

2024 Dryland Mixed Technology Cotton Variety Trial - Edcot Gin

Barry Evans Farm Kress, TX

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Summary

In 2019, a cotton variety testing program was established as a new service created by Windstar Inc. affiliated gins. These gins are working together to support a Cotton Agronomics Manager position. One of the components of this program is to work with local producers to scientifically evaluate varieties in a commercial on-farm setting from planting through ginning. These unique replicated trials are planted and harvested with the grower's commercial equipment. Each variety's round modules are combined across all replicates and then ginned and classed separately in an extremely detailed manner. Purging and weighing any remnant bale from the press is also performed for each variety. All lint samples from each variety's commercial bales are then classed by the USDA-AMS classing office. This detailed ginning and classing management of all round modules for each variety is key to the success of this program and to the best of our knowledge is without peer in the U.S. ginning industry.

At this site in 2024, seven entries containing various transgenic technologies were planted in a dryland field in a scientifically valid trial with three replicates. Trait packages among the seven entries included, an XtendFlex only, two Bollgard 3/XtendFlex, an Axant Flex, two Axant Flex/TwinLink Plus, and a Widestrike/Enlist.

This field had good to excellent subsoil moisture, but the surface soil was sub-par at planting, so the trial was dry planted on May 3rd. An excellent, uniform rainfall event (approximately 2 inches) was obtained on May 10, and the trial emerged fairly uniformly, although some skips and thin stands were noted. The trial escaped hail/wind events and entered bloom at about 8 nodes above white flower (NAWF), indicating promising yield potential. Essentially no adverse weather events were encountered during early season. Extremely high temperatures occurred in late June, July, August, and September. June rainfall was fair, but lack of substantial rainfall during July, August, and September adversely affected crop performance. The oppressive heat encountered in August and September coupled with lack of rainfall resulted in extreme moisture stress in the plants. Varieties bloomed through the terminal by early August. Low yields and poor quality were noted in the trial. This was a result of the high stress environment that occurred beginning in July and followed through the remainder of the growing season. Water stress during the bloom period induced short staple. By mid-August, sustained wilting resulted

in premature boll opening, which in turn resulted in poor maturity and low micronaire. Loan values suffered due to these and other fiber quality issues.

Harvest results indicated that statistically significant differences were observed. Lint yields ranged from a high of 232 lb/acre (DG 3385 B3XF) to a low of 171 lb/acre (FM 823 AXTP and DP 1822 XF), and averaged 198 lb/acre (Table 1). Average Loan value for varieties from commercially ginned and classed bales varied from a high of \$0.3594/lb (FM 823 AXTP) to a low of \$0.2735/lb (FM 868 AXTP). Overall Loan value for the trial across all entries was 0.3256/lb. Net gin credit is defined as seed credit minus ginning expense. Net value/acre (defined as gross Loan value plus net gin credit) ranged from a high of \$90/acre (DG 3385 B3XF) to a low of \$59/acre (FM 868 AXTP), a difference of \$31/acre. These differences were statistically significant, and had a low coefficient of variation of about 4%, indicating low variability among entries across replicates.

Table 2 provides similar information for the trial, but net value/acre is based on cash bid value. Cash bids were obtained for commercially ginned and classed bale quality for each variety. This was performed on October 11 at 73.40 cent December 2024 futures using the USDA-AMS classing results. These cash bid values ranged from a high of \$0.5638/lb (FM 823 AXTP) to a low of \$0.4394/lb (DP 1822 XF) and averaged almost \$0.50/lb. Net value/acre (defined as gross lint cash value plus net gin credit) ranged from a high of \$129/acre (DG 3385 B3XF) to a low of \$85/acre (DP 1822 XF), a difference of \$44/acre. These differences were statistically significant, and had a low coefficient of variation at just under 4%.

Table 3 presents in-season data including final plant population, stand establishment percentage, a visual estimate of vigor, nodes above white flower (NAWF) and plant height on two observation dates, and a visual estimate of storm resistance at harvest. The storm resistance visual rating was a difficult assessment in the trial due to the extreme premature boll opening that occurred due to moisture stress.

Table 4 provides the USDA-AMS classing results from each commercial bale for each variety and the variety averages. Averages indicate that color grades were typically 11, 21 with a few 22 values. Leaf grades ranged from 1 to 3. Staple ranged from a high of 33.0 (FM 823 AXTP) to a low of 31.3 32nds inch (DP 2335 B3XF). Average micronaire for varieties ranged from a low of 2.5 (FM 868 AXTP) to a high of 2.82 (DP 2335 B3XF). Loan chart low micronaire discounts are triggered at values of 3.4 and lower. Therefore, the entries encountered Loan rate discounts for low micronaire ranging from -920 to -1345 points/lb. No bark contamination was noted in commercial bales, but a significant percentage was noted with level 1 grass contamination. Grass contamination is attributed to sorghum stalks from the 2023 crop year still standing at cotton harvest in 2024. Fiber strength was lower than normally encountered, again, attributed to the extreme moisture stress the plants encountered. Strength values ranged from 23.6 to 27.1 g/tex, and uniformity ranged from 75.9 to 77.2%. Table 5 presents the mean values across all bales for each variety.

