

WUE□ & Waste

Group B vs Group C Corn

2021

In 2021, Group B planted 2260 Ac of corn and Group C planted 3278 Ac of corn. There was some overlap of varieties and planting dates. Group B averaged 249 Bu/Ac vs 289 Bu/Ac for Group C (Group A planted 485 Ac and averaged 227 Bu/Ac).

The yield/ac-in graph suggests that a maximum yield goal of 260-270 Bu/Ac above 22”/Ac. Group C yields were reduced by the added water.

The WUE for Group C was 12.5 Bu/In vs 13.7 Bu/in for Group B. The 1.2” on 3278 acres amounts to 3934 Ac/In.

Rio Real Estate LTD 2021 Water Efficiency Reports Crop Specific - ALL IRRIGATED FARMS

Farm						Irrigation				Total Water			
RIO FARMS	Site	Acres	Crop	Plant Date	Variety	Yield	Irrigation	Usage	Bu- #	Rain	Total H2O	Bu- #	Allotment
						(Bu-#)	(Inch)	(Ac-Inch)	(/Ac-Inch)	(Inch)	(Inch)	(/Ac-Inch)	WUE □ In
De Campo (Sec 320)	NE/4	112	Corn	05/01/21	P1366	248.20	24.95	2794.40	9.95	13.00	37.95	6.54	18.71
Margoso (Sec 288)	SW/4	127	Corn	04/26/21	P1477	197.10	30.73	3902.71	6.41	11.70	42.43	4.65	23.05
La Playa (Sec 343)	NW/4	132	Corn	05/07/21	P1828	217.20	23.15	3051.17	9.38	12.30	35.45	6.13	17.36
Margoso Oeste (Sec 289)	NW/4	114	Corn	04/29/21	P1366	252.70	24.81	2828.34	10.19	11.80	36.61	6.90	18.61
Moore/Sherman Wtd Avg		485	Corn			227.44	25.94	12576.62	8.92	12.19	38.13	6.02	19.43
N140 (Sec 191)	E/2	87	Corn	04/24/21	P1370	253.80	14.56	1263.81	17.43	15.30	29.86	8.50	10.92
4 & 5 (Sec 191)	E/2	143	Corn	04/21/21	P1370	260.00	16.89	2406.83	15.39	15.30	32.19	8.08	12.67
1 & 3 (Sec 190)	N/2	256	Corn	04/23/21	P1828	251.30	19.46	4979.81	12.91	14.40	33.86	7.42	14.60
6 & 7 (Sec 161)	S/2	254	Corn	04/25/21	P1828	242.90	22.35	5679.14	10.87	13.50	35.85	6.78	16.76
9 & 10 (Sec 159)	N/2	246	Corn	04/24/21	P1370	244.40	18.64	4576.12	13.11	14.50	33.14	7.37	13.98
Pat's Place (159)	NW/4	150	Corn	04/26/21	P1828	274.80	19.38	2907.00	14.18	18.60	37.98	7.24	14.54
Pat's Place (159)	NE/4	135	Corn	04/26/21	P1828	270.80	19.33	2609.55	14.01	18.60	37.93	7.14	14.50
Stovall (Sec 37)	SE/2	250	Corn	04/27/21	P1828	279.30	22.44	5603.27	12.45	16.40	38.84	7.19	16.83
Morris West (Sec 2)	S/2	246	Corn	04/30/21	DK063-90	239.10	16.00	3928.00	14.94	15.30	31.30	7.64	12.00
Morris East (Sec 17)	N/2	247	Corn	04/30/21	P1366	253.50	15.38	3803.47	16.48	15.30	30.68	8.26	11.54
