

Ohio State University Horticulture and Crop Science

Corn Take Out Study

Title No. 2:
Trial ID: 10LateCorn1 Protocol ID: 10LateCorn1
Location: Western Branch Study Director: Anthony F. Dobbels
Project ID: Investigator: Dr. Mark M. Loux
Sponsor Contact: Dr. Peter Thomison

General Trial Information

Study Director: Anthony F. Dobbels **Title:** Research Specialist
Investigator: Dr. Mark M. Loux **Title:** Professor

Trial Location

City: South Charleston **Latitude of LL Corner °:** 39.85929 N
State/Prov.: Ohio **Longitude of LL Corner °:** 83.66934 W
Postal Code: 45368 **Altitude of LL Corner, Unit:** 1086.00 FT
Country: USA

Personnel

Study Director: Anthony F. Dobbels **Title:** Research Specialist
Affiliation: The Ohio State University
Address: 7721 South Charleston Pike
Location: South Charleston OH
Postal Code: 45368 **E-mail:** dobbels.1@osu.edu
Investigator: Dr. Mark M. Loux **Title:** Professor
Affiliation: The Ohio State University
Address: 222 Kottman Hall, 2021 Coffey Road
Location: Columbus OH
Postal Code: 43210 **E-mail:** loux.1@osu.edu

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: Dekalb 61-19
BBCH Scale: BCOR
Planting Method: ESTABL established
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN
Seed Bed: MEDIUM medium
Soil Moisture: NORMAL normal
Description: RR
Planting Date: 4/20/10
Rate, Unit: 32097 S/A
Soil Temperature, Unit: 58 F
Emergence Date: 5/3/10

Crop 2: ZEAMX Zea mays Corn
Variety: Dekalb 61-19RR/Dekalb 61-70
BBCH Scale: BCOR
Planting Method: ESTABL established
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN
Seed Bed: MEDIUM medium
Soil Moisture: NORMAL normal
Description: 50/50 Blend
Planting Date: 4/20/10
Rate, Unit: 32097 S/A
Emergence Date: 5/3/10

Crop 3: ZEAMX Zea mays Corn
Variety: Dekalb 61-19RR/Dekalb 61-70
BBCH Scale: BCOR
Planting Method: ESTABL established
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN
Seed Bed: MEDIUM medium
Soil Moisture: NORMAL normal
Description: 25/75 Blend
Planting Date: 4/20/10
Rate, Unit: 32097 S/A
Emergence Date: 5/3/10

Crop 4: ZEAMX Zea mays Corn
Variety: Seed Consultants SC 11AQ07
BBCH Scale: BCOR
Planting Method: SEEDED seeded
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN
Seed Bed: SMOOTH smooth
Soil Moisture: NORMAL normal
Harvest Date: 10/19/10
Harvested Width, Unit: 5 FT
% Standard Moisture: 15.5
Weighing Equipment: HARVEST MASTER 401
Description: RR/LL
Planting Date: 5/26/10
Rate, Unit: 32097 S/A
Harvest Equipment: MASSEY 8 XP
Harvested Length, Unit: 40 FT
Moisture Meter: HARVEST MASTER

Site and Design

Plot Width, Unit: 10 FT
Plot Length, Unit: 40 FT
Plot Area, Unit: 400 FT²
Replications: 4 **Study Design:** RACOB L Randomized Complete Block (RCB)

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Maintenance

No.	Date	Maintenance Treatment Name	Rate	Tank Unit	Mix
1.	4/21/10	LEXAR	3.5	QT/A	no
2.	6/11/10	Roundup Powermax	22	OZ/A	yes
3.	6/11/10	Status	2.5	OZ/A	yes

Soil Description

Description Name: E-2
 % OM: 2.7
 pH: 6.1
 CEC: 22
 Texture: SICL silty clay loam
 Soil Name: Kokomo
 Fert. Level: G good
 Soil Drainage: G good