Disclaimer: Readers should realize that results from one trial do not represent conclusive evidence that the same response would occur where conditions vary. Multisite and multi-year data are always best. For this trial, good scientific techniques were used and the results are presented to indicate what actually occurred in the trial. Context of the environment, overall growing season impact, management techniques, and trial methodology used are important and must be considered.

Site Information and Methods

Elevation: 3530 ft

Previous crop: Grain sorghum

Tillage system: No-till

Planted: Dry planted May 2 (2 inch rainfall on May 10)

Replicates: 3 replicates in a randomized complete block design

Row spacing: 30-inch rows

Plot width: 16-row plots

Plot length: Trial was planted in one mile rows, with around 5,200 ft harvested

Seeding rate: 25,000 seed/acre

Days from planting to first bloom: 62 days (post 2-inch rainfall event after dry planting, blooms

on July 10)

Total rainfall May through September 15: ~5.25 inches

May 2.11, June 2.41, July 0.11, August 0.61, September 1-15th 0.01

Fertility management: No fertilizers applied

Chemical Applications:

March 3, 2024 - Dicamba 8 oz/acre, Glyphosate 1 qt/acre, Flumioxazone 3 oz/acre, MSO and Hydrostar

June 6, 2024 - Glufosinate 42 oz/acre, Hydrostar water treatment

July 3, 2024 - Glufosinate 1 qt/acre, Glyphosate 1 qt/acre, Metolochlor 1 pt/acre, Surfstar

and Hydrostar surfactant and water treatment

Plant growth regulators: 7 oz/acre mepiquat chloride (July 3)

Insecticides: 3.2 oz/acre acephate (June 6)

Harvest aid application: 1 gt/acre of 3-lb/gallon paraguat (September 19)

Harvesting: September 26 using a John Deere CS690, with harvested length determined by the GPS on the stripper monitor. Round modules were weighed using the integral CS690 handler scale, and all round modules from each variety were weighed at Edcot Gin.

Commercial ginning: Round modules for all 3 reps of each variety were staged together (1 per plot, with 3 reps = 3 total per variety) and commercially ginned separately by Edcot Gin. Commercial ginning included: cleaning module feeder, clearing gin stream, dumping seed rolls, and purging remnant bale in press. This process was initiated before the first variety module was ginned and then repeated for each variety module in trial.

Remnants were ejected from the bale press and weighed, but not sampled for USDA-AMS classing. Only data from commercial bales are included in classing data for each variety.

Lint value: Based on CCC Loan value and actual cash market bids for each variety derived from commercial ginning and USDA-AMS classing results.

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Acknowledgements

Edcot Gin would like to thank Barry Evans for committing equipment, land, and time to conduct and manage the trial. Gratitude is expressed to Deltapine, Dyna-Gro, FiberMax, PhytoGen, and Windstar Inc. Detailed ginning was performed by "Ginner Ernie" and the crew and a big thank you is extended to this hard-working group. Landon Kidd provided capable assistance with inseason data collection and module supervision and detailed ginning procedures.



Table 1. Harvest results for the dryland mixed technology variety trial (lint loan value), Barry Evans Farm, Kress, TX, 2024.

Entry	Lint turnout	Seed turnout	Bur cotton yield	Lint yield	Seed yield	Lint loan value	Lint loan value	Net gin credit	Net value	
lb/acre	9	6		lb/acre		\$/lb		\$/acre		
DG 3385 B3XF	30.8	46.5	754	232	351	0.3311	77	14	90	а
FM 765 AX	30.7	41.2	727	223	300	0.3541	79	9	88	а
PHY 415 W3FE	27.7	42.6	760	210	323	0.3275	69	10	79	b
DP 2335 B3XF	31.2	42.1	621	194	262	0.3255	63	8	71	С
FM 823 AXTP	30.1	43.5	569	171	248	0.3594	62	9	70	С
DP 1822 XF	27.2	44.6	628	171	280	0.3083	53	10	63	d
FM 868 AXTP	30.0	42.6	621	187	265	0.2735	51	8	59	d
Test average	29.7	43.3	669	198	290	0.3256	65	10	74	
CV, %			4.0	3.9	4.1		3.7	5.4	3.9	
OSL			0.0001	0.0001	0.0001		0.0001	0.0001	0.0001	
LSD			39	11	17		4	1	4	

For net value/acre, means within a column with the same letter are not significantly different.

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.10 level, NS - not significant.

Note: some columns may not add up due to rounding error.

Assumes:

\$3.65/cwt commercial ginning cost.

\$235/ton for seed.

Net gin credit is defined as seed credit minus ginning expense.

Net value is defined as gross loan value/acre plus net gin credit.

Value for lint based on CCC loan value from commercial ginning and USDA-AMS classing results.



Table 2. Harvest results for the dryland mixed technology variety trial (lint cash value), Barry Evans Farm, Kress, TX, 2024.