Morris East (Sec 17)	S/2	247	Late Corn	06/10/21	P1197	200.40	16.18	4002.93	12.39	15.30	31.48	6.37	12.14
Carson/Armstrong Wtd Avg Total		2260	Corn			249.41	18.48	41759.93	13.69	15.45	33.93	7.37	13.86
Temprano (Sec 54)	W	247	Corn			300.00	24.10	5952.70	12.45	13.60	37.70	7.96	18.08
Temprano (Sec 54)	E	113	Corn			280.30	24.10	2723.30	11.63	13.60	37.70	7.44	18.08
Rio Goat Barn (Sec 26)	N	123	Corn	05/12/21	P1108	270.10	25.23	3103.29	10.71	20.40	45.63	5.92	18.92
Rio Goat Barn (Sec 26)	S	122	Corn	04/30/21	P1828	300.60	22.09	2694.98	13.61	20.40	42.49	7.07	16.57
Rio Betty (Sec 21)	W	125	Corn	04/30/21	P1828	295.80	22.43	2803.75	13.19	16.40	38.83	7.62	16.82
Rio Headquarters (Sec 21)	W/2	242	Corn	04/21/21	P1828	304.90	22.43	5428.06	13.59	14.70	37.13	8.21	16.82
Rio Brillhart (Sec 118)	W	123	Corn	04/27/21	P1828	279.50	24.80	3050.40	11.27	16.70	41.50	6.73	18.60
Porter (Sec 112)	E	494	Corn	05/02/21	P1366	292.80	23.51	11613.94	12.45	15.70	39.21	7.47	17.63
Porter (Sec 113)	N	122	Corn	05/03/21	P1572	292.00	26.15	3190.30	11.17	15.70	41.85	6.98	19.61
Porter (Sec 113)	S	122	Corn	05/02/21	P1572	290.70	26.33	3212.26	11.04	15.70	42.03	6.92	19.75
Correll (Sec 24)	E	240	Corn	04/29/21	P1828	304.20	21.48	5155.20	14.16	14.00	35.48	8.57	16.11
TX Roberts (Sec 6) #13	W	125	Corn	05/08/21	P1572	280.00	24.11	3013.75	11.61	14.80	38.91	7.20	18.08
TX Roberts (Sec 5) #15	W	125	Corn	05/08/21	P1847	284.60	25.56	3195.00	11.13	14.80	40.36	7.05	19.17
TX Roberts (Sec 5) #16	E	125	Corn	05/04/21	P1572	269.20	24.42	3052.50	11.02	14.80	39.22	6.86	18.32
TX Roberts (Sec 4) #17	W	165	Corn	05/07/21	P1847	290.10	22.23	3667.95	13.05	14.80	37.03	7.83	16.67
TX Roberts (Sec 4) #18	E	165	Corn	05/09/21	P1847	291.60	24.25	4001.25	12.02	14.80	39.05	7.47	18.19
TX Roberts (Sec 1) #19	W	125	Corn	05/07/21	P1572	289.20	26.81	3351.25	10.79	14.80	41.61	6.95	20.11
TX Roberts (Sec 1) #20	E	125	Corn	05/06/21	P1572	278.70	26.15	3268.75	10.66	14.80	40.95	6.81	19.61
West of Town (Sec 64) #2	S	125	Corn	04/25/21	P1370	277.10	21.93	2741.25	12.64	18.40	40.33	6.87	16.45
West of Town (Sec 91) #3	N	125	Corn	04/26/21	P1370	265.20	23.88	2985.00	11.11	18.40	42.28	6.27	17.91
Rio Farms Wtd Avg Total		3278				289.36	23.86	78204.88	12.19	15.63	39.49	7.36	17.89
Wtd Avg Total/Usage		6023	Corn			269.39	22.01	132541.43	12.49	15.28	37.29	7.26	16.51

