

IV. TABLES

Table 1: Site Codes, Crop, Locations and Field Principal Investigators

Site Code & Crop	Site Location (City, State, County, Region)	Field Principal Investigator
AR01 Rice (Japonica Strain)	Proctor, Arkansas Crittenden County EPA Region 4	Don Harlan Mid-South Ag Research 2383 Hinckley Road Proctor, AR 72376
ND01 Wheat	Gardner, North Dakota Cass County EPA Region 5	Quan Zai Jia Northern Plains Ag Research 16458 19 th Street SE Gardner, ND 58036
IA01 Soybean	Richland, Iowa Jefferson County EPA Region 5	David Bennett Bennett Ag Research 1109 Ivy Avenue Richland, IA 52585
ND02 Wheat	Eldridge, North Dakota Stutsman County EPA Region 7	Quan Zai Jia Northern Plains Ag Research 16458 19 th Street SE Gardner, ND 58036
IA02 Soybean	Richland, Iowa Keokuk County EPA Region 5	David Bennett Bennett Ag Research 1109 Ivy Avenue Richland, IA 52585

Table 2: Field Pesticide History

Site Code	Month/Year	Crop	Product/Formulation	Active Ingredient(s)	Rate (lb ai/A)
AR01	05/03	Rice	Propanil	Propanil	4
	05/03	Rice	Facet	Quinclorac	0.375
ND01	06/03	Wheat	Harmony GT	Thifensulfuron	0.02
	06/03	Wheat	Sword	MCPAe	0.65
	06/03	Wheat	Puma	Fenoxaprop-P	0.04
	07/03	Wheat	Headline	Pyraclostrobin	0.18
IA01	06/03	Soybeans	Roundup Weather Max	Glyphosate	0.95
ND02	06/03	Soybeans	Roundup 3SL	Glyphosate	0.4
IA02	06/03	Soybeans	Roundup Weather Max	Glyphosate	0.69
	06/03	Soybeans	Roundup Weather Max	Glyphosate	0.69

Table 3: Soil Type

Site Code	Soil Series Type
AR01	Sharkey Silty Clay Loam
ND01	Bearden-Lindaas Silty Clay Loam
IA01	Taintor Silty Clay Loam
ND02	Svea-Sioux Loam
IA02	Otley Silty Clay Loam

Table 4: Field Test Site Layout

Site Code	Plot No.	Width x Length in Feet	Area in Square Feet	Area in Acres
AR01	1-UTC	24 x 50	1200	0.0275
	2-TRT	24 x 50	1200	0.0275
	3-TRT	24 x 50	1200	0.0275
	4-TRT	24 x 50	1200	0.0275
	5-TRT App 1	24 x 50	1200	0.0275
	5-TRT App 2	12 x 50	600	0.0138
	5-TRT App 3	12 x 50	600	0.0138
ND01	6-UTC	40 x 70	2800	0.0643
	7-TRT	40 x 70	2800	0.0643
	8-TRT	40 x 70	2800	0.0643
	9-TRT	40 x 70	2800	0.0643
	10-TRT	40 x 70	2800	0.0643
IA01	11-UTC	30 x 100	3000	0.0689
	12-TRT	30 x 100	3000	0.0689
	13-TRT	30 x 100	3000	0.0689
	14-TRT	30 x 100	3000	0.0689
	15-TRT	30 x 100	3000	0.0689
ND02	16-UTC	40 x 100	4000	0.0918
	17-TRT	40 x 100	4000	0.0918
	18-TRT	40 x 100	4000	0.0918
IA02	19-UTC	30 x 100	3000	0.0689
	20-TRT	30 x 100	3000	0.0689
	21-TRT	30 x 100	3000	0.0689
	22-TRT	30 x 100	3000	0.0689
	23-TRT	30 x 100	3000	0.0689