Entry	Lint turnout	Seed turnout	Bur cotton yield	Lint yield	Seed yield	Lint cash value	Lint cash value	Net gin credit	Net value	
lb/acre	9	6		lb/acre		\$/lb		\$/acre	·	
DG 3385 B3XF	30.8	46.5	754	232	351	0.4964	115	14	129	а
FM 765 AX	30.7	41.2	727	223	300	0.5245	117	9	126	а
PHY 415 W3FE	27.7	42.6	760	210	323	0.4807	101	10	112	b
DP 2335 B3XF	31.2	42.1	621	194	262	0.5080	98	8	106	bc
FM 823 AXTP	30.1	43.5	569	171	248	0.5638	97	9	105	С
FM 868 AXTP	30.0	42.6	621	187	265	0.4497	84	8	92	d
DP 1822 XF	27.2	44.6	628	171	280	0.4394	75	10	85	е
Test average	29.7	43.3	669	198	290	0.4946	98	10	108	
CV, %			4.0	3.9	4.1		3.9	5.4	3.7	
OSL			0.0001	0.0001	0.0001		0.0001	0.0001	0.0001	
LSD			39	11	17		6	1	6	

For net value/acre, means within a column with the same letter are not significantly different.

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.10 level, NS - not significant.

Note: some columns may not add up due to rounding error.

Assumes:

\$3.65/cwt commercial ginning cost.

\$235/ton for seed.

Net gin credit is defined as seed credit minus ginning expense.

Net value is defined as gross cash value/acre plus net gin credit.

Lint value based on cash bids for each variety on October 11 at 73.40 cent December 2024 futures using commercial ginning and USDA-AMS classing results.



Table 3. Plant observation results from the dryland mixed technology variety trial, Barry Evans Farm, Kress, TX, 2024.

Treatment	Final	Stand	Vigor	Nodes above	white flower	Plant h	eight	Storm resistance	
	population	establishment		Early bloom	+3 weeks	Early bloom	+3 weeks		
	plants/acre	%	1-5 visual scale, 5 best	count		inches		1-9 visual scale, 9 tightest	
	18-Jun	18-Jun	18-Jun	10-Jul	30-Jul	10-Jul	30-Jul	26-Sep	
DP 1822 XF	15,101	60.4	3.8	8.7	2.3	17.1	18.0	5.8	
DP 2335 B3XF	15,682	62.7	3.8	7.8	0.9	17.5	17.6	6.2	
FM 765 AX	11,616	46.5	3.8	7.9	0.5	17.7	18.1	7.7	
FM 823 AXTP	13,939	55.8	3.8	7.2	0.7	16.5	17.2	7.8	
FM 868 AXTP	15,391	61.6	3.6	8.7	1.1	18.7	19.4	7.8	
DG 3385 B3XF	13,939	55.8	3.4	7.8	0.7	19.2	19.4	6.8	
PHY 415 W3FE	16,262	65.1	4.2	6.4	0.3	19.9	20.3	5.8	
Test average	14,561	58.3	3.7	7.8	0.9	18.1	18.6	6.8	
CV, %	15.9	15.9	5.5	8.1	39.5	5.0	3.6	3.44	
OSL	0.3051	0.3046	0.0268	0.0104	0.0006	0.0063	0.0008	0.0001	
LSD	NS	NS	0.3	0.9	0.5	1.3	1.0	0.34	

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.10 level, NS - not significant.



Table 4. Commercial classing data for the dryland mixed technology variety trial, Barry Evans Farm, Kress, TX, 2024.

Entry and	Color Grade-Quadrant	Color	Color	Leaf	Staple	Micronaire	Extraneous	Remarks	Strength	Rd	+b	Trash	Uniformity	Length	Loan rate
Bale Number	grade-quadrant	digit 1	digit 2	grade	32nds inch	units	matter		g/tex	%	%	% area	%	100ths inch	cents/lb
DP 1822 XF															
4180667	21-3	2	1	2	34	2.8	21		26.8	77.7	9.5	2	78.3	105	38.60
4180668	21-1	2	1	2	33	2.7	21	•	25.8	80.3	8.8	1	76.1	102	31.30
4180669	21-3	2	1	2	32	2.5	21		24.5	78.0	9.8	2	74.0	101	24.85
4180670	21-3	2	1	2	32	2.6		•	22.6	78.2	9.8	2	76.1	101	29.70
4180671	21-3	2	1	2	32	2.5			22.5	78.2	9.9	2	74.9	99	29.70
Average		2.0	1.0	2.0	32.6	2.62	3/5 bales	level 1 grass	24.4	78.5	9.6	1.8	75.9	101.6	30.83
DP 2335 B3XF															
4180672	22-1	2	2	2	30	2.8	•		23.4	77.2	10.1	1.0	74.6	95.0	30.15
4180673	12-1	1	2	2	32	2.9			23.2	78.4	10.3	2.0	76.8	99.0	33.20
4180674	12-1	1	2	2	32	2.8			24.3	78.8	10.4	1.0	76.4	99.0	33.35
4180675	21-4	2	1	3	32	2.8	•		23.5	76.8	9.6	3.0	76.0	99.0	33.85
4180676	12-1	1	2	2	32	2.7	•		23.9	79.4	10.6	2.0	77.1	100.0	33.20
4180677	21-4	2	1	4	30	2.9	•		23.2	76.7	9.6	6.0	74.7	95.0	31.55
Average		1.5	1.7	2.5	31.3	2.82	0/6 bales	level 1 grass	23.6	77.9	10.1	2.5	75.9	97.8	32.55
FM 765 AX															
4180678	21-4	2	1	3	33	2.7	•		25.8	77.1	9.6	3	77.5	104	36.25
4180679	12-1	1	2	2	33	2.8	•		26.0	79.2	10.3	2	77.4	102	40.55
4180680	22-1	2	2	3	32	2.6	21		26.1	77.4	9.9	3	77.9	101	29.30
4180681	21-3	2	1	3	32	2.6	•		24.6	78.1	9.8	2	76.6	100	29.75
4180682	11-4	1	1	2	33	2.7	•		27.2	78.6	10.0	2	77.7	103	41.40
4180683	21-4	2	1	3	34	2.6	•		27.1	76.5	9.4	4	78.3	105	39.30
4180684	32-1	3	2	4	32	2.7			24.7	73.9	10.5	4	76.3	99	31.35
Average		1.9	1.4	2.9	32.7	2.67	1/7 bales	level 1 grass	25.9	77.3	9.9	2.9	77.4	102.0	35.41
FM 823 AXTP															
4180685	21-3	2	1	2	33	2.6	•		27.6	78.3	9.8	2	76.3	102	37.15
4180686	22-1	2	2	2	33	2.5	•		26.8	78.4	10.0	2	78.4	102	36.35
4180687	11-4	1	1	2	33	2.6	•		27.6	79.1	9.8	2	76.6	103	37.15
4180688	21-3	2	1	2	34	2.5	•		28.0	78.0	9.9	2	77.8	105	39.45
4180689	22-1	2	2	2	32	2.5			25.4	77.4	10.0	2	75.5	101	29.60
Average		1.8	1.4	2.0	33.0	2.54	0/5 bales	level 1 grass	27.1	78.2	9.9	2.0	76.9	102.6	35.94



