

The Ohio State University

Influence of Impact Programs on Weed Control and Yield of Field Corn

Trial ID: 14POC1
Protocol ID: 14POC1
Project ID: 14C04H060XOH500

Location: Trial Year: 2014
Investigator: Dr. Mark M. Loux
Study Director:
Sponsor Contact: Joe Argentine, AMVAC

General Trial Information

Investigator: Dr. Mark M. Loux

Trial Location

City: South Charleston Country: USA United States
State/Prov.: Ohio
Postal Code: 45368 Climate Zone: US Warm Continental

Latitude of LL Corner °: 39.86018 N
Longitude of LL Corner °: 83.67047 W

Investigator: Dr. Mark M. Loux

Crop Description

Crop 1: ZEAMX Zea mays
Variety: Dekalb DKC 60-67 RIB
Description: RR/LL

Corn

Planting Rate, Unit: 32097 S/A
Depth, Unit: 1.75 IN
Row Spacing, Unit: 30 IN

Planting Date: Apr-26-2014
Planting Method: PLANTD planted
Planting Equipment: FPP Finger Pickup Planter
Emergence Date: May-12-2014
Harvest Date: Sep-30-2014
Harvested Width, Unit: 5 FT
Harvested Length, Unit: 40 FT
Harvest Equipment: Massey Ferguson 8 XP
% Standard Moisture: 15.5
Moisture Meter: Harvest Master
Weighing Equipment: Harvest Master

Soil Temperature, Unit: 56 F
Soil Moisture: NORMAL normal, adequate
Seed Bed: MEDIUM medium

Pest Description

- Pest 1 Type: W Code: SETFA Setaria faberi
Common Name: Giant foxtail
- Pest 2 Type: W Code: AMBTR Ambrosia trifida
Common Name: Giant ragweed
- Pest 3 Type: W Code: CHEAL Chenopodium album
Common Name: Common lambsquarters
- Pest 4 Type: W Code: ABUTH Abutilon theophrasti
Common Name: velvetleaf
- Pest 5 Type: W Code: POLPY Persicaria pensylvanica
Common Name: Pennsylvania smartweed
- Pest 6 Type: W Code: AMARE Amaranthus retroflexus
Common Name: Redroot pigweed

Site and Design

Treated Plot Width: 6.67 FT
Treated Plot Length: 40 FT
Treated Plot Area: 266.8 FT2
Replications: 4
Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOB L Randomized Complete Block (RCB)

No. Previous Crop Year
1. Soybean 2013

Soil Description

Description Name: F-7 East
% OM: 2 Texture: SIC silty clay
pH: 6.9 Soil Name: Crosby
CEC: 14 Fert. Level: G good
Soil Drainage: G good

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Application Equipment

Appl. Equipment: 10' AI XR
Equipment Type: SPRBAC
Operation Pressure, Unit: 46 PSI
Nozzle Type: AI XR
Nozzle Size: 110015
Nozzle Spacing, Unit: 18 IN
Boom Length, Unit: 10 FT
Boom Height, Unit: 20 IN
Ground Speed, Unit: 3 MPH
Carrier: WATER
Spray Volume, Unit: 15 GPA
Mix Size, Unit: 3 Liters
Propellant: CO2

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Pest Type				
Pest Code				
Pest Scientific Name				
Pest Name				
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX
BBCH Scale	BCOR	BCOR	BCOR	BCOR
Crop Scientific Name	Zea mays	Zea mays	Zea mays	Zea mays
Crop Name	Corn	Corn	Corn	Corn
Rating Date	Sep-30-2014	Sep-30-2014	Sep-30-2014	Sep-30-2014
Rating Type	WEIGHT	MOICON	YIELD	WEITES
Rating Unit	LBS	%	BU	LBS
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	123 123	123 123	123 123	123 123
Trt-Eval Interval	123 DA-A	123 DA-A	123 DA-A	123 DA-A
Plant-Eval Interval	157 DP-1	157 DP-1	157 DP-1	157 DP-1
Days After Emergence	141 DE-1	141 DE-1	141 DE-1	141 DE-1
ARM Action Codes	ET1		ET1 TY1	
Number of Decimals	1	1	1	1

