FIELD EXPERIMENT HISTORY

Title: **Arlington Band Spray/Zone Tillage Trial** **Year: 1995**
Personnel: **N.C. Wollenhaupt, J.G. Lauer, A.H. Bosworth, K.D. Hudelson, K.G. Silveira**
Location: **Arlington Research Station, Arlington, WI**
Supported by: **Wisconsin Non-Point Project**

FIELD INFORMATION

Field:	220				
Soil Type:	Plano Silt Loam				
Soil Test Results:	Date: Nov 93	pH: 6.4	P(ppm): 21	K(ppm): 110	OM(%): 4.2
Fertilizer Applied:	100 lbs/a of 6-24-24 at planting				
Previous Crop:	Alfalfa				

EXPERIMENTAL PROCEDURE

Exp. Design: Two Factor RCB

Variables: Factor A: Two Tillage Operations
1-Zone Tillage (Oct. 19, 1994)
2-No Tillage

Factor B: Three Herbicide applications

1-Fall 15 " Band Spray	Roundup(2qt/a), Banvel(1pt/a), 2,4-D(1pt/a) on Oct 5
-w/ spring burndown	Bladex 90DF(2lbs/a) and Prowl(1.5qt/a) on May 12
2-Fall Broadcast Spray	Roundup(2qt/a), Banvel(1pt/a), 2,4-D(1pt/a) on Oct 5
-w/ spring burndown	Bladex 90DF(2lbs/a) and Prowl(1.5qt/a) on May 12
3-Spring Broadcast Spray	Roundup(1qt/a) and 2,4-D(1pt/a) on April 29
	Bladex 90DF(2lbs/a) and Prowl(1.5qt/a) on May 12

Plot Size: Planted: 20' x 40'
Harvested: 15' x 36'

Planting: Date: May 1
Row Spacing: 30"
Equipment: John Deere Max-Emerge
Depth: 2"
Rate: 32,000/a
Hybrid: Pioneer 3769

Harvesting: Date: October 1
Equipment: Gleaner Plot Combine

Results: Table E-52.

Table E-52. 1995 Band Spray/Zone Tillage Trial.
Arlington, WI

Tillage	Herbicide Treatment	Residue	Soil Loss 50yr Storm (72mm/hr)	Soil Moisture Gravimetric	Soil Moisture Volumetric	Soil Bulk Density	Grain Moisture	Grain Yield
		%	g/sq.m.	%	%	g/cc	%	bu/a
Notill		51.6	252.6	23.0	32.0	1.4	20.5	141.6
Zone Till		47.4	174.8	23.4	32.0	1.4	20.6	144.2
	Fall Band	49.8	127.8	23.4	32.1	1.4	20.5	145.2
	Fall Broadcast	21.0	500.8	21.9	29.8	1.4	20.5	148.0
	Spring Broadcast	77.7	12.5	24.3	34.1	1.4	20.6	135.4
Notill	Fall Band	55.8	127.4	22.8	32.0	1.4	20.3	144.4
Notill	Fall Broadcast	18.8	614.1	21.9	30.4	1.4	20.6	144.0
Notill	Spring Broadcast	80.2	16.3	24.3	33.6	1.4	20.6	136.2
Zone Till	Fall Band	43.8	128.2	24.0	32.3	1.4	20.8	145.9
Zone Till	Fall Broadcast	23.2	387.6	21.8	29.3	1.4	20.5	152.1
Zone Till	Spring Broadcast	75.2	8.6	24.3	34.6	1.4	20.7	134.6
Mean		49.5	213.7	23.2	32.0	1.4	20.6	142.9
Probability(%)								
Tillage (T)		15.7	24.7	> 50	> 50	> 50	34.3	> 50
Herbicide (H)		< 0.1	< 0.1	< 0.1	< 0.1	40.4	> 50	< 0.1
T x H		37.2	12.4	42.2	47.5	15.1	23.8	24.6
LSD(0.10)								
Tillage (T)		NS	NS	NS	NS	NS	NS	NS
Herbicide (H)		9.9	103.0	0.9	1.5	NS	NS	5.0
CV(%)		25.6	61.7	4.8	6.1	4.0	1.9	4.9

FIELD EXPERIMENT HISTORY

Title: **Lancaster Band Spray/Zone Tillage Trial** **Year: 1995**
Personnel: **N.C. Wollenhaupt, J.G. Lauer, A.H. Bosworth, T.M. Wood, K.D. Hudelson, K.G. Silveira**
Location: **Lancaster Research Station, Lancaster, WI**
Supported by: **Wisconsin Non-Point Project**

FIELD INFORMATION

Field no.: 112W	912				
Soil Type: Rozetta Silt Loam	Rozetta Silt loam				
Soil Test Results:	Date: NA	pH: NA	P(ppm): NA	K(ppm): NA	OM(%): NA
Fertilizer Applied:	100 lbs/a of 6-24-24 at planting				
Previous Crop:	Alfalfa				