Application Description

	A	B	C	D
Application Date:	5/16/10	5/25/10	5/28/10	6/17/10
Time of Day:	8:30 A.M.	9:00 A.M.	8:00 A.M.	8:00 AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	6 DB4PL	PRE	2 DAPL	3WKAP
Application Placement:	BROFO	BROFO	BROFO	BROFO
Applied By:	Dobbels	Dobbels	Dobbels	Dobbels
Air Temperature, Unit:	56 F	69 F	70 F	75 F
% Relative Humidity:	73	79	81	72
Wind Velocity, Unit:	6 MPH	7 MPH	2 MPH	1 MPH
Wind Direction:	NE	E	NE	NW
Dew Presence (Y/N):	N no	N no	Y yes	Y yes
Soil Temperature, Unit:	59 F	64 F	68 F	70 F
Soil Moisture:	NORMAL	NORMAL	NORMAL	WET
% Cloud Cover:	100	40	100	0
Next Rain Occurred On:	5/17/10	6/2/10	6/2/10	

Crop Stage At Each Application

	A		B		C		D	
Crop 1 Code, BBCH Scale:	ZEAMX	BCOR	ZEAMX	BCOR	ZEAMX	BCOR	ZEAMX	BCOR
Stage Scale Used:	BBCH		BBCH		BBCH		BBCH	
Stage Majority, Percent:	12	100	15	100	15	100	17	100
Height, Unit:	5	IN	9	IN	12	IN	10	IN
Height Minimum, Maximum:	5	5	8	10	11	12	8	12
Crop 2 Code, BBCH Scale:	ZEAMX	BCOR	ZEAMX	BCOR	ZEAMX	BCOR	ZEAMX	BCOR
Stage Scale Used:	BBCH		BBCH		BBCH		BBCH	
Stage Majority, Percent:	12	100	15	100	15	100	19	100
Height, Unit:	5	IN	9	IN	12	IN	34	IN
Height Minimum, Maximum:	5	5	8		11		32	36
Crop 3 Code, BBCH Scale:	ZEAMX	BCOR	ZEAMX	BCOR	ZEAMX	BCOR	ZEAMX	BCOR
Stage Scale Used:	BBCH		BBCH		BBCH		BBCH	
Stage Majority, Percent:	12	100	15	100	15	100	19	100
Height, Unit:	5	IN	9	IN	12	IN	34	IN
Height Minimum, Maximum:	5	5	8		11		32	36
Crop 4 Code, BBCH Scale:	ZEAMX	BCOR	ZEAMX	BCOR	ZEAMX	BCOR	ZEAMX	BCOR
Stage Scale Used:					BBCH		BBCH	
Stage Majority, Percent:					13	100	16	100
Height, Unit:					4	in	15	IN
Height Minimum, Maximum:					4	5	14	16

Application Equipment

	A	B	C	D
Appl. Equipment:	BACKPACK	BACKPACK	BACKPACK	BACKPACK
Equipment Type:	SPRBAC	SPRBAC	SPRBAC	SPRBAC
Operating Pressure, Unit:	53 PSI	53 PSI	53 PSI	53 PSI
Nozzle Type:	TEEJET DG	TEEJET DG	TEEJET DG	TEEJET DG
Nozzle Size:	11002	11002	11002	11002
Nozzle Spacing, Unit:	18 IN	18 IN	18 IN	18 IN
Boom Length, Unit:	10 FT	10 FT	10 FT	10 FT
Boom Height, Unit:	20 IN	20 IN	20 IN	20 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH	3 MPH
Carrier:	WATER	WATER	WATER	WATER
Spray Volume, Unit:	20 GPA	20 GPA	20 GPA	20 GPA
Mix Size, Unit:	3 Liters	3 Liters	3 Liters	3 Liters
Propellant:	CO2	CO2	CO2	CO2

