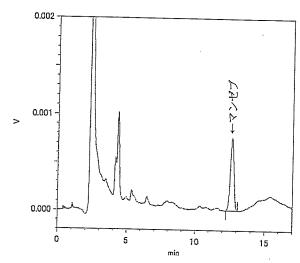
D:¥saka¥manzeb.met D:¥saka¥060130¥P060130A016

System

分析日時: 印刷日時: 06/01/30 19:08:25 06/01/30 19:31:41

ID: 玄麦 R1.0-A comment: cooking



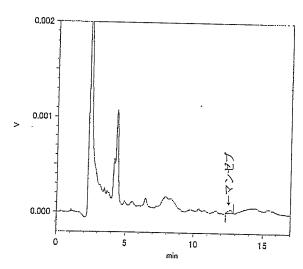
# 1.0 ppm 添加 20 μL/2 mL/1 g

D:¥saka¥manzeb.met D:¥saka¥060130¥P060130A012

System

分析日時: 印刷日時: 06/01/30 17:34:51 06/01/31 9:51:04

ID: 玄麦 R0.05-A comment: cooking



0.05 ppm 添加 20 pL/2 mL/1 g

図 8.2 マンゼブ(玄麦試料)のクロマトグラム

D:¥saka¥manzeb.met D:¥saka¥060130¥P060130A010

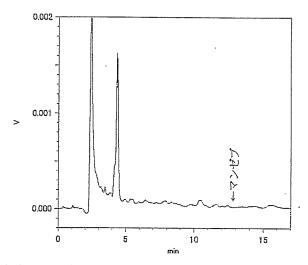
System

分析日時: 06/01/30 16:48:13 印刷日時: 06/01/30 19:30:02

ID:

玄麦 ND01 BL-A

comment: cooking



無処理区(ND01-Plot7)  $20~\mu L/2~mL/1~g$ 

D:\frac{4}{5}saka\frac{4}{5}manzeb.met D:\frac{4}{5}saka\frac{4}{5}060131\frac{4}{5}060131A010

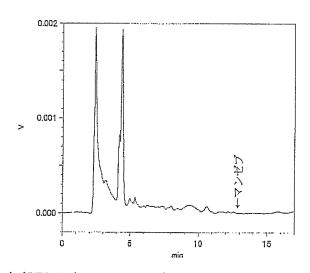
System

分析日時:印刷日時: 06/01/31 20:51:29 06/02/01 9:30:15

ID:

玄麦 MO01 BL-A

comment cooking



無処理区(MO01·Plot10) 20 µL/2 mL/1 g

図 8-2 マンゼブ (玄麦試料) のクロマトグラム (続き)

D:\saka\manzeb.met

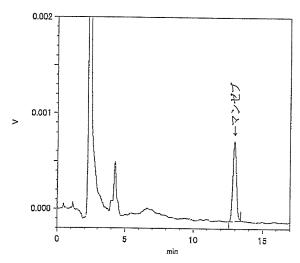
D:\saka\060301\B060301A018

System

分析日時:印刷日時: 06/03/02 2:18:42 06/03/02 2:49:57

ID: 玄麦 ND01-8-F

comment cooking



処理区(ND01-Plot8)  $20~\mu L/4~mL/1~g$ 

メソット 名 データ名 D:\saka\manzeb.met

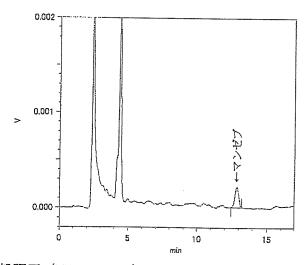
D:\frac{2}{2} saka\frac{2}{2} 060131\frac{2}{2} 1

System

分析日時: 06/02/01 1:07:54 印刷日時: 06/02/01 9:30:40

玄麦 ND01\_Plot9-A

comment: cooking



処理区(ND01-Plot8) 20 μL/4 mL/1 g

図8-2マンゼブ(玄麦試料)のクロマトグラム(続き)