Table 4 (continued). Commercial classing data for the dryland mixed technology trial, Barry Evans Farm, Kress, TX, 2024.

									<u> </u>						
Entry and	Color Grade-Quadrant	Color	Color	Leaf	Staple		Extraneous	Remarks	Strength	Rd	+b	Trash	Uniformity	Length	Loan rate
Bale Number	grade-quadrant	digit 1	digit 2	grade	32nds inch	units	matter		g/tex	%	%	% area	%	100ths inch	cents/lb
FM 868 AXTP															
4180690	22-1	2	2	2	32	2.5			24.7	76.4	10.6	2	75.6	100	29.10
4180691	22-2	2	2	3	32	2.5	21		24.7	75.4	10.5	3	75.6	100	23.85
4180692	22-2	2	2	3	32	2.5			24.7	75.0	10.5	3	75.6	100	29.00
4180693	22-1	2	2	2	32	2.5	•		24.7	76.0	10.4	2	75.6	100	29.10
4180694	22-1	2	2	2	32	2.5	21		24.7	76.0	10.7	2	75.6	100	23.95
4180695	22-1	2	2	2	32	2.5			24.7	75.6	11.0	1	75.6	100	29.10
Average	-	2.0	2.0	2.3	32.0	2.50	2/6 bales	level 1 grass	24.7	75.7	10.6	2.2	75.6	100.0	27.35
DG 3385 B3XF															
4180696	12-2	1	2	2	32	2.7	21		25.1	76.5	10.6	2	77.2	100	28.70
4180697	12-2	1	2	2	32	2.7	•		25.1	76.4	11.1	2	77.2	100	33.85
4180698	12-2	1	2	2	32	2.7	•	•	25.1	76.6	10.8	2	77.2	100	33.85
4180699	12-2	1	2	2	32	2.7	•	•	25.1	76.7	10.6	2	77.2	100	33.85
4180700	22-1	2	2	2	32	2.7	•	•	25.1	76.1	11.0	2	77.2	100	33.85
4180701	12-2	1	2	1	32	2.7	•	•	25.1	76.3	11.2	1	77.2	100	33.85
4180702	12-2	1	2	2	32	2.7			25.1	76.2	11.1	2	77.2	100	33.85
Average		1.1	2.0	1.9	32.0	2.70	1/7 bales	level 1 grass	25.1	76.4	10.9	1.9	77.2	100.0	33.11
PHY 415 W3FE															
4180703	22-2	2	2	3	33	2.6	21		23.8	74.0	10.7	4	77.3	102	25.45
4180704	11-3	1	1	2	33	2.7	21		23.7	80.4	9.8	1	76.0	102	30.65
4180705	22-2	2	2	4	33	2.7			25.0	73.6	10.8	4	77.5	104	34.65
4180706	21-3	2	1	2	32	2.7			23.4	79.2	9.4	2	76.6	101	34.10
4180707	11-1	1	1	2	32	2.9			25.3	81.3	9.6	2	77.5	101	34.75
4180708	21-3	2	1	3	33	2.9	11		26.5	79.1	9.4	3	78.5	104	36.90
Average	-	1.7	1.3	2.7	32.7	2.75	0/6 bales	level 1 grass	24.6	77.9	10.0	2.7	77.2	102.3	32.75



Table 5. Mean commercial classing data across all bales by variety for the dryland mixed technology variety trial, Barry Evans Farm, Kress, TX, 2024.

