

# The Ohio State University

Trial ID: 24\_BAYERSHORTCORN-OSU  
 Protocol ID: Location: Trial Year: 2024  
 Study Director: Erin Burns Sponsor Contact: Devin Hammer  
 Investigator: Alyssa Essman

## Crop Description

Crop 1: C ZEAMD Zea mays indentata Dent corn  
 Entry Date: Apr-30-2024 Stage Scale: BBCH  
 Variety: DKC64-22RIB  
 Attributes: VT2PRIB  
 Seed Shape: AF2 Seed Size: 1683 S/LB  
 Planting Date: Apr-28-2024 Planting Rate: 32000 S/A  
 Depth: 2.25 IN  
 Rows per Plot: 4 Planting Method: PLANTD planted  
 Row Spacing: 30 IN Planting Equipment: FPP finger pickup planter  
 Seed Bed: SMOOTH smooth  
 Soil Temperature: 74 F Soil Moisture: DRY dry  
 Emergence Date: May-4-2024

Crop 2: C ZEAMD Zea mays indentata Dent corn  
 Entry Date: Apr-30-2024 Stage Scale: BBCH  
 Variety: PR111-20SSC  
 Attributes: VT2PRIB  
 Seed Shape: LR Seed Size: 1311 S/LB  
 Planting Date: Apr-28-2024 Planting Rate: 32000 S/A  
 Depth: 2.25 IN  
 Rows per Plot: 4 Planting Method: PLANTD planted  
 Row Spacing: 30 IN Planting Equipment: FPP finger pickup planter  
 Seed Bed: SMOOTH smooth  
 Soil Temperature: 74 F Soil Moisture: DRY dry  
 Emergence Date: May-4-2024

Crop 3: C ZEAMD Zea mays indentata Dent corn  
 Entry Date: Apr-30-2024 Stage Scale: BBCH  
 Variety: PR111-20SSC  
 Attributes: VT2PRIB  
 Seed Shape: LR Seed Size: 1311 S/LB  
 Planting Date: Apr-28-2024 Planting Rate: 40000 S/A  
 Depth: 2.25 IN  
 Rows per Plot: 4 Planting Method: PLANTD planted  
 Row Spacing: 30 IN Planting Equipment: FPP finger pickup planter  
 Seed Bed: SMOOTH smooth  
 Soil Temperature: 74 F Soil Moisture: DRY dry  
 Emergence Date: May-4-2024

Crop 4: C ZEAMD Zea mays indentata Dent corn  
 Entry Date: Apr-30-2024 Stage Scale: BBCH  
 Variety: PR112-20SSC  
 Attributes: VT2PRIB  
 Seed Shape: LR Seed Size: 1396 S/LB  
 Planting Date: Apr-28-2024 Planting Rate: 40000 S/A  
 Depth: 2.25 IN  
 Rows per Plot: 4 Planting Method: PLANTD planted  
 Row Spacing: 30 IN Planting Equipment: FPP finger pickup planter  
 Seed Bed: SMOOTH smooth  
 Soil Temperature: 74 F Soil Moisture: DRY dry  
 Emergence Date: May-4-2024

Crop 5: C ZEAMD Zea mays indentata Dent corn  
 Entry Date: Apr-30-2024 Stage Scale: BBCH  
 Variety: PR112-20SSC  
 Attributes: VT2PRIB  
 Seed Shape: LR Seed Size: 1396 S/LB  
 Planting Date: Apr-28-2024 Planting Rate: 32000 S/A  
 Depth: 2.25 IN  
 Rows per Plot: 4 Planting Method: PLANTD planted  
 Row Spacing: 30 IN Planting Equipment: FPP finger pickup planter  
 Seed Bed: SMOOTH smooth  
 Soil Temperature: 74 F Soil Moisture: DRY dry  
 Emergence Date: May-4-2024

## Site and Design

Treated Plot Width: 10 FT  
 Treated Plot Length: 30 FT  
 Treated Plot Area: 300.0 FT<sup>2</sup>  
 Replications: 4 Treatments: 15 Plots: 60 Study Design: RAOBL Randomized Complete Block (RCB)  
 Distance between Blocks: 5 FT  
 Distance between 'Plot' Experimental Units: 0.5 FT

