

2024 Enlist Cotton Variety Trial – Edcot Gin

George Brothers Farm Hart, TX

Dr. Randy Boman, Cotton Agronomics Manager – Windstar Inc.

Landon Kidd, Edcot Gin Manager

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, six entries with Enlist technology were planted in a center pivot irrigated field in a scientifically valid trial with three replicates. These entries included PHY 205 W3FE, PHY 210 W3FE, PHY 250 W3FE, PHY 332 W3FE, PHY 411 W3FE, and PHY 415 W3FE.

Relatively fair moisture conditions prevailed at the site during the early spring, then low rainfall was encountered in July and August. The trial was planted May 21 and escaped hail and wind events typically associated with spring thunderstorms. Good early-season growing conditions and outstanding vigor resulted in an average emergence of about 93% of the seed planted (45,000 seed/acre) when stand count observations were performed on June 18. Minimal seedling disease was noted. A total of 62 days from planting to first bloom (July 22) was noted in this trial. This indicates a fairly rapid rate of development based on calendar days. This is attributed to good root health, and warm May and June growing conditions. Once the crop reached the bloom stage, its progression was excellent through the early August when excessively high temperatures occurred and rainfall became sparse. Due to the long growing season and limited irrigation, the trial's yield and quality were fair. Yields were moderate (about 2 bales/acre) in the test and fiber maturity as measured by micronaire was excessively high in some entries. Micronaire averaged 4.9 across all entries, and staple was short due to high

moisture stress in August and September. Substantial late season pre-harvest rainfall likely impacted the color and leaf grades in the trial.

Harvest results indicated that statistically significant differences were observed. Lint yields ranged from a high of 1169 lb/acre (PHY 411 W3FE) to a low of 953 lb/acre (PHY 210 W3FE), and averaged 1079 lb/acre (Table 1). Average Loan value for varieties from commercially ginned and classed bales varied from a high of \$0.5318/lb (PHY 415 W3FE) to a low of \$0.4856/lb (PHY 411 W3FE). Overall Loan value for the trial across all entries was 0.5094/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 \$603/acre (PHY 411 W3FE) to a low of \$530/acre (PHY 210 W3FE), a difference of \$73/acre. These differences were statistically significant, and had a low coefficient of variation of about 5%, indicating low variability among entries across replicates. Five of the six entries were in the top "t-group" indicating there were no significant differences among those five entries.

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 January 6th at 68.50 cent March 2025 futures using the USDA-AMS classing results. These cash bid values ranged from a high of \$0.6252/lb (PHY 415 W3FE) to a low of \$0.56314/lb (PHY 205 W3FE) and averaged almost \$0.60/lb. Net value/acre (defined as gross lint cash value plus net gin credit) ranged from a high of \$721/acre (PHY 332 W3FE) to a low of \$618/acre (PHY 210 W3FE), a difference of \$103/acre. These differences were statistically significant, and had a low coefficient of variation at just under 5%. Based on cash bid value, four of the entries were in the top "t-group" (denoted by the letter "a") indicating there were no significant differences among those four entries.

Table 3 presents in-season data including stand establishment percentage, vigor, nodes above white flower (NAWF) on two observation dates, plant height on three observation dates, nodes above cracked boll (NACB) on October 3, and a visual estimate of storm resistance at harvest. Final plant heights ranged from a high of 28.4 inches for PHY 411 W3FE to a low of 22.1 inches for PHY 205 W3FE.

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 good and were predominantly 31 across all entries. Leaf grades ranged from about 3 to 4. Staple ranged from a low of 32.6 (PHY 411 W3FE) to a high of 34.5 32nds inch (PHY 332 W3FE and PHY 415 W3FE). Micronaire averages were excellent for most entries and ranged from a low of 4.73 (PHY 415 W3FE) to a high of over 5 (PHY 205 W3FE and PHY 332 W3FE). No bark contamination was noted in commercial bales. Fiber strength ranged from 28.3 to 30.3 g/tex, and uniformity ranged from 80.3 to 80.9%. 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: 3605 ft

Previous crop: Wheat for grain

Tillage system: No-till

Planted: May 21

Replicates: 3 replicates in a randomized complete block design

Plot width: 8-row plots

Plot length: Trial was planted in the full length of semi-circular rows and were ~3,450 ft long

Seeding rate: 45,000 seed/acre

Days from planting to first bloom: 62 (July 22)

Row spacing: 30-inch rows

Rainfall (inches) by month:

Jan 0.64, Feb 0.51, Mar 0.29, Apr 1.52, May 0.65, Jun 3.82, Jul 0.12, Aug 1.58, Sept 1.74, Oct 0.12, Nov 4.64, Dec 0.0

Total irrigation by month:

Mar 2.0, Apr 0.0, May 1.0, Jun 1.0, Jul 3.5, Aug 2.0, Sept 2.0, Total 11.5

Herbicide management – products, rates, and dates of application:

March 10 – 2 oz/acre Red Eagle, 32 oz/acre Roundup, 10 oz/acre dicamba, 22 oz/acre 2,4-D LV6

May behind planter – 16 oz/acre Direx, 16 oz/acre Caparol, 32 oz/acre paraquat

June 15 – 16 oz/acre Outlook

July 4 – 43 oz Liberty, 32 oz/acre Roundup

Nitrogen fertility rates, dates, and application methods:

June 15 - 15 gpa 32-0-0 via pivot

July 10 - 15 gpa 32-0-0 via pivot

Total of 30 gpa of 32-0-0, so ~103 lb N/acre via fertigation

Other fertility (phosphate, potash, micronutrients) application rates, dates and application methods: None

Insecticide products, application rates and dates:

June 15 - Acephate

Plant growth regulator products, application rates and dates:

July 4 – 3 oz/acre Stance

Harvest aid products, application rates, and dates:

Oct 8 – 48 oz/acre Setup (ethephon)

Harvesting: December 16 using a John Deere CS690, a full round module was harvested for each 8-row plot. Round modules were weighed using the integral CS690 handler scale, and round modules were weighed by variety at the 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 the 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: Table 1 is based on CCC Loan value from commercial ginning and USDA-AMS classing results.