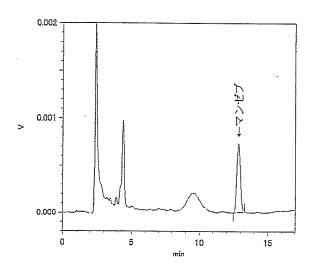
D:\(\pm\)saka\(\pm\)met D:\(\pm\)saka\(\pm\)060131\(\pm\)060131A025

System

/ ユーザー : 分析日時: 印刷日時: 06/02/01 2:41:07 06/02/01 9:30:48

玄麦 MO01\_Plot11-A

comment: cooking



処理区(MO01·Plot11) 20 μL/4 mL/1 g

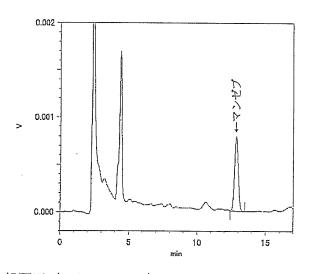
D:\(\perp\)saka\(\perp\)manzeb.met D:\(\perp\)saka\(\perp\)060131\(\perp\)060131A018

System

メソット・名 : 〒一タ名 : ユーザー : 分析日時: 印刷日時: 06/01/31 23:57:59 06/02/01 9:30:33

玄麦 MO01\_Plot12-B ID:

comment cooking



処理区(MO01-Plot12) 20 μL/4 mL/1 g

図 8-2 マンゼブ (玄麦試料) のクロマトグラム (続き)

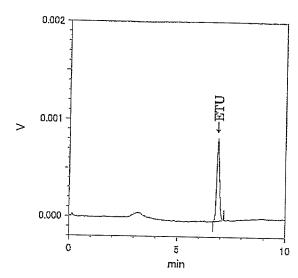
メソット 名 テータ名 D:\frac{1}{2}saka\frac{1}{2}ETU.met

D:\frac{1}{20060308\frac{1}{20060309A001}}

System

06/03/09 18:16:19 分析日時: 印刷日時: 06/03/09 18:35:38

sample ID: ETU 0.1 mg/L {データのコメント} comment:



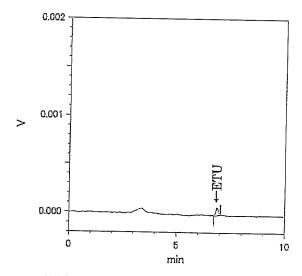
ETU 標準品 1.0 ng

メソッド名 D:¥saka¥ETU.met

テータ名 ユーサー D:\saka\20060308\B060309A002

System

分析日時: 06/03/09 18:35:39 印刷日時: 06/03/09 18:54:52 sample ID: ETU 0.01mg/L comment: **「データのコメント**]



ETU 標準品 0.1 ng

図 9-1 ETU (玄米試料) のクロマトグラム

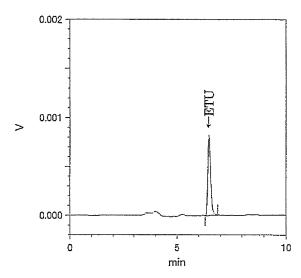
D:\saka\ETU2.met

D:\saka\20060613\R060613A009

System

分析日時: 06/06/13 20:27:44 06/06/13 20:58:55 印刷日時:

玄米 R0.5-C 行・タのコメント sample ID: comment:



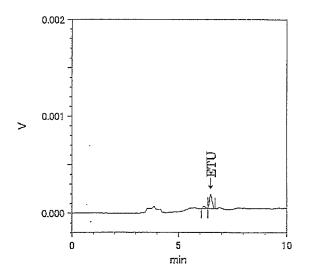
0.5 ppm 添加 10 µL/2 mL/4 g

メソッド名 D:\saka\ETU2.met

テータ名 ユーサー D:\saka\20060612\R060612A017

System

分析日時: 06/06/13 01:12:14 06/06/13 01:43:30 玄米 R`0.01-C {データのコメント} 印刷日時: sample ID: comment:



0.01 ppm 添加 10 µL/2 mL/4 g

図 9-1 ETU (玄米試料) のクロマトグラム (続き)