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## Application Description

	A	B	C
Date	Apr-28-2024	May-21-2024	May-30-2024
Start Time	8:00 PM	9:55 AM	12:15 PM
Stop Time	8:20 PM	10:05 AM	12:25 PM
Method	SPRAY	SPRAY	SPRAY
Timing	PREEM	EAPOWE	POST
Placement	BROSOL	BROFOL	BROFOL
Mixed/Prepared By	Colin Barclay	Colin Barclay	Ella Poling
Applied By	Colin Barclay	Colin Barclay	Colin Barclay
Entry Date	Apr-30-2024	May-22-2024	May-30-2024
Air Temperature Start, Stop	77, 75.5 F	69, 69 F	66, 66 F
% Relative Humidity Start, Stop	49, 52	73, 73	39, 39
Wind Velocity+Dir. Start	8 MPH, S	6 MPH, SSW	3.4 MPH, SW
Wind Velocity+Dir. Stop	4 MPH, S	6 MPH, SSW	4 MPH, SW
Wind Velocity+Dir. Max	11 MPH, S	6 MPH, SSW	5 MPH, SW
Wet Leaves (Y/N)	N, no	N, no	N, no
Soil Temperature	68 F	62 F	62 F
Soil Temperature Depth	6 IN	6 IN	6 IN
Soil Moisture	DRY	DRY	SLIWET
Soil Surface Condition	SMOOTH	SMOOTH	SMOOTH
% Cloud Cover	2	20	95
First Moisture Occurred On	Apr-29-2024	May-22-2024	May-30-2024
Time to First Moisture	16.0 HR	1.0 DAY	5.0 DAY
Amount of First Moisture	0.06 IN	0.21 IN	0.24 IN
Moisture 1 Week Before Appl.	0 IN	1.91 IN	0.69 IN
Moisture 6 Hours After Appl.	0 IN	0 IN	0 IN
Moisture 24 Hours After Appl.	0.06 IN	0 IN	0 IN
Moisture 1 Week After Appl.	0.68 IN	0.59 IN	0.67 IN
Problems with Application?	N, no	N, no	

## Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale	ZEAMD, BCOR	ZEAMD, BCOR	ZEAMD, BCOR
Days after Emergence	-6	17	26
Crop 2 Code, BBCH Scale	ZEAMD, BCOR	ZEAMD, BCOR	ZEAMD, BCOR
Days after Emergence	-6	17	26
Crop 3 Code, BBCH Scale	ZEAMD, BCOR	ZEAMD, BCOR	ZEAMD, BCOR
Days after Emergence	-6	17	26
Crop 4 Code, BBCH Scale	ZEAMD, BCOR	ZEAMD, BCOR	ZEAMD, BCOR
Days after Emergence	-6	17	26
Crop 5 Code, BBCH Scale	ZEAMD, BCOR	ZEAMD, BCOR	ZEAMD, BCOR
Days after Emergence	-6	17	26

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Appl Code	Appl Timing	Rep 1	Rep 2	Rep 3	Rep 4	Notes
1	Short Corn UPRIGHT 32,000 population										101	213	315	409	
	TriVolt	3.65 LBA/GAL		SC	20 oz/a		0.57 lb ai/a		A	PRE					
	AAtrex	4 LBA/GAL		F	1 qt/a		1 lb ai/a		A	PRE					
9	Short Corn DROOPY 32,000 population										102	209	314	411	
	TriVolt	3.65 LBA/GAL		SC	12 oz/a		0.342 lb ai/a		A	PRE					
	AAtrex	4 LBA/GAL		F	0.5 qt/a		0.5 lb ai/a		A	PRE					
	Roundup Powermax 3	4.79 LBAE/GAL		SL	30 oz/a		1.12 lb ae/a		C	POST					
	Laudis	3.5 LBA/GAL		SC	3 oz/a		0.082 lb ae/a		C	POST					
	AAtrex	4 LBA/GAL		F	0.5 qt/a		0.5 lb ai/a		C	POST					
	AMSOL	100 %		L	2.5 % v/v		2.5 % v/v		C	POST					
10	Short Corn DROOPY 40,000 population										103	210	302	412	
	TriVolt	3.65 LBA/GAL		SC	20 oz/a		0.57 lb ai/a		A	PRE					
	AAtrex	4 LBA/GAL		F	1 qt/a		1 lb ai/a		A	PRE					
5	Short Corn UPRIGHT 40,000 population										104	212	313	413	
	Capreno	3.45 LBA/GAL		SC	3 oz/a		0.081 lb ai/a		B	EAPOST					
	AAtrex	4 LBA/GAL		F	1 qt/a		1 lb ai/a		B	EAPOST					
	Roundup Powermax 3	4.79 LBAE/GAL		SL	30 oz/a		1.12 lb ae/a		B	EAPOST					
	AMSOL	100 %		L	2.5 % v/v		2.5 % v/v		B						
13	Tall Corn 32,000 population										105	206	306	415	
	TriVolt	3.65 LBA/GAL		SC	20 oz/a		0.57 lb ai/a		A	PRE					