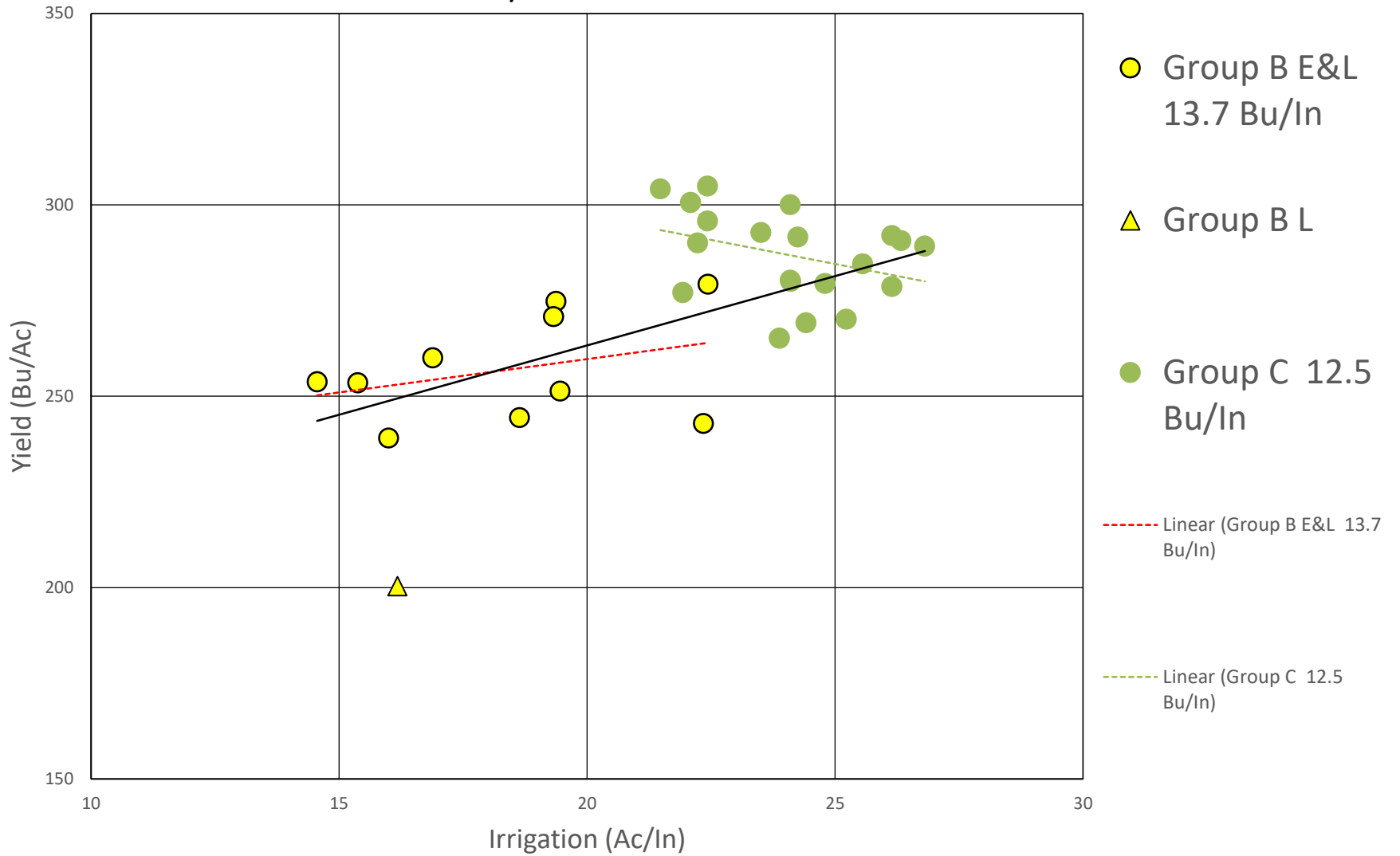
<https://riopetro.sharepoint.com/sites/RioPetroleum/Shared Documents/General/ALLSHARE/Farms/2025 Farms/3. Farm Studies/Group B vs Group C Corn 2021.docx>

Field Note 2021 – 001

This review suggests a maximum corn yield goal of 260-270 Bu/Ac for farms with capacity to fully irrigate. Also indicates that at some point (perhaps 22"/Ac of irrigation this year) additional water decreases corn yield.

Group B operator continues to raise corn, Group C operator raised no corn in 2022 nor in 2023 and moved out of the Panhandle. This suggests the Group Cs 269 Bu/Ac yield was not profitable on 3278 acres of corn.

