

# 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 FT<sup>2</sup>  
**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											
Rating Date	6/10/10	6/10/10	6/24/10	6/24/10	6/24/10	7/8/10						
Rating Type	Phyto		kill new phyto	old kill	new kill	NEW KILL						
Rating Unit												
Plant-Eval Interval	51 DP-1	51 DP-1	65 DP-1	65 DP-1	65 DP-1	79 DP-1						
Days After Emergence	38 DE-	38 DE-	52 DE-	52 DE-	52 DE-	66 DE-						
Crop Variety	61-19	61-19	61-19	61-19	61-19	61-19						
Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate	Appl Unit	Code	1	2	3	4	5	6
1	Gramoxone Inteon	2	1 pt/a		B		52.5	5.0	0.0	16.3	0.0	0.0
1	Superb HC	100	0.4 qt/a		B							
2	Select Max	1	8 oz/a		A		0.0	100.0	0.0	100.0	0.0	0.0
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		45.0	99.5	0.0	100.0	0.0	0.0
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		73.8	51.3	0.0	51.3	0.0	0.0
4	N-PAK AMS	100	4 qt/a		B							
5	Ignite	2.34	22 oz/a		B		77.5	48.8	83.8	73.8	0.0	98.8
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		97.3	36.3	0.0	20.0	0.0	0.0
6	N-PAK AMS	100	4 qt/a		B							
6	50/50											
7	Roundup PowerMax	4.5	22 oz/a		B		53.8	28.8	0.0	36.3	0.0	0.0
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		97.3	37.5	73.8	17.5	0.0	91.3
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		98.0	68.8	0.0	57.5	0.0	0.0
9	N-PAK AMS	100	4 qt/a		B							
9	25/75											
10	Roundup PowerMax	4.5	22 oz/a		B		67.5	62.5	0.0	77.5	0.0	0.0
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		98.0	70.0	77.5	48.8	0.0	85.0
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)							22.93	16.36	7.88	20.36	0.00	6.26
Standard Deviation							15.88	11.33	5.46	14.10	0.00	4.34
CV							22.97	20.49	25.56	25.91	0.0	17.36
Bartlett's X2							73.375	19.464	6.009	30.851	0.0	5.112
P(Bartlett's X2)							0.001*	0.022*	0.05*	0.001*	.	0.078
Replicate F							1.225	5.042	0.762	1.427	0.000	2.173
Replicate Prob(F)							0.3179	0.0060	0.5241	0.2542	1.0000	0.1119
Treatment F							14.623	26.086	180.324	19.000	0.000	391.551
Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001	1.0000	0.0001

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### Crop Code

ZEAMX, BCOR, Zea mays, = US

### Plant-Eval Interval

51 DP-1 = 1 4/20/10

65 DP-1 = 1 4/20/10

79 DP-1 = 1 4/20/10