Table 5: Field Test Site Preparation and Maintenance

Site Code	Date	Pesticide (Product/Active Ingredient)	Rate (lb ai/A)	Date	Agronomic Practice	Date	Fertilizer	Rate (lb/A)
AR01	05/26/04	Command 3ME/ Clomazone	0.4	06/18/04	Irrigated 4 inches	06/17/04	Urea 46%	100
	06/04/04	Stam M4/Propanil	4	06/19/04	Irrigated 1 inch	07/16/04	Urea 46%	100
	06/17/04	Aim 2EC/ Carfentrazone-ethyl	0.025	06/20/04	Average 1" irrigation per day until drained			
	06/17/04	Grandstand 3SL/ Triclopyr	0.25	09/10/04	Estimated, levees cut			
	06/26/04	Bronate Adv 2.5 & 2.5EC/Bromoxynil + MCPAe	0.375 0.375		No agronomic practices were performed during the study	06/03/04	Urea 46% 46-0-0	217
ND01	06/26/04	Puma 1EC/ Fenoxaprop-P	0.05			06/03/04	MAP 52% 11-52-0	77
	07/28/04	Folicur 3.6F/ Tebuconazole	0.084					
	04/29/04	Prowl 3.3EC Pendimethalin	1.24	04/17/04	One pass with field cultivator	10/17/03	Dry fertilizer 6-30-35	N-6 lb, P ₂ O ₅ - 30 lb, K ₂ O- 35 lb
IA01	04/29/04	Canopy XL 56.3% ai/ Chlorimuron (9.4%) + Sulfentrazone (46.9%)	0.21					
	06/11/04	Select 2EC/ Clethodim (24.6%)	0.11					

Table 5: Field Test Site Preparation and Maintenance (Continued)

Site Code	Date	Pesticide (Product/Active Ingredient)	Rate (lb ai/A)	Date	Agronomic Practice	Date	Fertilizer	Rate (lb/A)
ND02	06/17/04	Discover 2EC /Clodinafop+ cloquintocet-mexyl	0.06	No agronomic practices were performed during the study.	11/03	Urea 46-0-0/N	150	
	06/17/04	Curtail M 0.42+ 2.35 SL /MCPA+clopyralid	0.05 + 0.3					
	06/17/04	Harmony GT 75DF/ Thifensulfuron	0.019					
IA02	06/04/04	Roundup Weather Max 5.5 lb ai/gal/Glyphosate	1.12	No agronomic practices were performed during the study	No fertilizers were applied during the study			

Table 6: Crop

Site Code	Variety	Planting Date	Row Spacing (inches)	Plant Spacing (inches)
AR01	Cocodrie Rice	05/25/04	6	1
ND01	Granite Wheat	06/03/04	7	0.5
IA01	Pioneer 93B87 Soybean	04/27/04	30	1.11
ND02	Knudson Wheat	05/08/04	6	1
IA02	Pioneer 93M80	05/12/04	15	2.3

Table 7: Test Substance Shipping and Storage

Site Code	Product Name	Amount	Date Obtained/ Rec'd by FPI	Test Site Storage Temp ¹	
				Min °C	Max °C
AR01	Dimethoate 4EC	2.5 gal	04/19/04	18	29
	PennCap M (Methyl parathion)	2.5 gal	04/19/04	18	29
	Diquat	1 gal	04/19/04	18	29
	Fenitrothion	4 x 100 mL	07/29/04	21	28
	Sevin (Carbaryl)	2 x 1 qt	07/29/04	21	28
ND01	Cheminova methyl 4EC (Methyl parathion)	1 qt	06/30/04	11	28
	Dimate 4E (Dimethoate)	1 qt	06/24/04	11	28
	Fenitrothion	3 x 100 mL	07/29/04	11	24
	Reglone (Diquat)	2.5 gal	08/24/04	13	24
IA01	Reglone (Diquat)	1 qt	06/03/04	17	27
	Dimethoate	1 gal	06/23/04	17	27
	Methyl Parathion	1 gal	06/23/04	17	27
	Gramoxone Max (Paraquat)	2.5 gal	07/01/04	17	27
	Fenitrothion	1000 mL	07/29/04	17	27
	Reglone (Diquat)	1 pt	08/24/04	17	27
ND02	Reglone (Diquat)	2.5 gal	08/24/04	N/A ²	N/A ²
IA02	Reglone (Diquat)	1 qt	06/03/04	12	27
	Gramoxone Max (Paraquat)	2.5	06/23/04	12	27
	Reglone (Diquat)	1 pt	08/24/04	12	27

¹Storage temperatures represent time from receipt of test substance by Principal Investigator to last application.