EXPERIMENTAL PROCEDURE

Exp. Design: Two Factor Randomized Complete Block

Variables: Factor A: Two Tillage Operations
1-Zone Tillage on Oct. 27, 1994
2-No Tillage

Factor B: Three Herbicide applications

1-Fall 15 " Band Spray	Roundup(2qt/a), Banvel(1pt/a), 2,4-D(1pt/a)
-w/ spring burndown	Roundup(2qt/a) on 5/1, Dual(2.5pt/a) on 4/25 Banvel(1pt/a) on 5/26
2-Fall Broadcast Spray	Roundup(2qt/a), Banvel(1pt/a), 2,4-D(1pt/a)
-w/ spring burndown	Roundup(2qt/a) on 5/1, Dual(2.5pt/a) on 4/25 Banvel(1pt/a) on 5/26
3-Spring Broadcast Spray	Roundup(2qt/a) on 5/1, Dual(2.5pt/a) on 4/25 Banvel(1pt/a) on 5/26

Plot Size: Planted: 20' x 40'
Harvested: 15' x 36'

Planting: Date: May 2
Row Spacing: 30"
Equipment: John Deere Max-Emerge
Depth: 2"
Rate: 32,000/a
Hybrid: Pioneer 3769

Harvesting: Date: October 13
Equipment: Gleaner Plot Combine

Results: Table E-53.

Table E-53. 1995 Band Spray/Zone Tillage Trial. Lancaster, WI

Tillage	Herbicide Treatment	Residue	Soil Loss	Soil Moisture		Soil Bulk Density	Grain	
				Gravimetric	Volumetric		Moisture	Yield
		%	g/sq.m.	%	%	g/cc	%	bu/a
Notill		45.5	456.1	22.5	32.3	1.4	15.2	132.1
Zone Till		41.9	443.2	21.9	31.4	1.4	15.3	137.5
	Fall Band	40.4	329.1	22.3	31.5	1.4	15.3	140.4
	Fall Broadcast	22.7	886.1	22.2	31.7	1.4	15.2	139.6
	Spring Broadcast	68.0	133.8	22.2	32.3	1.5	15.2	124.5
Notill	Fall Band	42.6	333.9	22.4	31.7	1.4	15.3	142.2
Notill	Fall Broadcast	23.6	858.7	23.1	33.3	1.4	15.2	136.5
Notill	Spring Broadcast	70.2	175.6	22.1	32.0	1.5	15.2	117.6
Zone Till	Fall Band	38.2	324.2	22.2	31.3	1.4	15.4	138.5
Zone Till	Fall Broadcast	21.8	913.4	21.3	30.1	1.4	15.3	142.6
Zone Till	Spring Broadcast	65.8	92.0	22.3	32.7	1.5	15.2	131.3
Mean		43.7	449.6	22.2	31.8	1.4	15.3	134.8
Probability(%)								
Tillage (T)		18.0	> 50	23.0	21.3	> 50	40.3	40.2
Herbicide (H)		< 0.1	< 0.1	> 50	> 50	14.6	> 50	< 0.1
T x H		> 50	> 50	18.3	21.4	> 50	> 50	6.4
LSD(0.10)								
Tillage (T)		NS	NS	NS	NS	NS	NS	NS
Herbicide (H)		3.6	150.9	NS	NS	NS	NS	6.0
CV(%)		10.6	43.0	5.4	7.5	3.4	1.4	5.7

FIELD EXPERIMENT HISTORY

Title: **Fond Du Lac Band Spray/Zone Tillage Trial** **Year: 1995**
Personnel: **N.C. Wollenhaupt, J.G. Lauer, A.H. Bosworth, M.C. Rankin, K.D. Hudelson, K.G. Silveira**
Location: **Francis & Oscar Guelig Farm - Malone, WI**
Supported by: **Wisconsin Non-Point Project**

FIELD INFORMATION

Soil Type:	Dodge Silt Loam				
Soil Test Results:	Date: NA	pH: NA	P(ppm): NA	K(ppm): NA	OM(%): NA
Fertilizer Applied:	100 lbs/a of 6-24-24 at planting				
Previous Crop:	Alfalfa				

EXPERIMENTAL PROCEDURE

Exp. Design: RCB

Variables: Factor A: Two Tillage Operations
1-Zone Tillage on Oct. 20, 1994
2-No Tillage

Factor B: Three Herbicide applications

1-Fall 15 " Band Spray	Roundup(2qt/a), Banvel(1pt/a), 2,4-D(1pt/a)
-w/ spring burndown	Roundup(2qt/a), Banvel(2pt/a) and Crop Oil(1pt/a) on May 6, 1994
2-Fall Broadcast Spray	Roundup(2qt/a), Banvel(1pt/a), 2,4-D(1pt/a)
-w/ spring burndown	Roundup(2qt/a), Banvel(2pt/a) and Crop Oil(1pt/a) on May 6, 1994
3-Spring Broadcast Spray	Roundup(2qt/a), Banvel(2pt/a) and Crop Oil(1pt/a) on May 6, 1994

Plot Size: Planted: 10' x 40'
Harvested: 5' x 36'

Planting: Date: May 19
Row Spacing: 30"
Equipment: John Deere Max-Emerge
Depth: 2"
Rate: 32,000/a
Hybrid: Pioneer 3861

Harvesting: Date: October 18
Equipment: Gleaner Plot Combine

Results: Table E-54.