Trt No.	Treatment Name	Other Rate	Other Unit	Appl Code	Appl Description	Plot	34	35	36	37
1	UTC					101	37.3	18.3	140.2	54.9
						205	29.6	21.5	106.9	54.9
						304	40.6	19.7	150.2	56.1
						406	36.8	18.5	137.9	56.2
					Mean =		36.1	19.5	133.8	55.5
2	Impact	0.75 oz/a	A	POST		102	66.4	19.6	245.6	58.3
	Roundup PowerMax	22 oz/a	A	POST		203	66.3	18.6	248.5	58.8
	Atrazine	1 qt/a	A	POST		307	60.1	18.1	226.6	54.6
	MSO	0.6 qt/a	A	POST		408	62.4	20.8	227.5	53.1
	N PAK AMS	1.5 qt/a	A	POST						
					Mean =		63.8	19.3	237.0	56.2
3	Impact	1 oz/a	A	POST		103	65.9	19.7	243.6	54.0
	Roundup PowerMax	22 oz/a	A	POST		202	66.7	19.6	246.8	58.4
	Atrazine	1 qt/a	A	POST		306	66.1	19.7	244.2	54.3
	MSO	0.3 qt/a	A	POST		407	66.2	21.2	240.1	53.2
	N PAK AMS	1.5 qt/a	A	POST						
					Mean =		66.2	20.1	243.7	55.0
4	Impact	0.75 oz/a	A	POST		104	66.8	20.0	245.8	54.1
	Roundup PowerMax	22 oz/a	A	POST		208	62.6	19.1	233.1	53.8
	Atrazine	1 qt/a	A	POST		301	64.7	18.0	244.2	60.0
	Warrant	3 pt/a	A	POST		402	64.4	20.3	236.2	57.3
	MSO	0.3 qt/a	A	POST						
	N PAK AMS	1.5 qt/a	A	POST						
					Mean =		64.6	19.4	239.8	56.3
5	Impact	0.75 oz/a	A	POST		105	66.4	23.3	234.5	52.4
	Sequence	2.5 pt/a	A	POST		201	64.6	19.2	240.1	58.8
	Atrazine	1 qt/a	A	POST		302	65.5	19.6	242.4	58.5
	NIS	4.8 oz/a	A	POST		403	64.8	19.1	241.3	54.6
	N PAK AMS	1.5 qt/a	A	POST						
					Mean =		65.3	20.3	239.6	56.1
6	Halex GT	3.6 pt/a	A	POST		106	62.8	21.4	227.0	52.8
	AAtrex	1 qt/a	A	POST		207	61.0	21.1	221.6	52.5
	NIS	4.8 oz/a	A	POST		303	65.7	18.8	245.5	59.5
	N PAK AMS	1.5 qt/a	A	POST		405	63.4	19.9	233.6	54.3
					Mean =		63.2	20.3	231.9	54.8
7	Impact	0.75 oz/a	A	POST		107	64.1	22.2	229.7	52.1
	Roundup PowerMax	22 oz/a	A	POST		204	67.2	19.2	249.7	55.5
	Atrazine	1 qt/a	A	POST		305	65.2	17.1	248.8	56.3
	Zidua	2 oz/a	A	POST		401	66.8	19.4	247.7	58.5
	MSO	0.3 qt/a	A	POST						
	N PAK AMS	1.5 qt/a	A	POST						
					Mean =		65.8	19.5	244.0	55.6

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Rating Date	Sep-30-201	Sep-30-201	Sep-30-201	Sep-30-201
	4	4	4	4
Rating Type	WEIGHT	MOICON	YIELD	WEITES
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2	Roundup PowerMax	22 oz/a		A	POST				
2	Atrazine	1 qt/a		A	POST				
2	MSO	0.6 qt/a		A	POST				
2	N PAK AMS	1.5 qt/a		A	POST				
3	Impact	1 oz/a		A	POST	66.2 a	20.1 a	243.7 a	55.0 a
3	Roundup PowerMax	22 oz/a		A	POST				
3	Atrazine	1 qt/a		A	POST				
3	MSO	0.3 qt/a		A	POST				
3	N PAK AMS	1.5 qt/a		A	POST				
4	Impact	0.75 oz/a		A	POST	64.6 a	19.4 a	239.8 a	56.3 a
4	Roundup PowerMax	22 oz/a		A	POST				
4	Atrazine	1 qt/a		A	POST				
4	Warrant	3 pt/a		A	POST				
4	MSO	0.3 qt/a		A	POST				
4	N PAK AMS	1.5 qt/a		A	POST				
5	Impact	0.75 oz/a		A	POST	65.3 a	20.3 a	239.6 a	56.1 a
5	Sequence	2.5 pt/a		A	POST				
5	Atrazine	1 qt/a		A	POST				
5	NIS	4.8 oz/a		A	POST				
5	N PAK AMS	1.5 qt/a		A	POST				
6	Halex GT	3.6 pt/a		A	POST	63.2 a	20.3 a	231.9 a	54.8 a
6	AAtrex	1 qt/a		A	POST				
6	NIS	4.8 oz/a		A	POST				
6	N PAK AMS	1.5 qt/a		A	POST				
7	Impact	0.75 oz/a		A	POST	65.8 a	19.5 a	244.0 a	55.6 a
7	Roundup PowerMax	22 oz/a		A	POST				
7	Atrazine	1 qt/a		A	POST				
7	Zidua	2 oz/a		A	POST				
7	MSO	0.3 qt/a		A	POST				
7	N PAK AMS	1.5 qt/a		A	POST				

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