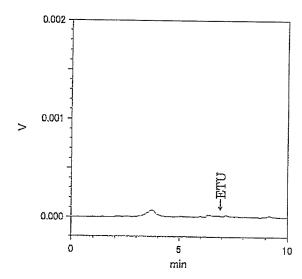
メソット 名 テータ名

D:\frac{4}{5}saka\frac{4}{5}ETU2.met D:\frac{4}{5}saka\frac{4}{2}0060413\frac{4}{5}R060413A007

System

分析日時: 印刷日時: sample ID: 06/04/13 21:32:38 06/05/19 12:22:04

玄米 BL-A 行・一タのコメント comment:



無処理区(CA01-Plot4) 10  $\mu$ L/2 mL/4 g

図 9-1 ETU (玄米試料) のクロマトグラム (続き)

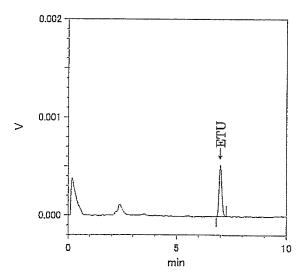
D:\saka\ETU.met

D:\saka\s20060306\B060306A014

System

06/03/06 22:20:32 06/03/06 22:39:47 印刷日時:

玄麦 R0.5-C {データのコメント} sample ID: comment:



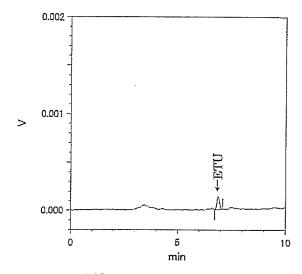
0.5ppmn 添加 10 µL/2 mL/4 g

D:\saka\ETU.met

/ソット・名 データ名 ユーサー D:\frac{1}{2}saka\frac{1}{2}20060308\frac{1}{2}B060308A008

System

分析日時: 06/03/08 19:44:32 06/03/08 20:03:45 印刷日時: 玄麦 R'0.01-D {データのコメント} sample ID: comment



0.01ppmn 添加 10 µL/2 mL/4 g

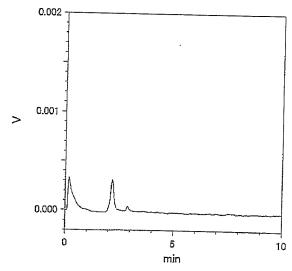
図 9-2 ETU (玄麦試料) のクロマトグラム

メソット 名 テータ名 D:\saka\ETU.met

D:\frac{4}{20060306}\frac{4}{20060306}\frac{1}{2

System

分析日時: 06/03/06 18:16:58 06/03/06 18:33:18 玄麦 ND01-BL-A [データのコメント] 印刷日時: sample ID: comment:



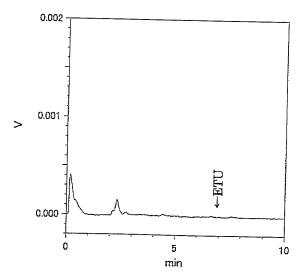
無処理区(ND01-Plot7)  $10 \,\mu\text{L}/2 \,\text{mL}/4 \,\text{g}$ 

D:\forall saka\forall ETU.met

メソット 名 テータ名 ユーサー D:\saka\s20060306\B060306A009

System

分析日時: 印刷日時: 06/03/06 20:44:10 06/03/06 21:03:23 玄麦 MO01-BL-A {データのコメント} sample ID: comment



無処理区(MO01-Plot10) 10 μL/2 mL/4 g

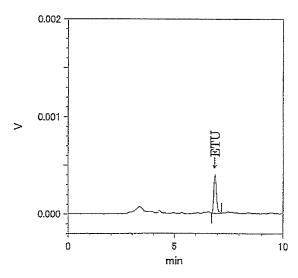
図 9-2 ETU (玄麦試料) のクロマトグラム (続き)

D:\forall saka\forall ETU.met

D:\fraka\fraka\frak20060308\frak20060308A002

System

分析日時: 06/03/08 17:34:51 06/03/08 17:51:33 印刷日時: sample ID: 玄麦 ND01-8-A [データのコメント] comment