Treatment	Color	Color	Leaf	Staple	Micronaire	Extraneous	Remarks	Strength	Rd	+b	Trash	Uniformity	Length	Loan rate	Cash bid*
	digit 1	digit 2	grade	32nds inch	units	matter		g/tex	%	%	% area	%	100ths inch	cents/lb	cents/lb
DP 1822 XF	2.0	1.0	2.0	32.6	2.62	3/5 bales	level 1 grass	24.4	78.5	9.6	1.8	75.9	101.6	30.83	43.94
DP 2335 B3XF	1.5	1.7	2.5	31.3	2.82	0/6 bales	level 1 grass	23.6	77.9	10.1	2.5	75.9	97.8	32.55	50.80
FM 765 AX	1.9	1.4	2.9	32.7	2.67	1/7 bales	level 1 grass	25.9	77.3	9.9	2.9	77.4	102.0	35.41	52.45
FM 823 AXTP	1.8	1.4	2.0	33.0	2.54	0/5 bales	level 1 grass	27.1	78.2	9.9	2.0	76.9	102.6	35.94	56.38
FM 868 AXTP	2.0	2.0	2.3	32.0	2.50	2/6 bales	level 1 grass	24.7	75.7	10.6	2.2	75.6	100.0	27.35	44.97
DG 3385 B3XF	1.1	2.0	1.9	32.0	2.70	1/7 bales	level 1 grass	25.1	76.4	10.9	1.9	77.2	100.0	33.11	49.64
PHY 415 W3FE	1.7	1.3	2.7	32.7	2.75	0/6 bales	level 1 grass	24.6	77.9	10.0	2.7	77.2	102.3	32.75	48.07
Mean	1.7	1.5	2.3	32.3	2.66			25.1	77.4	10.1	2.3	76.6	100.9	32.56	49.46

^{*}Value based on cash bids for each variety on October 11 at 73.40 cent December 2024 futures using commercial ginning and USDA-AMS classing results.





Appendix

Evans 2024 Dryland Mixed Technology Cotton Variety Trial – Plant height and NAWF graphs, Amarillo 2024 cotton heat units and weather data.

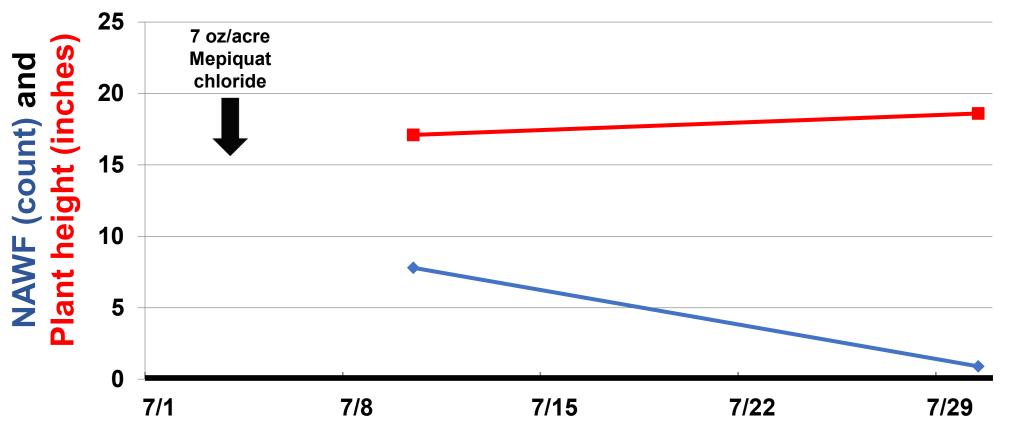






Evans Dryland Mixed Technology Variety Trial (Across All Entries)

Kress - 2024



Hard cutout "bloomed out the top"

Rainfall (inches): May 2.1, June 2.4, July 0.1, August 0.6, September 0.0 = 5.2

Dry planted: May 2 (Rain May 10)

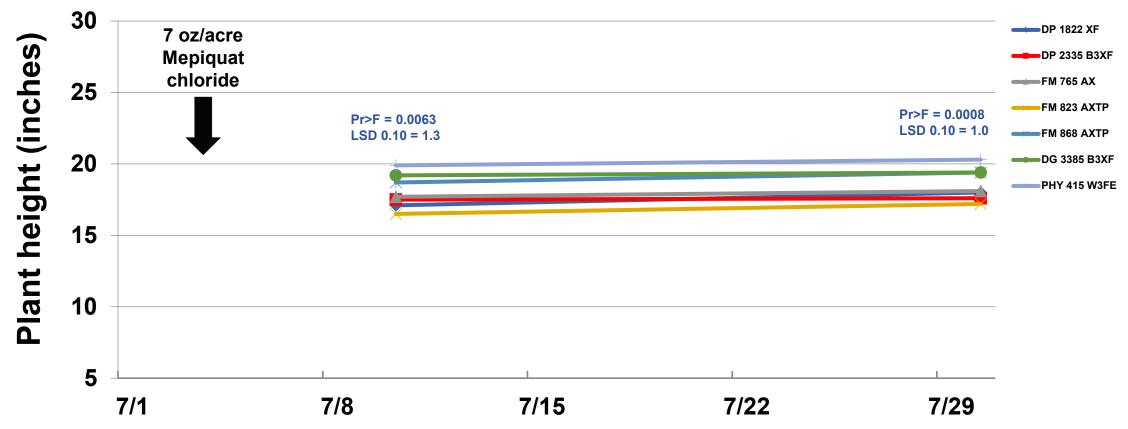
Days to bloom: 62 (after rain)