²N/A=not applicable. Test substance Diquat was purchased on the day of application.

Table 8: Equipment Calibration and Application

Site Code & Crop	Plot No.	Test Compound	App No.	Calibration Date	Calibrated GPA	Application Date
AR01 Rice	2	Diquat (1X)	1	09/26/04	24.29	09/26/04
		Carbaryl (1X)	1	09/10/04	24.3	09/10/04
		Carbaryl (1X)	2	09/17/04	24.4	09/17/04
	3	Diquat (5X)	1	09/26/04	24.29	09/26/04
		Carbaryl (5X)	1	09/10/04	24.3	09/10/04
		Carbaryl (5X)	2	09/17/04	24.4	09/17/04
	4	Dimethoate (1X)	1	08/13/04	24.16	08/13/04
		Dimethoate (1X)	2	08/20/04	24.26	08/20/04
		Dimethoate (1X)	3	08/27/04	24.11	08/27/04
		Dimethoate (1X)	4	09/03/04	24.15	09/03/04
		Methyl parathion (1X)	1	09/09/04	24.3	09/09/04
		Methyl parathion (1X)	2	09/16/04	24.3	09/16/04
		Fenitrothion (1X)	1	08/27/04	110.36	08/27/04
		Fenitrothion (1X)	2	09/03/04	111	09/03/04
		Fenitrothion (1X)	3	09/10/04	110.3	09/10/04
	5	Dimethoate (5X)	1	08/13/04	24.16	08/13/04
		Dimethoate (5X)	2	08/20/04	24.26	08/20/04
		Dimethoate (5X)	3	08/27/04	24.11	08/27/04
		Dimethoate (5X)	4	09/03/04	24.15	09/03/04
		Methyl parathion (5X)	1	09/09/04	24.3	09/09/04
		Methyl parathion (5X)	2	09/16/04	24.3	09/16/04
		Fenitrothion (5X)	1	08/27/04	110.36	08/27/04
		Fenitrothion (5X)	2	09/03/04	111	09/03/04
		Fenitrothion (5X)	3	09/10/04	110.3	09/10/04

Table 8: Equipment Calibration and Application (Continued)

Site Code & Crop	Plot No.	Test Compound	App No.	Calibration Date	Calibrated GPA	Application Date	
ND01 Wheat	7	Diquat (1X)	1	09/12/04	20	09/12/04	
	8	Diquat (5X)	1	09/12/04	20	09/12/04	
	9		Dimethoate (5X)	1	09/06/04	20	09/06/04
			Dimethoate (5X)	2	09/12/04	20	09/12/04
			Methyl Parathion (5X)	1	08/28/04	20	08/28/04
			Methyl Parathion (5X)	2	09/04/04	20	09/04/04
			Fenitrothion (5X)	1	09/12/04	110	09/13/04
	10		Dimethoate (1X)	1	09/06/04	20	09/06/04
			Dimethoate (1X)	2	09/12/04	20	09/12/04
			Methyl Parathion (1X)	1	08/28/04	20	08/28/04
			Methyl Parathion (1X)	2	09/04/04	20	09/04/04
			Fenitrothion (1X)	1	09/12/04	110	09/13/04
	IA01 Soybean	12	Diquat (1X)	1	09/27/04	17.53	09/27/04
			Paraquat (1X)	1	09/18/04	22.9	09/18/04
		13	Diquat (5X)	1	09/27/04	17.53	09/27/04
Paraquat (5X)			1	09/18/04	22.9	09/18/04	
14			Dimethoate (5X)	1	09/06/04	27.7	09/06/04
			Dimethoate (5X)	2	09/12/04	27.9	09/12/04
			Methyl parathion (5X)	1	09/06/04	20	09/06/04
			Methyl parathion (5X)	2	09/13/04	20.1	09/13/04
			Fenitrothion (5X)	1	08/22/04	114.2	08/22/04
			Fenitrothion (5X)	2	08/29/04	114.3	08/29/04
			Fenitrothion (5X)	3	09/06/04	107	09/06/04
			Fenitrothion (5X)	4	09/12/04	113.1	09/12/04
15			Dimethoate (1X)	1	09/06/04	27.7	09/06/04
			Dimethoate (1X)	2	09/12/04	27.9	09/12/04
			Methyl parathion (1X)	1	09/06/04	20	09/06/04
			Methyl parathion (1X)	2	09/13/04	20.1	09/13/04
			Fenitrothion (1X)	1	08/22/04	114.2	08/22/04
			Fenitrothion (1X)	2	08/29/04	114.3	08/29/04
			Fenitrothion (1X)	3	09/06/04	113.1	09/06/04
			Fenitrothion (1X)	4	09/12/04	113.1	09/12/04