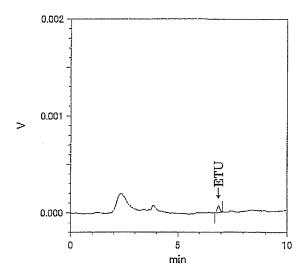
処理区(ND01-Plot8) 10 μL/2 mL/4 g

メソット名 D:\saka\ETU.met

データ名 ユーサー D:\saka\20060308\B060309A011

System

分析日時: 06/03/09 21:28:49 印刷日時: 06/03/09 21:48:06 玄麦 ND01-9-A sample ID: {データのコメント} comment:



処理区(ND01-Plot9) 10 μL/2 mL/4 g

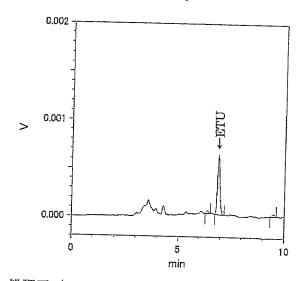
図 9-2 ETU (玄麦試料) のクロマトグラム (続き)

D:\saka\ETU.met

D:\saka\subseteq 20060308\subseteq 5000308\subseteq 5000308

System

分析日時: 06/03/08 18:08:02 印刷日時: 06/03/08 18:27:20 玄麦 M001-11-A {データのコメント} sample ID: comment:



処理区(MO01-Plot11) 10 μL/2 mL/4 g

D:\saka\ETU.met

メソット 名 テータ名 ユーサー D:\frac{14}{20060308}

System 06/03/09 22:26:34 06/03/09 22:45:46 分析日時: 印刷日時: sample ID: 玄麦 MO01-12-A 「データのコメント] comment:

0.002 0.001 0.000 5 10 min

処理区(MO01-Plot12)  $10 \, \mu L/2 \, mL/4 \, g$ 

図 9-2 ETU (玄麦試料) のクロマトグラム (続き)

# 付表 1 試料調製報告書

## STUDY TITLE

Magnitude of the Residue of Several Test Compounds in Rice, Wheat, and Soybean Raw Agricultural Commodities

#### STUDY NUMBER

ERS25060

## DATA REQUIREMENT

OPPTS 860.1000: Residue Chemistry Test Guidelines OPPTS 860.1500: Crop Field Trials

#### **AUTHORS**

Tim A. Cooley Marilyn B. Everett Excel Research Services, Inc.

# FIELD REPORT COMPLETION DATE

February 20, 2006

# FIELD MANAGEMENT/FIELD COORDINATOR

Tim A. Cooley, Field Manager
Marilyn B. Everett, Field Coordinator
Excel Research Services, Inc.
3021 West Dakota Avenue, Suite 110
Fresno, CA 93722

# SPONSOR/TESTING FACILITY

The Institute of Environmental Toxicology Uchimoriya-machi 4321, Mitsukaido-shi Ibaraki 303-0043, JAPAN

# SPONSOR REPRESENTATIVE/STUDY DIRECTOR

Yasuhiro Kato, Ph.D. The Institute of Environmental Toxicology Uchimoriya-machi 4321, Mitsukaido-shi Ibaraki 303-0043, JAPAN

Page 1 of 75

#### GOOD LABORATORY PRACTICE STATEMENT

The field phase reported herein, "Magnitude of the Residue of Several Test Compounds in Rice, Wheat, and Soybean Raw Agricultural Commodities," was conducted and reported following the 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.
- Acquisition and certification of test substances. All materials used were commercial products from various manufacturers.
- Data documentation not strictly adhered to for GLPS.

This did not affect the integrity of the study.

Author:

Tim A. Cooley

Field Manager

Excel Research Services, Inc.