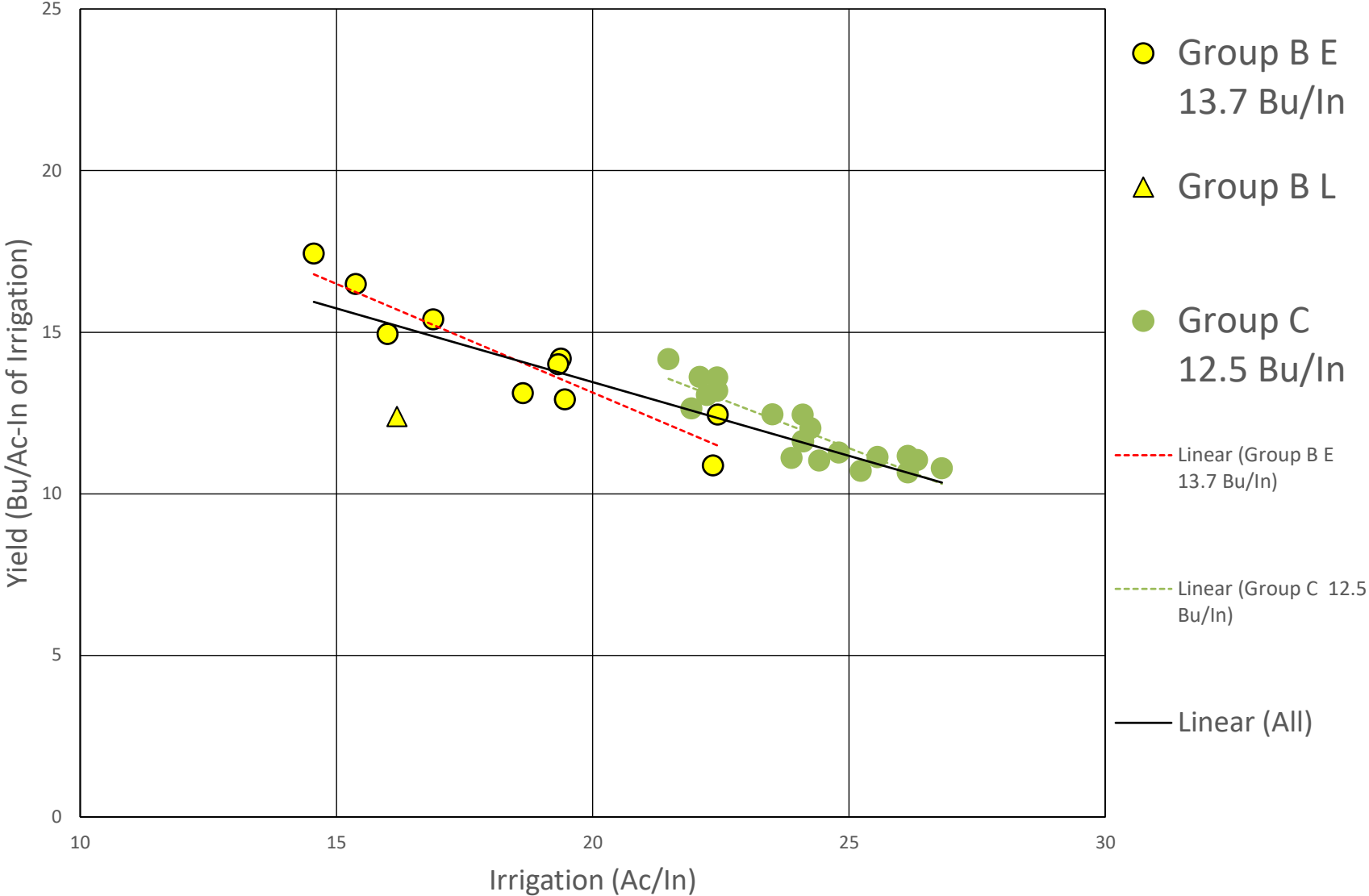
2021 Yield Per Inches of Irrigation
6023 Ac Corn: 12.2 Bu/In IRR
269 Bu/Ac 22.0" Irr 37.3" Total