First bloom date: Jul 10



Evans Dryland Mixed Technology Variety Trial (Across All Entries)

Kress - 2024



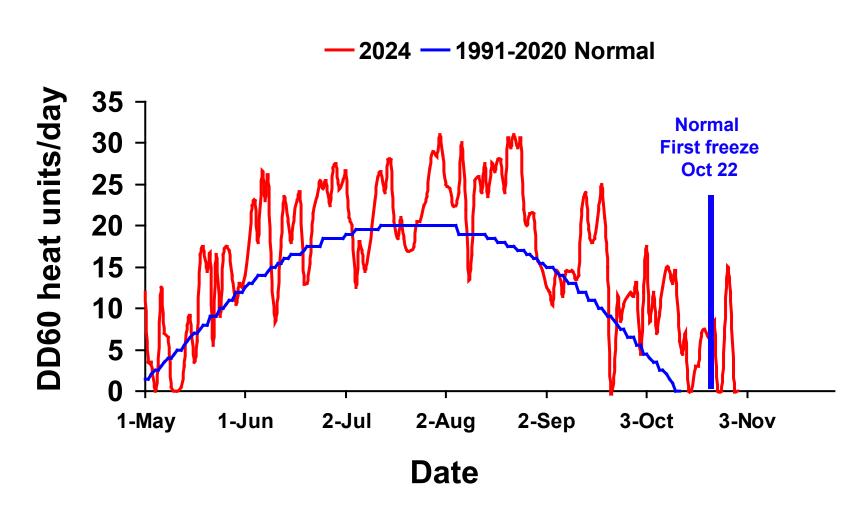
Rainfall (inches): May 2.1, June 2.4, July 0.1, August 0.6, September 0.0 = 5.2

Dry planted: May 2 (Rain May 10)

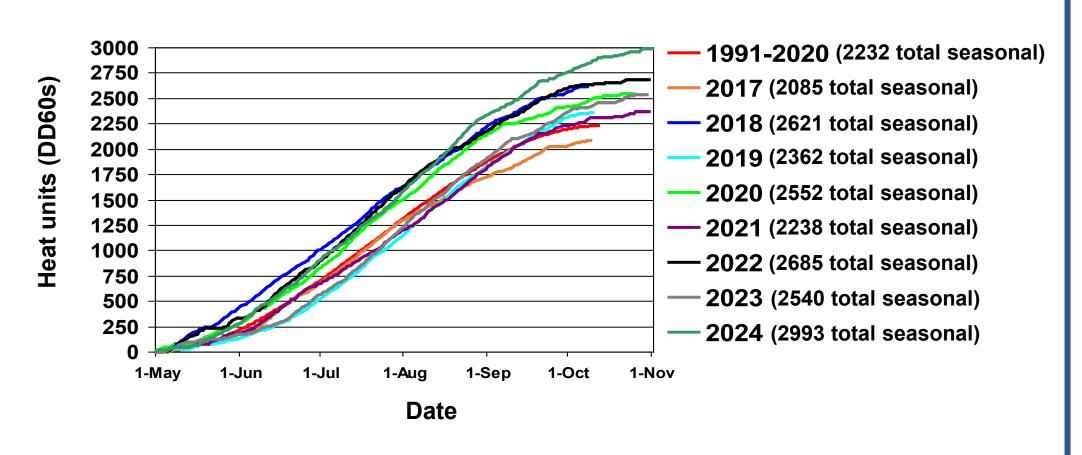
Days to bloom: 62 (after rain)

First bloom date: Jul 10

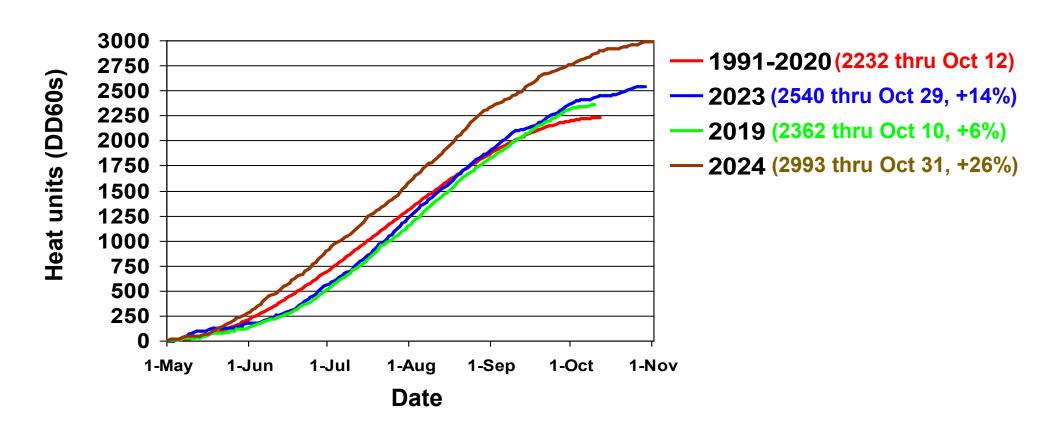
Amarillo 30-Year Normal (1991-2020) and 2024 Daily Heat Units