3021 West Dakota Avenue, Suite 110

Fresno, CA 93722

Field Report

Test Compounds in Rice, Wheat and Soybean RAC

Study No. ERS25060

## QUALITY ASSURANCE STATEMENT

Reviews conducted by the Quality Assurance Unit confirm that the field data and field report reflect the raw data for the field phase of the study. The final field report was inspected by Vincella J. Erickson on February 12 and 15, 2006, 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
AR01 Rice  CA01 Rice  ND01 Wheat  MO01 Wheat	Protocol Review	05/16/05	CC	05/17/05	05/17/05
	Application	09/05/05	CC	09/07/05	09/07/05
	Sampling	09/24/05	CC	10/06/05	10/06/05
	Field Logbook	10/31/05	CC	11/01/05	11/01/05
	Calibration/Application 1	08/19/05	DCW	08/22/05	08/22/05
	Field Logbook	12/27/05	DCW	12/29/05	12/29/05
	Calibration/Application	08/05/05	SDK	08/15/05	08/15/05
	Field Logbook	11/28/05	SDK	12/04/05	12/04/05
	Application	06/18/05	PEJ	06/20/05	06/20/05
	Field Logbook	08/26/05	PEJ	08/30/05	08/30/05
	Protocol Review	05/16/05	CC	05/17/05	05/17/05
AR02 Soybean	Application	08/17/05	CC	08/17/05	08/17/05
	Sampling	09/28/05	CC	10/06/05	10/06/05
	Field Logbook	10/31/05	CC	11/01/05	11/01/05
IA01 Soybean	Calibration/Application	09/10/05	PEJ	09/15/05	09/15/05
	Field Logbook	11/27/05	PEJ	12/01/05	12/01/05

Vincella J. Erickson

Quality Assurance Officer

A<sup>2</sup> Regulatory Professionals

Quality Assurance Personnel:

= Vincella J. Erickson, A<sup>2</sup> Regulatory Professionals, contracted by Excel Research Services, Inc.

= Cathy Caldwell, Mid-South Ag Research, Inc. CC

= S. Derek Killilea, Ph.D., contracted by Northern Plains Ag Research SDK

= Patricia E. Johnston, Quality Assurance Services, contracted by Bennett Ag Research PEJ

= Duke C. Wiley, GLP Research and Consulting, contracted by Research 2000 DCW

Field Report

Test Compounds in Rice, Wheat and Soybean RAC

Study No. ERS25060

## 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 Field Manager

Excel Research Services, Inc. 3021 W. Dakota Avenue, Suite 110

Fresno, CA 93722

Field Report

Test Compounds in Rice, Wheat and Soybean RAC

Study No. ERS25060

20 Sch 06 Date

#### TABLE OF CONTENTS

GO(	OD L	ABORAT	ORY PRACTICE STATEMENT	2			
QU.	ALIT	Y ASSUR	ANCE STATEMENT	∠			
CERTIFICATION OF AUTHENTICITY.							
TAE	BLE (	OF CONTE	ENTS	+			
I.	SUI	MMARY	TON T	ر			
Π.	INT	RODUCT	ION	٥			
$\coprod$ .	FIE:	LD PROC	EDURES	/			
	A.	TEST ST	JBSTANCE DESCRIPTION	/			
	B.	TEST SY	STEM	7			
	C.	FIELD T	EST SITES	8			
	-	1. Ove	erview	8			
		2. Plo:	t Size Site Descriptions Crop County and D. 1	8			
		3. Tes	t Size, Site Descriptions, Crop Growth, and Development	8			
		200	t Substance Treatment Rate and Application Timings	9			
		5. We	plication Procedures	10			
		6. San	ather Data	11			
	D.		upling and Sample Shipment	11			
	Б. Е.	DEVIATION	IONS	12			
	F.	QUALII	Y CONTROL	13			
IV.		SIUKAC	E OF RAW DATA	13			
IV.	IAE	T-11 1		14			
		Table 1:	Site Codes, Crop, Locations and Field Principal Investigators	15			
		Table 2:	Field Pesticide History	16			
		Table 3:	Soil Type	16			
		Table 4:	Field Test Site Layout.	17			
		Table 5:	Field Test Site Preparation and Maintenance	18			
		Table 6:	Crop	20			
		Table 7:	Test Substance Shipping and Storage	21			
		Table 8:	Equipment Calibration and Application	22			
		Table 9:	Application	25			
		Table 10:	Product Rate Determination.	32			
		Table 11:	Environmental Conditions at Application	52			
		Table 12:	Current and Historical Weather	63			
		Table 13:	Sampling	66			
		Table 14:	Sample Storage and Shipping	67			
V.	FIGU	JRES		68			
		Figure 1:	Field Test Site Locations	69			
		Figure 2:	Plot Map - Site AR01 (Rice) Proctor, Arkansas	70			
		Figure 3:	Plot Map – Site CA01 (Rice) Chico, California	71			
		Figure 4:	Plot Map – Site ND01 (Wheat) Gardner, North Dakota	77			
		Figure 5:	Plot Map – Site MO01 (Wheat) Kirksville, Missouri	72			
		Figure 6:	Plot Map – Site AR02 (Soybean), Proctor, Arkansas	. /J 7/			
		Figure 7:	Plot Map – Site IA01 (Soybean), Richland, Iowa	75			
			The state of the s	. 13			