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	AAtrex	4 LBA/GAL		F	1 qt/a	1 lb ai/a		A	PRE					
3	Short Corn UPRIGHT 32,000 population									106	203	310	414	
	TriVolt	3.65 LBA/GAL		SC	12 oz/a	0.342 lb ai/a		A	PRE					
	AAtrex	4 LBA/GAL		F	0.5 qt/a	0.5 lb ai/a		A	PRE					
	Roundup Powermax 3	4.79 LBAE/GAL		SL	30 oz/a	1.12 lb ae/a		C	POST					
	Laudis	3.5 LBA/GAL		SC	3 oz/a	0.082 lb ae/a		C	POST					
	AAtrex	4 LBA/GAL		F	0.5 qt/a	0.5 lb ai/a		C	POST					
	AMSOL	100 %		L	2.5 % v/v	2.5 % v/v		C	POST					
8	Short Corn DROOPY 32,000 population									107	204	309	406	
	Capreno	3.45 LBA/GAL		SC	3 oz/a	0.081 lb ai/a		B	EAPOST					
	AAtrex	4 LBA/GAL		F	1 qt/a	1 lb ai/a		B	EAPOST					
	Roundup Powermax 3	4.79 LBAE/GAL		SL	30 oz/a	1.12 lb ae/a		B	EAPOST					
	AMSOL	100 %		L	2.5 % v/v	2.5 % v/v		B						
12	Short Corn DROOPY 40,000 population									108	215	312	407	
	TriVolt	3.65 LBA/GAL		SC	12 oz/a	0.342 lb ai/a		A	PRE					
	AAtrex	4 LBA/GAL		F	0.5 qt/a	0.5 lb ai/a		A	PRE					
	Roundup Powermax 3	4.79 LBAE/GAL		SL	30 oz/a	1.12 lb ae/a		C	POST					
	Laudis	3.5 LBA/GAL		SC	3 oz/a	0.082 lb ae/a		C	POST					
	AAtrex	4 LBA/GAL		F	0.5 qt/a	0.5 lb ai/a		C	POST					
	AMSOL	100 %		L	2.5 % v/v	2.5 % v/v		C	POST					
4	Short Corn UPRIGHT 40,000 population									109	202	308	408	
	TriVolt	3.65 LBA/GAL		SC	20 oz/a	0.57 lb ai/a		A	PRE					
	AAtrex	4 LBA/GAL		F	1 qt/a	1 lb ai/a		A	PRE					
15	Tall Corn 32,000 population									110	211	301	410	
	TriVolt	3.65 LBA/GAL		SC	12 oz/a	0.342 lb ai/a		A	PRE					
	AAtrex	4 LBA/GAL		F	0.5 qt/a	0.5 lb ai/a		A	PRE					
	Roundup Powermax 3	4.79 LBAE/GAL		SL	30 oz/a	1.12 lb ae/a		C	POST					
	Laudis	3.5 LBA/GAL		SC	3 oz/a	0.082 lb ae/a		C	POST					
	AAtrex	4 LBA/GAL		F	0.5 qt/a	0.5 lb ai/a		C	POST					
	AMSOL	100 %		L	2.5 % v/v	2.5 % v/v		C	POST					
2	Short Corn UPRIGHT 32,000 population									111	208	305	404	
	Capreno	3.45 LBA/GAL		SC	3 oz/a	0.081 lb ai/a		B	EAPOST					
	AAtrex	4 LBA/GAL		F	1 qt/a	1 lb ai/a		B	EAPOST					
	Roundup Powermax 3	4.79 LBAE/GAL		SL	30 oz/a	1.12 lb ae/a		B	EAPOST					
	AMSOL	100 %		L	2.5 % v/v	2.5 % v/v		B						
7	Short Corn DROOPY 32,000 population									112	214	304	401	
	TriVolt	3.65 LBA/GAL		SC	20 oz/a	0.57 lb ai/a		A	PRE					
	AAtrex	4 LBA/GAL		F	1 qt/a	1 lb ai/a		A	PRE					
11	Short Corn DROOPY 40,000 population									113	205	307	402	
	Capreno	3.45 LBA/GAL		SC	3 oz/a	0.081 lb ai/a		B	EAPOST					
	AAtrex	4 LBA/GAL		F	1 qt/a	1 lb ai/a		B	EAPOST					
	Roundup Powermax 3	4.79 LBAE/GAL		SL	30 oz/a	1.12 lb ae/a		B	EAPOST					
	AMSOL	100 %		L	2.5 % v/v	2.5 % v/v		B						
6	Short Corn UPRIGHT 40,000 population									114	207	303	403	
	TriVolt	3.65 LBA/GAL		SC	12 oz/a	0.342 lb ai/a		A	PRE					
	AAtrex	4 LBA/GAL		F	0.5 qt/a	0.5 lb ai/a		A	PRE					
	Roundup Powermax 3	4.79 LBAE/GAL		SL	30 oz/a	1.12 lb ae/a		C	POST					
	Laudis	3.5 LBA/GAL		SC	3 oz/a	0.082 lb ae/a		C	POST					
	AAtrex	4 LBA/GAL		F	0.5 qt/a	0.5 lb ai/a		C	POST					
	AMSOL	100 %		L	2.5 % v/v	2.5 % v/v		C	POST					

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Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Appl Code	Appl Timing	Rep				Notes
											1	2	3	4	
14	Tall Corn 32,000 population										115	201	311	405	
	Capreno	3.45 LBA/GAL		SC	3 oz/a		0.081 lb ai/a		B	EAPOST					
	AAtrex	4 LBA/GAL		F	1 qt/a		1 lb ai/a		B	EAPOST					
	Roundup Powermax 3	4.79 LBAE/GAL		SL	30 oz/a		1.12 lb ae/a		B	EAPOST					
	AMSOL	100 %		L	2.5 % v/v		2.5 % v/v		B						

Sort Order: Replicate 1