Amarillo 30-Yr Normal (1991-2020) vs. 2017 through 2024 Cotton Heat Unit Accumulation From May 1 Through First Hard Freeze

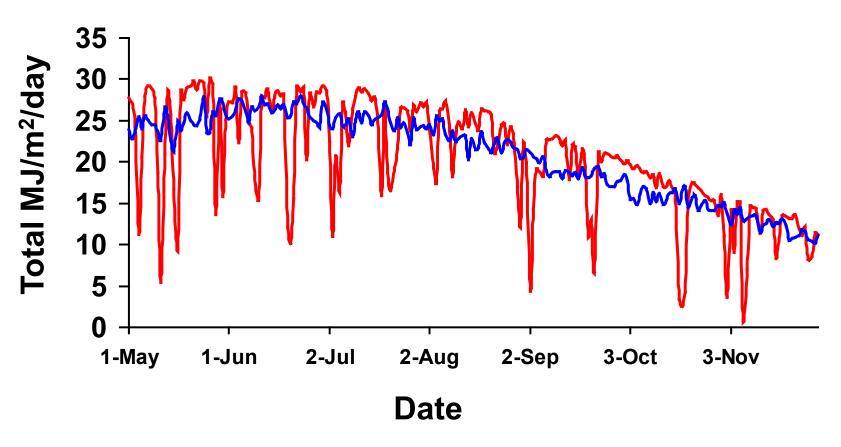


Amarillo 30-Yr Normal (1991-2020) vs. 2019, 2023 and 2024 Cotton Heat Unit Accumulation From May 1



Muleshoe 18-Year Mean (2004-2021) and 2024 Daily Total Solar Radiation (MJ/meter²)

— 2024 — Muleshoe 18-Yr Mean

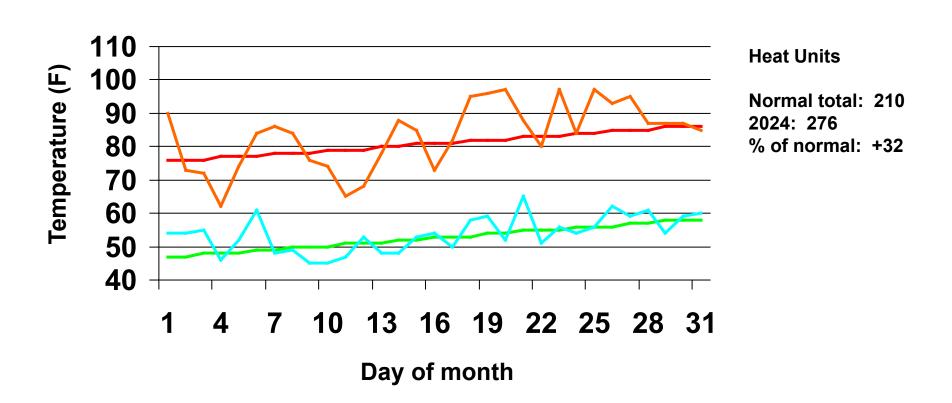


Total solar energy, in MJ/meter², calculated from the hourly average global solar radiation rates and converted to energy by integrating over time.

Source: https://www.ncei.noaa.gov/pub/data/uscrn/products/daily01/2024/

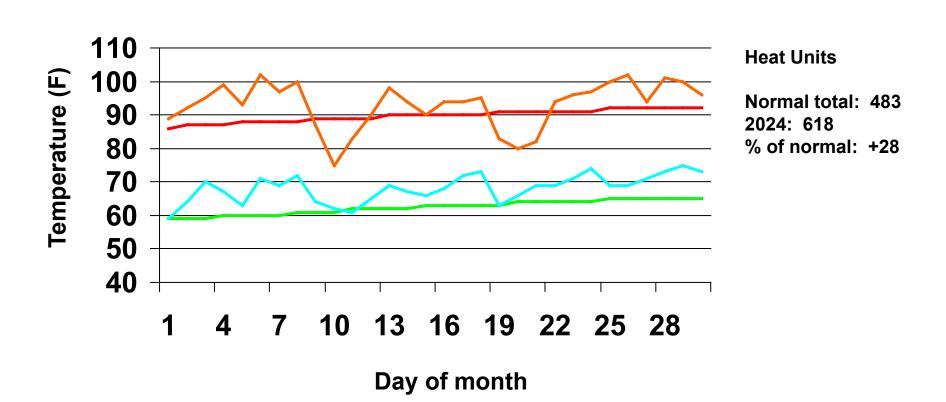
Amarillo 30-Yr Normal (1991-2020) and May 2024 Air Temperatures