Table 8: Equipment Calibration and Application (Continued)

Site Code & Crop	Plot No.	Test Compound	App No.	Calibration Date	Calibrated GPA	Application Date
ND02 Wheat	17	Diquat (1X)	1	08/24/04	15	08/24/04
	18	Diquat (5X)	1	08/24/04	15	08/24/04
IA02 Soybean	20	Diquat (1X)	1	10/11/04	17.13	10/11/04
	21	Paraquat (1X)	1	10/02/04	22.17	10/02/04
	22	Diquat (5X)	1	10/11/04	17.13	10/11/04
	23	Paraquat (5X)	1	10/02/04	22.17	10/02/04

¹N/A = Not applicable.

Table 9: Application

Site Code	Plot	Test Compound	App No.	Equipment Type	Nozzle Type	Nozzle Tip No.	Nozzle No.	Spacing (in.)	Pressure Source	Approx. Pressure (psi)
AR01	2	Diquat (1X)	1	Backpack Sprayer	Flat Fan	TeeJet 9502	8	18	CO ₂	40
		Carbaryl (1X)	1	Backpack Sprayer	Flat Fan	TeeJet 9502	8	18	CO ₂	40
		Carbaryl (1X)	2	Backpack Sprayer	Flat Fan	TeeJet 9502	8	18	CO ₂	40
	3	Diquat (5X)	1	Backpack Sprayer	Flat Fan	TeeJet 9502	8	18	CO ₂	40
		Carbaryl (5X)	1	Backpack Sprayer	Flat Fan	TeeJet 9502	8	18	CO ₂	40
		Carbaryl (5X)	2	Backpack Sprayer	Flat Fan	TeeJet 9502	8	18	CO ₂	40
	4	Dimethoate (1X)	1	Backpack Sprayer	Flat Fan	TeeJet 9502	8	18	CO ₂	40
		Dimethoate (1X)	2	Backpack Sprayer	Flat Fan	TeeJet 9502	8	18	CO ₂	40
		Dimethoate (1X)	3	Backpack Sprayer	Flat Fan	TeeJet 9502	8	18	CO ₂	40
		Dimethoate (1X)	4	Backpack Sprayer	Flat Fan	TeeJet 9502	8	18	CO ₂	40
		Methyl parathion (1X)	1	Backpack Sprayer	Flat Fan	TeeJet 9502	8	18	CO ₂	40

Table 9: Application (Continued)

Site Code	Plot	Test Compound	App No.	Equipment Type	Nozzle Type	Nozzle Tip No.	Nozzle No.	Spacing (in.)	Pressure Source	Approx. Pressure (psi)	
AR01 (Continued)	4 (cont)	Methyl parathion (1X)	2	Backpack Sprayer	Flat Fan	TeeJet 9502	8	18	CO ₂	40	
		Fenitrothion (1X)	1	Backpack Sprayer	Flat Fan	TeeJet 9505	8	18	CO ₂	70	
		Fenitrothion (1X)	2	Backpack Sprayer	Flat Fan	TeeJet 9505	8	18	CO ₂	70	
		Fenitrothion (1X)	3	Backpack Sprayer	Flat Fan	TeeJet 9505	8	18	CO ₂	70	
	5	Dimethoate (5X)	1	Backpack Sprayer	Flat Fan	TeeJet 9502	8	18	18	CO ₂	40
		Dimethoate (5X)	2	Backpack Sprayer	Flat Fan	TeeJet 9502	8	18	18	CO ₂	40
		Dimethoate (5X)	3	Backpack Sprayer	Flat Fan	TeeJet 9502	8	18	18	CO ₂	40
		Dimethoate (5X)	4	Backpack Sprayer	Flat Fan	TeeJet 9502	8	18	18	CO ₂	40
		Methyl parathion (5X)	1	Backpack Sprayer	Flat Fan	TeeJet 9502	8	18	18	CO ₂	40
		Methyl parathion (5X)	2	Backpack Sprayer	Flat Fan	TeeJet 9502	8	18	18	CO ₂	40
		Fenitrothion (5X)	1	Backpack Sprayer	Flat Fan	TeeJet 9505	8	18	18	CO ₂	70