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Crop Code	ZEAMX			ZEAMX			ZEAMX		
Rating Date	10/19/10			10/19/10			10/19/10		
Rating Type	YIELD			MOICON			YIELD		
Rating Unit	LBS			%			BU		
Plant-Eval Interval	182 DP-1			182 DP-1			182 DP-1		
Days After Emergence	169 DE			169 DE			169 DE		
Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate Unit	Appl Code	7	8	9	
1	Gramoxone Inteon	2	1 pt/a		B	57.7 ab	12.9 e	231.4 ab	
1	Superb HC	100	0.4 qt/a		B				
2	Select Max	1	8 oz/a		A	62.2 a	15.7 b	241.6 a	
2	Roundup PowerMax	4.5	22 oz/a		A				
2	N-PAK AMS	100	4 qt/a		A				
3	Gramoxone Inteon	2	40 oz/a		B	62.1 a	17.5 a	235.7 ab	
3	Sencor DF	75	3 oz/a		B				
3	Superb HC	100	0.4 qt/a		B				
4	Ignite	2.34	22 oz/a		B	58.7 ab	15.1 bcd	229.4 ab	
4	N-PAK AMS	100	4 qt/a		B				
5	Ignite	2.34	22 oz/a		B	61.2 a	16.1 b	236.2 ab	
5	N-PAK AMS	100	4 qt/a		B				
5	Ignite	2.34	22 oz/a		D				
5	N-PAK AMS	100	4 qt/a		D				
6	Roundup PowerMax	4.5	22 oz/a		B	54.2 bc	13.2 e	216.8 bc	
6	N-PAK AMS	100	4 qt/a		B				
6	50/50								
7	Roundup PowerMax	4.5	22 oz/a		B	58.0 ab	14.2 cde	229.2 ab	
7	N-PAK AMS	100	4 qt/a		B				
7	Gramoxone Inteon	2	1 pt/a		C				
7	Superb HC	100	0.4 qt/a		C				
7	50/50								
8	Roundup PowerMax	4.5	22 oz/a		B	47.9 d	15.8 b	185.4 d	
8	N-PAK AMS	100	4 qt/a		B				
8	Ignite	2.34	22 oz/a		D				
8	N-PAK AMS	100	4 qt/a		D				
8	50/50								
9	Roundup PowerMax	4.5	22 oz/a		B	52.4 cd	13.8 de	208.0 c	
9	N-PAK AMS	100	4 qt/a		B				
9	25/75								
10	Roundup PowerMax	4.5	22 oz/a		B	59.7 a	15.2 bc	233.3 ab	
10	N-PAK AMS	100	4 qt/a		B				
10	Gramoxone Inteon	2	1 pt/a		C				
10	Superb HC	100	0.4 qt/a		C				
10	25/75								
11	Roundup PowerMax	4.5	22 oz/a		B	52.4 cd	14.9 bcd	205.4 cd	
11	N-PAK AMS	100	4 qt/a		B				
11	Ignite	2.34	22 oz/a		D				
11	N-PAK AMS	100	4 qt/a		D				
11	25/75								
LSD (P=.05)						5.00	1.37	20.03	
Standard Deviation						3.46	0.95	13.87	
CV						6.08	6.34	6.22	
Bartlett's X2						7.108	14.888	6.606	
P(Bartlett's X2)						0.715	0.136	0.762	
Replicate F						1.133	0.080	1.082	
Replicate Prob(F)						0.3516	0.9703	0.3717	
Treatment F						7.203	8.415	6.077	
Treatment Prob(F)						0.0001	0.0001	0.0001	

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.

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Crop Code

ZEAMX, BCOR, Zea mays, = US

Rating Type

YIELD = yield

MOICON = moisture content

Rating Unit

% = percent

BU = bushel

Plant-Eval Interval

182 DP-1 = 1 4/20/10

ARM Action Codes

TY1 = $3.889286 \cdot 7 \cdot (100-8)/84.5$