─ Normal High ─ Actual High ─ Normal Low ─ Actual Low



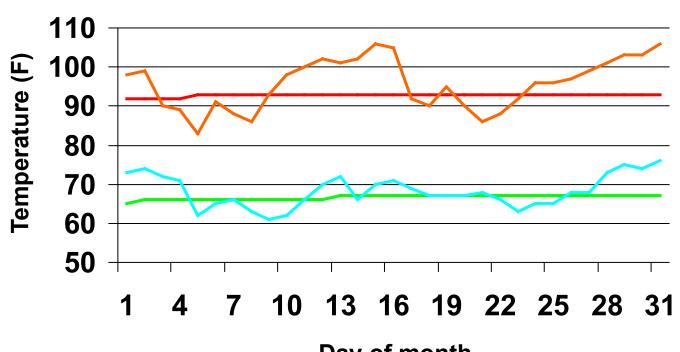
Amarillo 30-Yr Normal (1991-2020) and June 2024 Air Temperatures

— Normal High — Actual High — Normal Low — Actual Low



Amarillo 30-Yr Normal (1991-2020) and July 2024 Air Temperatures

— Normal High — Actual High — Normal Low — Actual Low



Heat Units

Normal total for month: 612

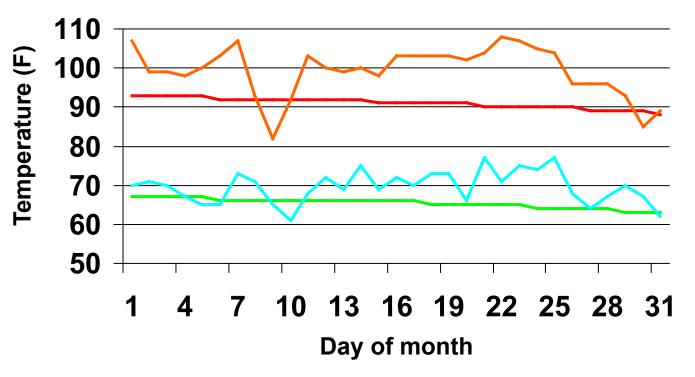
2024: 680

% of normal: +11

Day of month

Amarillo 30-Yr Normal (1991-2020) and August 2024 Air Temperatures

— Normal High — Actual High — Normal Low — Actual Low



Heat Units

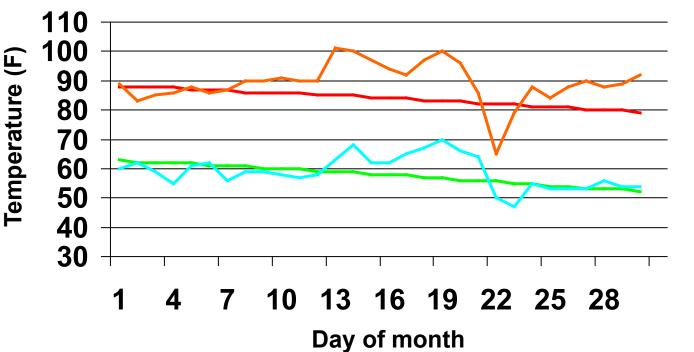
Normal total for month: 565

2024: 757

% of normal: +34

Amarillo 30-Yr Normal (1991-2020) and September 2024 Air Temperatures

— Normal High — Actual High — Normal Low — Actual Low



Heat Units

Normal total for month: 329

2024: 427

% of normal: +30

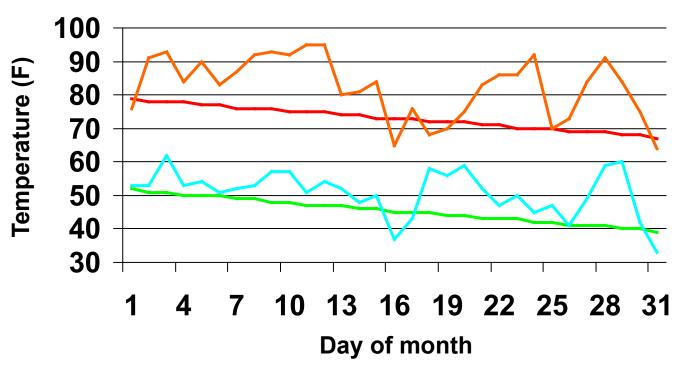
Normal Heat Units/Day

Sep 1: 16 Sep 30: 6

Goes to zero on Oct 12

Amarillo 30-Yr Normal (1991-2020) and October 2024 Air Temperatures

— Normal High — Actual High — Normal Low — Actual Low



Heat Units

Normal total for month: 35

2024: 235

% of normal: +571

Normal Heat Units/Day

Oct 1: 6 Oct 12: 0

Goes to zero on Oct 12

No first freeze in Oct; first freeze on Nov 9 (32 degrees). No hard freeze in Oct; hard freeze on Nov 29 (25 degrees).

Amarillo 2024 DD60s vs Normal (1991-2020)

Month	May	June	July	August	September
Normal	210	483	612	565	329
Actual	276	618	680	757	427
% of Normal	+32	+28	+11	+34	+30
Number of days <u>></u> 100 degrees	0	6	10	17	3