Table 9: Application (Continued)

Site Code	Plot	Test Compound	App No.	Equipment Type	Nozzle Type	Nozzle Tip No.	Nozzle No.	Spacing (in.)	Pressure Source	Approx. Pressure (psi)
AR01 (Continued)	5	Fenitrothion (5X)	2	Backpack Sprayer	Flat Fan	TeeJet 9505	8	18	CO ₂	70
	(cont)	Fenitrothion (5X)	3	Backpack Sprayer	Flat Fan	TeeJet 9505	8	18	CO ₂	70
ND01	7	Diquat (1X)	1	Tractor-Mounted	Air Induction	TeeJet A1 110015	12	20	Compress Air	38
	8	Diquat (5X)	1	Tractor-Mounted	Air Induction	TeeJet A1 110015	12	20	Compress Air	38
		Dimethoate (5X)	1	Tractor-Mounted	Air Induction	TeeJet A1 110015	12	20	Compress Air	38
		Dimethoate (5X)	2	Tractor-Mounted	Air Induction	TeeJet A1 110015	12	20	Compress Air	38
	9	Methyl parathion (5X)	1	Tractor-Mounted	Air Induction	TeeJet A1 110015	12	20	Compress Air	38
		Methyl parathion (5X)	2	Tractor-Mounted	Air Induction	TeeJet A1 110015	12	20	Compress Air	38
		Fenitrothion (5X)	1	Tractor-Mounted	Flat Fan	TeeJet 8006	12	20	PTO Pump	38
	10	Dimethoate (1X)	1	Tractor-Mounted	Air Induction	TeeJet A1 110015	12	20	Compress Air	38
		Dimethoate (1X)	2	Tractor-Mounted	Air Induction	TeeJet A1 110015	12	20	Compress Air	38

Table 9: Application (Continued)

Site Code	Plot	Test Compound	App No.	Equipment Type	Nozzle Type	Nozzle Tip No.	Nozzle No.	Spacing (in.)	Pressure Source	Approx. Pressure (psi)
ND01 (Continued)	10 (cont)	Methyl parathion (1X)	1	Tractor-Mounted	Air Induction	TeeJet AI 110015	12	20	Compress Air	38
		Methyl parathion (1X)	2	Tractor-Mounted	Air Induction	TeeJet AI 110015	12	20	Compress Air	38
		Fenitrothion (1X)	1	Tractor-Mounted	Flat Fan	TeeJet 8006	12	20	PTO Pump	38
IA01	12	Diquat (1X)	1	Tractor-Mounted	Flat Fan	TeeJet 8002	9	20	CO ₂	31
		Paraquat (1X)	1	Tractor-Mounted	Flat Fan	TeeJet 8002	9	20	CO ₂	30
	13	Diquat (5X)	1	Tractor-Mounted	Flat Fan	TeeJet 8002	9	20	CO ₂	31
		Paraquat (5X)	1	Tractor-Mounted	Flat Fan	TeeJet 8002	9	20	CO ₂	30
		Dimethoate (5X)	1	Tractor-Mounted	Flat Fan	TeeJet 8002	9	20	CO ₂	40
14	Dimethoate (5X)	2	Tractor-Mounted	Flat Fan	TeeJet 8002	9	20	CO ₂	40	
	Methyl parathion (5X)	1	Tractor-Mounted	Flat Fan	TeeJet 8002	9	20	CO ₂	40	
		Methyl parathion (5X)	2	Tractor-Mounted	Flat Fan	TeeJet 8002	9	20	CO ₂	40

Table 9: Application (Continued)