Table E-54. 1995 Band Spray/Zone Tillage Trial.
Fond du Lac, WI

Tillage	Herbicide Treatment	Residue	Grain Moisture	Grain Yield
		%	%	bu/a
Notill		87.1	20.3	128.2
Zone Till		59.6	20.1	128.7
	Fall Band	71.4	20.3	127.6
	Fall Broadcast	64.6	19.9	137.5
	Spring Broadcast	84.0	20.3	120.3
Notill	Fall Band	84.9	20.4	129.0
Notill	Fall Broadcast	80.5	20.0	139.3
Notill	Spring Broadcast	95.8	20.4	116.3
Zone Till	Fall Band	57.9	20.2	126.1
Zone Till	Fall Broadcast	48.8	19.8	135.7
Zone Till	Spring Broadcast	72.2	20.3	124.2
Mean		73.4	20.2	128.4
Probability(%)				
Tillage (T)		< 0.1	17.2	> 50
Herbicide (H)		< 0.1	0.2	1.7
T x H		34.3	> 50	> 50
LSD(0.10)				
Tillage (T)		3.6	NS	NS
Herbicide (H)		4.7	0.2	9.4
CV(%)		9.1	1.3	10.4

FIELD EXPERIMENT HISTORY

Title: **Chippewa Band Spray/Zone Tillage Trial** **Year: 1995**
Personnel: **N.C. Wollenhaupt, J.G. Lauer, F.D. Thompson, K.D. hudelson, K.G. Silveira**
Location: **Chippewa County Farm, Chippewa Falls, WI**
Supported by: **Wisconsin Non-Point Project**

FIELD INFORMATION

Soil Type:	Sattre Loam				
Soil Test Results:	Date: October 1993	pH: 6.2	P(ppm): 18	K(ppm): 90	OM(%): 2.2
Fertilizer Applied:	Fertilizer Applied: 100 lbs/a of 6-24-24 at planting				
Previous Crop:	Alfalfa				

EXPERIMENTAL PROCEDURE

Exp. Design: Two Factor RCB

Variables: Factor A: Two Tillage Operations
1-Zone Tillage on Oct. 21, 1994
2-No Tillage

Factor B: Three Herbicide applications

1-Fall 15 " Band Spray	Roundup(2qt/a), Banvel(1pt/a), 2,4-D(1pt/a)
-w/ spring burndown	Roundup(2qt/a), Banvel(1pt/a), LV400(1pt/a), and 1% Aquagene on May 3
2-Fall Broadcast Spray	Roundup(2qt/a), Banvel(1pt/a), 2,4-D(1pt/a)
-w/ spring burndown	Roundup(2qt/a), Banvel(1pt/a), LV400(1pt/a), and 1% Aquagene on May 3
3-Spring Broadcast Spray	Roundup(2qt/a), Banvel(1pt/a), LV400(1pt/a), and 1% Aquagene on May 3

Plot Size: Planted: 10' x 40'
Harvested: 5' x 36'

Planting: Date: April 28
Row Spacing: 30"
Equipment: John Deere Max-Emerge
Depth: 2"
Rate: 32,000/a
Hybrid: Pioneer 3861

Harvesting: Date: Oct. 11
Equipment: Gleaner Plot Combine

Results: Table E-55.

Table E-55. 1995 Band Spray/Zone Tillage Trial.
Chippewa Falls, WI

Tillage	Herbicide Treatment	Residue	Grain Moisture	Grain Yield
		%	%	bu/a
Notill		74.5	23.9	111.2
Zone Till		65.7	23.5	107.0
	Fall Band	62.4	23.6	103.8
	Fall Broadcast	65.8	23.2	107.8
	Spring Broadcast	81.9	24.2	115.7
Notill	Fall Band	66.6	24.0	108.5
Notill	Fall Broadcast	68.2	23.2	111.9
Notill	Spring Broadcast	88.6	24.6	113.2
Zone Till	Fall Band	58.2	23.3	99.0
Zone Till	Fall Broadcast	63.5	23.2	103.8
Zone Till	Spring Broadcast	75.3	23.9	118.2
Mean		70.1	23.7	109.1
Probability(%)				
Tillage (T)		2.1	11.3	> 50
Herbicide (H)		< 0.1	5.2	32.9
T x H		> 50	> 50	> 50
LSD(0.10)				
Tillage (T)		5.4	NS	NS
Herbicide (H)		7.0	0.7	NS
CV(%)		14.1	4.1	17.8