to application of the test substance. All applications were verified by the time/volume technique, which is based on the output per time and equipment travel speed. The calibrations were conducted the same day as or the day before the applications at all sites. Equipment calibration and application information is presented in Table 8, and product rate determination is presented in Table 10

The equipment used was typical of small plot research equipment that closely simulates commercial equipment. Boom sprayers, backpack sprayers, and tractor-mounted boom sprayers were used to make the application. Application equipment information is presented in Table 9 and environmental conditions at application are presented in Table 11

No problems occurred during applications

5 Weather Data

Weather data for each site, including minimum/maximum temperatures and daily rainfall, were recorded for the trial period from permanent weather stations located near or on the test sites, and compared to the historical norm. Weather data are presented in Table 12