Site Code	Plot	Test Compound	App No.	Equipment Type	Nozzle Type	Nozzle Tip No.	Nozzle No.	Spacing (in.)	Pressure Source	Approx. Pressure (psi)
IA01 (Continued)	14 (cont)	Fenitrothion (5X)	1	Tractor Mounted	Flat Fan	Turbo T-Jet 06	9	20	Roller Pump	40
		Fenitrothion (5X)	2	Tractor Mounted	Flat Fan	Turbo T-Jet 06	9	20	Roller Pump	40
		Fenitrothion (5X)	3	Tractor Mounted	Flat Fan	Turbo T-Jet 06	9	20	Roller Pump	50
		Fenitrothion (5X)	4	Tractor Mounted	Flat Fan	Turbo T-Jet 06	9	20	Roller Pump	50
	15	Dimethoate (1X)	1	Tractor Mounted	Flat Fan	TeeJet 8002	9	20	CO ₂	40
		Dimethoate (1X)	2	Tractor Mounted	Flat Fan	TeeJet 8002	9	20	CO ₂	40
		Methyl parathion (1X)	1	Tractor Mounted	Flat Fan	TeeJet 8002	9	20	CO ₂	40
		Methyl parathion (1X)	2	Tractor Mounted	Flat Fan	TeeJet 8002	9	20	CO ₂	40
		Fenitrothion (1X)	1	Tractor Mounted	Flat Fan	Turbo T-Jet 06	9	20	Roller Pump	40
		Fenitrothion (1X)	2	Tractor Mounted	Flat Fan	Turbo T-Jet 06	9	20	Roller Pump	40
		Fenitrothion (1X)	3	Tractor Mounted	Flat Fan	Turbo T-Jet 06	9	20	Roller Pump	50
		Fenitrothion (1X)	4	Tractor Mounted	Flat Fan	Turbo T-Jet 06	9	20	Roller Pump	50

Table 9: Application (Continued)

Site Code	Plot	Test Compound	App No.	Equipment Type	Nozzle Type	Nozzle Tip No.	Nozzle No.	Spacing (in.)	Pressure Source	Approx. Pressure (psi)
ND02	17	Diquat (1X)	1	Backpack Sprayer	Flat Fan	TeelJet 80015 EVS	4	20	CO ₂	31
	18	Diquat (5X)	1	Backpack Sprayer	Flat Fan	TeelJet 80015 EVS	4	20	CO ₂	31
IA02	20	Diquat (1X)	1	Tractor-Mounted	Flat Fan	TeelJet 8002 VS	9	20	CO ₂	30
	21	Paraquat (1X)	1	Tractor-Mounted	Flat Fan	TeelJet 8002	9	20	CO ₂	30
	22	Diquat (5X)	1	Tractor-Mounted	Flat Fan	TeelJet 8002 VS	9	20	CO ₂	30
	23	Paraquat (5X)	1	Tractor-Mounted	Flat Fan	TeelJet 8002	9	20	CO ₂	30

Table 10: Product Rate Determination

Rice Site Code	Test Substance & Application Date	Plot	App. No.	Volume			Total Pass Time (sec)	Calibrated Spray Rate (mL/sec)	Spray Mix Applied To Plot (mL) ¹	Treated Area (Acres)	Spray Rate (GPA)	Rate		
				Test Substance (mL)	Carrier (mL)	Total Mixture (mL)						mL/A ³	Actual lb ai/A ⁸	% of Target ^{6,7}
AR01	Diquat 1X 09/26/04	2	1	33	2967	3000	27.24	93.1	2536.0	0.0275	24.4	1015.9	0.54 ⁴	100
AR01	Carbaryl 1X 09/10/04	2	1	93	2907	3000	27.16	93.1	2528.6	0.0275	24.3	2851.2	1.5 ⁵	100
AR01	Carbaryl 1X 09/17/04	2	2	92	2908	3000	27.34	93.3	2550.8	0.0275	24.5	2843.8	1.5 ⁵	100

¹Spray Mix Applied to Plot (mL) = Total Pass Times (sec) x Calibrated Spray Rate (mL/sec)

²Spray Rate (GPA) = $\frac{\text{Spray Mix Applied to Plot (mL)}}{3785 \text{ mL/gal}} \times \frac{1}{\text{Treated Area (acres)}}$