2021 Yield Per Inches of Irrigation

6023 Ac Corn: 12.2 Bu/In IRR

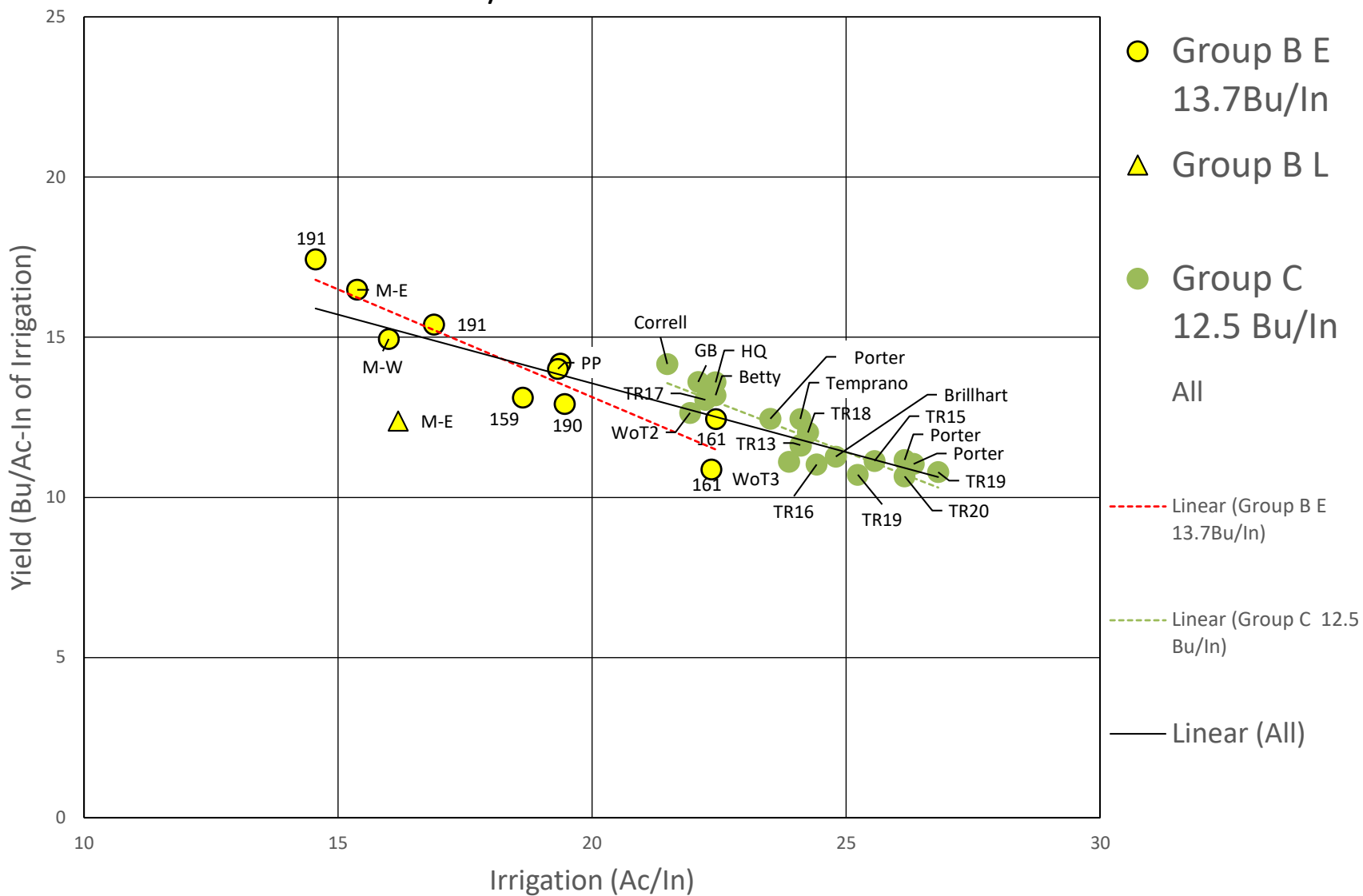