Field Report

Test Compounds in Rice, Wheat and Soybean RAC Study No. ERS25060
Page 5

#### I. SUMMARY

This magnitude of the residue study was conducted to provide raw agricultural commodity (RAC) samples of, and determine residue levels on, rice, wheat, and soybeans, following applications of mancozeb, malathion, carbofuran, clethodim and esfenvalerate. Not all test substances were used on every crop or plot. For all test substances with multiple applications, the interval between applications was between six and eleven days. 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.

The field phase of this study was conducted from May 16, 2005 to December 12, 2005, corresponding to the first application through the last date of sample shipment. This study was conducted at six sites representing United States EPA Regions 4, 5, and 10, typical rice, wheat, 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 rice, wheat, and soybean production at each site.

Rice, wheat, and soybean samples were successfully collected at all sites. Samples were stored frozen and shipped to Ibaraki, Japan, on dry ice via FedEx International Priority. All samples were received in good condition.

#### II. INTRODUCTION

This study took place at six locations that represent typical rice, wheat, and soybean production conditions. The sites consisted of both untreated and treated plots. Treatment regimes consisted of both single and multiple applications at labeled and exaggerated rates and typical volume of carrier using commercial ground application equipment.

This study was conducted to provide raw agricultural commodity samples of rice, wheat, and soybean following applications of several test compounds. The test substances used were mancozeb, malathion, carbofuran, clethodim and esfenvalerate. Not all test substances were used on every crop or plot. For all test substances with multiple applications, the interval between applications was between six and eleven days.

Each site contained a single untreated control plot and two treated plots. Rice, wheat, or soybean samples were successfully collected at all sites.

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

A short description of each test substance follows:

- Mancozeb is a fungicide for use on field crops, fruits, vegetables, nuts, and commercial sod farms; and as a seed treatment for cereal grains and other field crops.
- Malathion is an insecticide used to control aphids, scale insects, spider mites and other insects on fruits, vegetables, ornamentals and stored products.
- Carbofuran is an insecticide and nematicide used to control a wide range of insects on many crops.
- Clethodim is an herbicide used postemergence to control annual and perennial grasses in a wide variety of crops, including soybeans.
- Esfenvalerate is an insecticide used on wide variety of crops, including soybeans.

Field Report

Test Compounds in Rice, Wheat and Soybean RAC

Study No. ERS25060

The test substance product names, CAS Numbers (a.i.), lot numbers, appearance, dates test substances were obtained, amounts, and container sizes were recorded, if available, in the raw data by the principal field investigators. Test substance shipping and storage information is presented in Table 7.

#### B. Test System

The test system was rice, wheat, 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 rice, wheat, and soybean-producing areas representing United States EPA Regions 4, 5, and 10.

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 rice, wheat, and soybean-growing regions. The site codes, locations, and Field Principal Investigators are listed in Table 1. A map of the United States listing the test site locations is presented in Figure 1.

Each site contained a single untreated control plot and two treated plots. Rice, wheat, or soybean samples were successfully collected at each site.

### 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 were loam at AR01; sandy clay loam at Site CA01; silty clay loam at sites ND01, MO01, and IA01; and sandy loam at AR02. Soil types were typical of the soils in the major rice, wheat, and soybean-growing areas representative of the United States EPA Regions 4, 5, and 10. Soil type information is presented in Table 3.

At Sites AR01 and AR02, the untreated and treated plots were  $24 \times 50$  feet. At Site CA01, all plots were  $20 \times 50$  feet; at Site ND01 the

Field Report

Test Compounds in Rice, Wheat and Soybean RAC

Study No. ERS25060