³Actual Rate mL/A = $\frac{\text{Test Substance in Spray Mixture (mL)}}{\text{Total Mixture Volume (mL)}} \times \text{Actual Spray Rate (GPA)} \times \frac{3785 \text{ mL}}{1 \text{ gal}}$

⁴Actual Rate lb ai/A = $\frac{\text{Actual Rate mL}}{\text{Acre}} \times \frac{2 \text{ lb ai}}{\text{gallon}} \times \frac{1 \text{ gallon}}{3785 \text{ mL}}$

⁵Actual Rate lb ai/A = $\frac{\text{Actual Rate mL}}{\text{Acre}} \times \frac{2 \text{ lb ai}^9}{\text{gallon}} \times \frac{1 \text{ gallon}}{3785 \text{ mL}}$

⁶Percent of Target = $\frac{\text{Actual Rate (lb ai/A)}}{\text{Target Rate (lb ai/A)}} \times 100$

⁷Rice, Diquat 1X rate = 0.54 lb ai/A
Rice, Carbaryl 1X rate = 1.5 lb ai/A

⁸To convert lb ai/A to kg ai/ha, multiply lbs ai/A x 1.121

⁹A 2 lb ai per gallon Carbaryl formulation was used rather than a 4 lb ai per gallon as suggested in the protocol.

Table 10: Product Rate Determination (Continued)

Rice Site Code	Test Substance & Application Date	Plot	App. No.	Volume			Total Pass Time (sec)	Calibrated Spray Rate (mL/sec)	Spray Mix Applied To Plot (mL) ¹	Treated Area (Acres)	Spray Rate (GPA) ²	Rate		
				Test Substance (mL)	Carrier (mL)	Total Mixture (mL)						mL/A ³	lb ai/A ⁴	% of Target ^{6,7}
AR01	Diquat 5X 09/26/04	3	1	166	2834	3000	27.11	93.1	2523.9	0.0275	24.2	5068.4	2.68 ⁴	100
AR01	Carbaryl 5X 09/10/04	3	1	463	2537	3000	27.19	93.1	2531.4	0.0275	24.3	14194.9	7.5 ⁵	100
AR01	Carbaryl 5X 09/17/04	3	2	461	2539	3000	27.21	93.3	2538.7	0.0275	24.4	14191.7	7.5 ⁵	100

¹Spray Mix Applied to Plot (mL) = Total Pass Times (sec) x Calibrated Spray Rate (mL/sec)

²Spray Rate (GPA) = $\frac{\text{Spray Mix Applied to Plot (mL)}}{3785 \text{ mL/gal}} \times \frac{1}{\text{Treated Area (acres)}}$

³Actual Rate mL/A = $\frac{\text{Test Substance in Spray Mixture (mL)}}{\text{Total Mixture Volume (mL)}} \times \text{Actual Spray Rate (GPA)} \times \frac{3785 \text{ mL}}{1 \text{ gal}}$

⁴Actual Rate lb ai/A = $\frac{\text{Actual Rate mL}}{\text{Acres}} \times \frac{2 \text{ lb ai}}{\text{gallon}} \times \frac{1 \text{ gallon}}{3785 \text{ mL}}$

⁵Actual Rate lb ai/A = $\frac{\text{Actual Rate mL}}{\text{Acres}} \times \frac{2 \text{ lb ai}^9}{\text{gallon}} \times \frac{1 \text{ gallon}}{3785 \text{ mL}}$

⁶Percent of Target = $\frac{\text{Actual Rate (lb ai/A)}}{\text{Target Rate (lb ai/A)}} \times 100$

⁷Rice, Diquat 5X rate = 2.68 lb ai/A
Rice, Carbaryl 5X rate = 7.5 lb ai/A

⁸To convert lb ai/A to kg ai/ha, multiply lbs ai/A x 1.121

⁹A 2 lb ai per gallon Carbaryl formulation was used rather than a 4 lb ai per gallon as suggested in the protocol.