269 Bu/Ac 22.0" Irr 37.3" Total



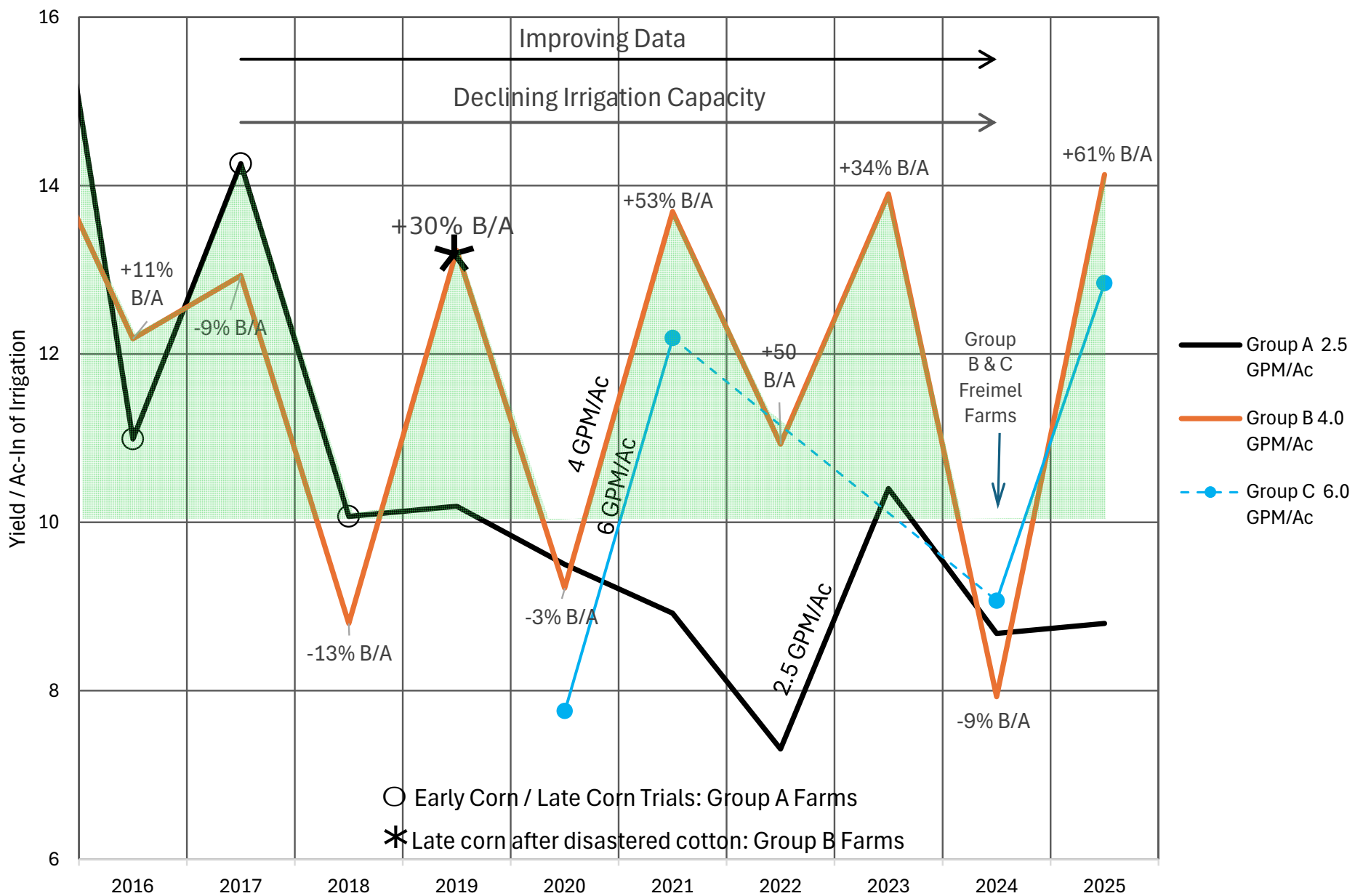
2021 Yield Per Acre Per Acre-Inches of Irrigation