Table 10: Product Rate Determination (Continued)

Rice Site Code	Test Substance & Application Date	App. No.	Plot	Volume			Total Pass Time (sec)	Calibrated Spray Rate (mL/sec)	Spray Mix Applied To Plot (mL) ¹	Treated Area (Acres)	Spray Rate (GPA) ²	Rate		% of Target ^{5,6}
				Test Substance (mL)	Carrier (mL)	Total Mixture (mL)						mL/A ³	lb ai/A ^{4,7}	
AR01	Dimethoate 1X 08/13/04	1	4	5.6	2994	3000	27.25	92.6	2523.4	0.0275	24.2	171.0	0.181	101
AR01	Dimethoate 1X 08/20/04	2	4	5.6	2994	3000	27.18	92.9	2525.0	0.0275	24.3	171.7	0.181	101
AR01	Dimethoate 1X 08/27/04	3	4	5.6	2994	3000	27.07	92.8	2512.1	0.0275	24.1	170.3	0.180	100
AR01	Dimethoate 1X 09/03/04	4	4	5.6	2994	3000	27.12	92.9	2519.4	0.0275	24.2	171.0	0.181	101

¹Spray Mix Applied to Plot (mL) = Total Pass Times (sec) x Calibrated Spray Rate (mL/sec)

²Spray Rate (GPA) = $\frac{\text{Spray Mix Applied to Plot (mL)}}{3785 \text{ mL/gal}} \times \frac{1}{\text{Treated Area (acres)}}$

³Actual Rate mL/A = $\frac{\text{Test Substance in Spray Mixture (mL)}}{\text{Total Mixture Volume (mL)}} \times \text{Actual Spray Rate (GPA)} \times \frac{3785 \text{ mL}}{1 \text{ gal}}$

⁴Actual Rate lb ai/A = $\frac{\text{Actual Rate mL}}{\text{Acres}} \times \frac{4 \text{ lb ai}}{\text{gallon}} \times \frac{1 \text{ gallon}}{3785 \text{ mL}}$

⁵Percent of Target = $\frac{\text{Actual Rate (lb ai/A)}}{\text{Target Rate (lb ai/A)}} \times 100$

⁶Rice, Dimethoate 1X rate = 0.18 lb ai/A

⁷To convert lb ai/A to kg ai/ha, multiply lbs ai/A x 1.121

Table 10: Product Rate Determination (Continued)

Rice Site Code	Test Substance & Application Date	Plot	App. No.	Volume			Total Pass Time (sec)	Calibrated Spray Rate (mL/sec)	Spray Mix Applied To Plot (mL) ¹	Treated Area (Acres)	Spray Rate (GPA) ²	Rate		
				Test Substance (mL)	Carrier (mL)	Total Mixture (mL)						mL/A ³	lb ai/A ^{4,7}	% of Target ^{5,6}
AR01	Methyl parathion IX 09/09/04	4	1	46	2954	3000	27.22	93.1	2534.2	0.0275	24.3	1410.3	0.75	100
AR01	Methyl parathion IX 09/16/04	4	2	46	2954	3000	27.23	93.2	2537.8	0.0275	24.4	1416.1	0.75	100

¹Spray Mix Applied to Plot (mL) = Total Pass Times (sec) x Calibrated Spray Rate (mL/sec)

²Spray Rate (GPA) = $\frac{\text{Spray Mix Applied to Plot (mL)}}{3785 \text{ mL/gal}} \times \frac{1}{\text{Treated Area (acres)}}$

³Actual Rate mL/A = $\frac{\text{Test Substance in Spray Mixture (mL)}}{\text{Total Mixture Volume (mL)}} \times \text{Actual Spray Rate (GPA)} \times \frac{3785 \text{ mL}}{1 \text{ gal}}$

⁴Actual Rate lb ai/A = $\frac{\text{Actual Rate mL}}{\text{Acres}} \times \frac{2 \text{ lb ai}^8}{\text{gallon}} \times \frac{1 \text{ gallon}}{3785 \text{ mL}}$

⁵Percent of Target = $\frac{\text{Actual Rate (lb ai/A)}}{\text{Target Rate (lb ai/A)}} \times 100$

⁶Rice, Methyl parathion 1X rate = 0.75 lb ai/A

⁷To convert lb ai/A to kg ai/ha, multiply lbs ai/A x 1.121

⁸A 2 lb ai per gallon Methyl parathion formulation was used rather than a 4 lb ai per gallon as suggested in the protocol.