6023 Ac Corn: 12.5 Bu/In IRR

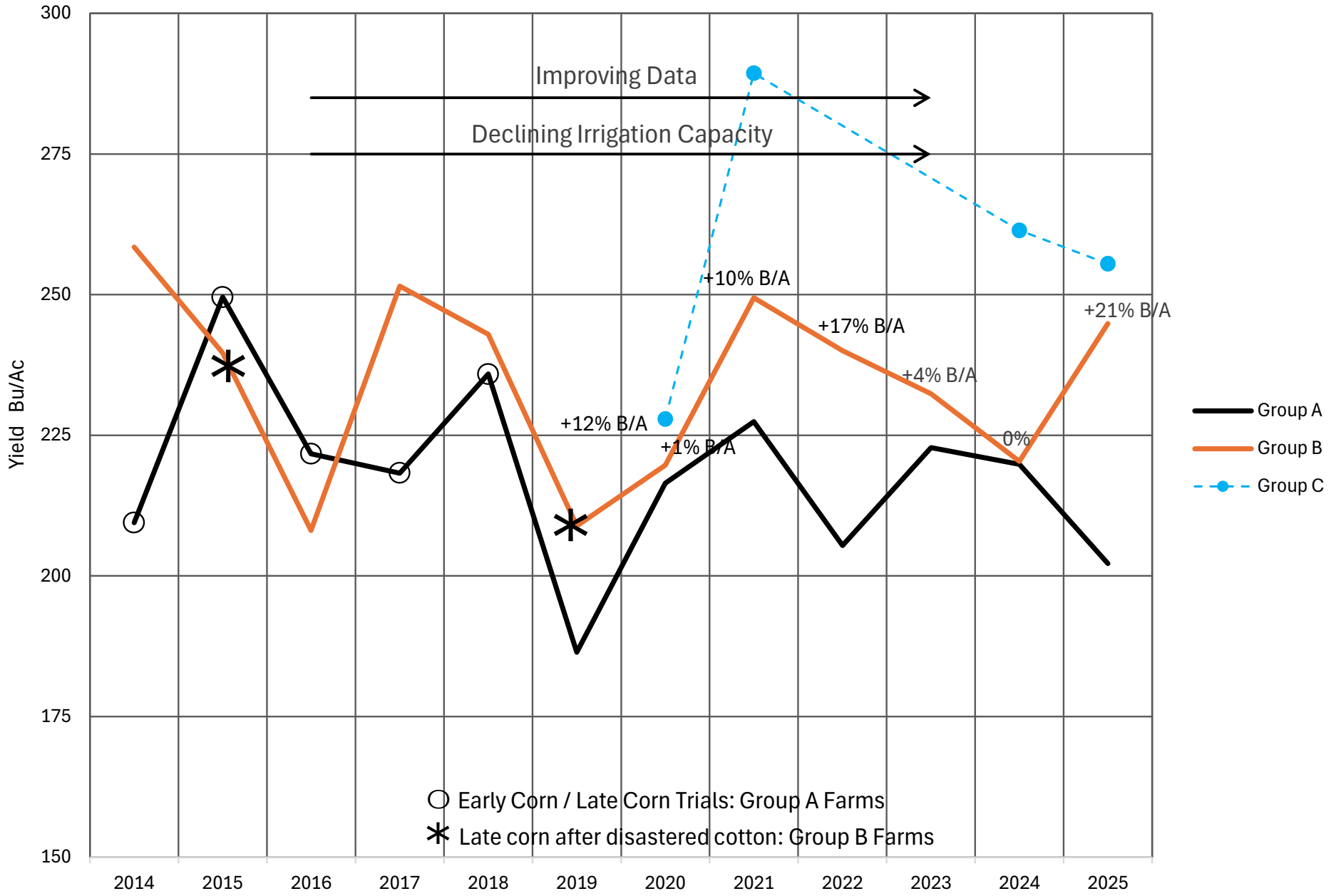
269 Bu/Ac 22.0" Irr 37.3" Total



Corn Crop Water Efficiency 2016-2025



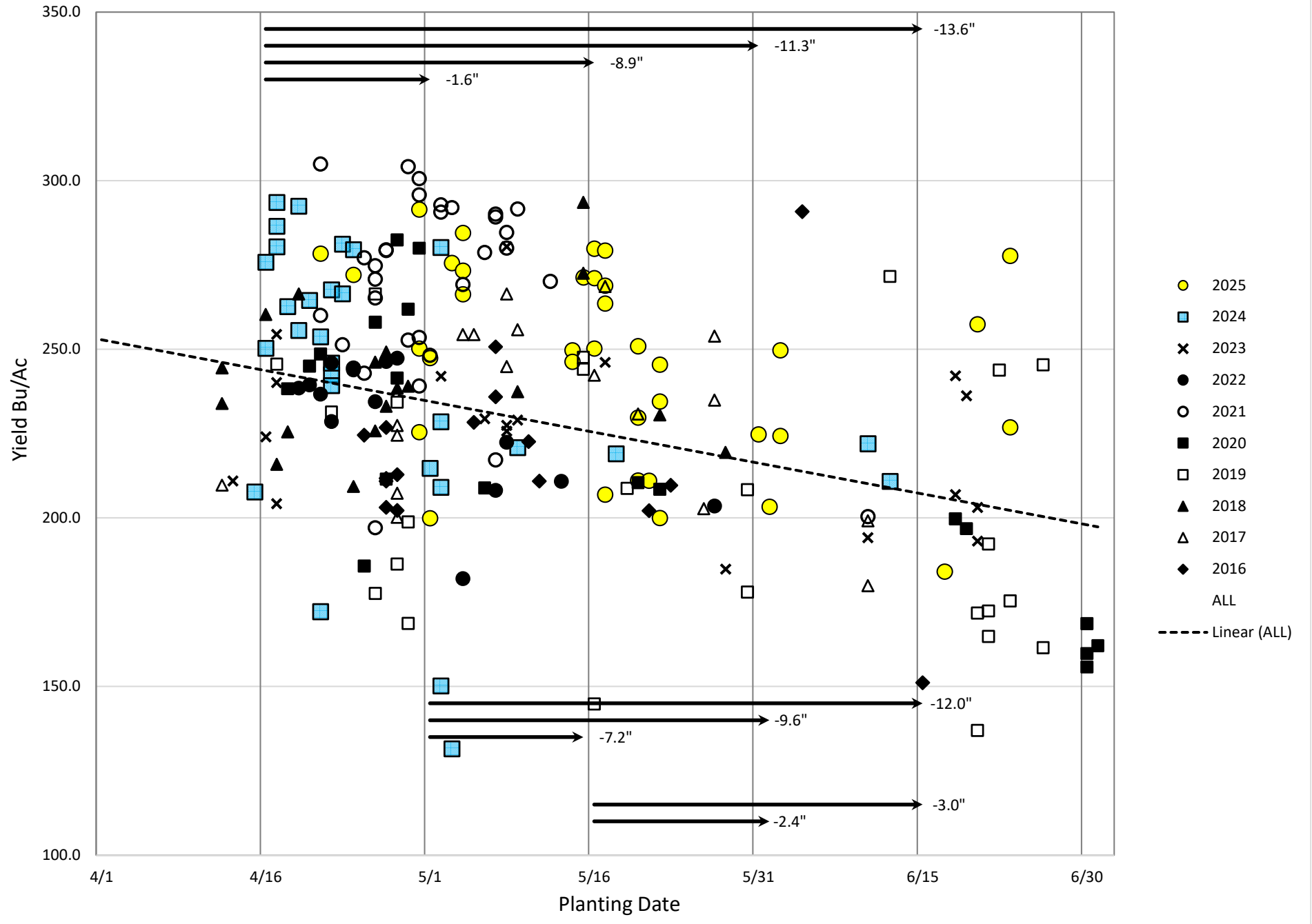
Corn Crop Yield 2013-2025



○ Early Corn / Late Corn Trials: Group A Farms

* Late corn after disastered cotton: Group B Farms

All Farms Corn Yield Bu/Ac by Planting Date 2016-2025



All Farms Corn Yield Bu/Ac-In of Irrigation by Planting Date 2016-2025