List of Tables

Table 1. Harvest results for the center pivot irrigated Enlist technology cotton variety trial, George Farm, Hart, TX, 2024.

Table 2. Harvest results for the center pivot irrigated Enlist technology cotton variety trial, George Farm, Hart, TX, 2024.

Table 3. Plant observation results from the center pivot irrigated Enlist technology cotton variety trial, George Farm, Hart, TX, 2024.

Table 4. Commercial classing data for the center pivot irrigated Enlist technology cotton variety trial, George Farm, Hart, TX, 2024.

Table 5. Mean commercial classing data across all bales by treatment for the center pivot irrigated Enlist technology cotton variety trial, George Farm, Hart, TX, 2024.

Appendix – Amarillo 2024 cotton heat units and weather data.

Acknowledgements

Edcot Gin would like to thank Brennan George and Gentry George for committing equipment, land, and time to conduct and manage the trial. Gratitude is expressed to PhytoGen Cotton Seed for providing trial seed, 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 in-season data collection and module supervision and detailed ginning procedures.



Table 1. Harvest results for the center pivot irrigated Enlist technology cotton variety trial, George Farm, Hart, 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	
	9	6	I	b/acre		\$/lb		\$/acre	e	
PHY 411 W3FE	32.1	39.5	3638	1169	1437	0.4856	567	36	603	а
PHY 332 W3FE	31.3	38.1	3607	1129	1373	0.5060	572	30	601	а
PHY 205 W3FE	31.9	39.6	3569	1139	1413	0.4866	554	36	590	а
PHY 415 W3FE	31.2	38.1	3369	1052	1282	0.5318	560	28	587	а
PHY 250 W3FE	30.6	39.7	3381	1033	1343	0.5244	542	35	576	а
PHY 210 W3FE	31.2	40.2	3058	953	1228	0.5221	498	33	530	b
Test average	31.4	39.2	3437	1079	1346	0.5094	549	33	581	
CV, %			4.9	4.9	4.9		4.8	5.1	4.8	
OSL			0.0136	0.0045	0.0222		0.0551	0.0004	0.0782	
LSD			247	78	97		39	3	41	

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 center pivot irrigated Enlist technology cotton variety trial, George Farm, Hart, 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		\$/lb		\$/acre		
PHY 332 W3FE	31.3	38.1	3607	1129	1373	0.6124	692	30	721	а
PHY 411 W3FE	32.1	39.5	3638	1169	1437	0.5643	659	36	695	ab
PHY 415 W3FE	31.2	38.1	3369	1052	1282	0.6252	658	28	686	ab
PHY 205 W3FE	31.9	39.6	3569	1139	1413	0.5631	642	36	677	ab
PHY 250 W3FE	30.6	39.7	3381	1033	1343	0.6159	636	35	671	b
PHY 210 W3FE	31.2	40.2	3058	953	1228	0.6136	585	33	618	С
Test average	31.4	39.2	3437	1079	1346	0.5991	645	33	678	
CV, %			4.9	4.9	4.9		4.7	5.1	4.7	
OSL			0.0136	0.0045	0.0222		0.0282	0.0004	0.0464	
LSD			247	78	97		45	3	48	

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.

Value based on cash bids for each variety on January 6 at 68.50 cent March 2025 futures using commercial ginning and USDA-AMS classing results.



Table 3. Plant observation results from the center pivot irrigated Enlist technology cotton variety trial, George Farm, Hart, TX, 2024.

Entry	Final	Stand	Vigor	Nodes above	white flower		Plant height		Nodes above	Storm
	population	establishment	_	Mid bloom	Late bloom	Prebloom	Mid bloom	Final	cracked boll	resistance
	plants/acre	%	1-5 visual scale, 5 best	col	unt		inches		count	1-9 visual scale, 9 tight
	18-Jun	18-Jun	18-Jun	30-Jul	14-Aug	10-Jul	30-Jul	14-Aug	3-Oct	16-Dec
PHY 205 W3FE	42,398	94.2	4.0	7.2	2.1	13.0	20.6	22.1	0.6	8.2
PHY 210 W3FE	40,946	91.0	3.7	6.9	2.1	14.1	21.3	22.2	0.9	7.3
PHY 250 W3FE	39,785	88.4	4.2	7.5	3.0	13.0	23.0	24.6	1.4	7.2
PHY 332 W3FE	43,270	96.2	4.3	7.5	3.3	14.3	25.6	28.3	4.3	6.0
PHY 411 W3FE	42,689	94.9	3.7	8.7	3.9	14.0	24.7	28.4	3.7	5.5
PHY 415 W3FE	42,689	94.9	4.3	7.2	2.6	16.3	26.0	28.1	3.7	6.0
Test average	41,963	93.3	4.0	7.5	2.8	14.1	23.5	25.6	2.4	6.7
CV, %	4.5	4.5	3.2	7.5	20.5	6.0	5.8	6.7	33.9	3.3
OSL	0.2888	0.2882	0.0002	0.0325	0.0166	0.0084	0.0026	0.0015	0.0007	0.0001
LSD	NS	NS	0.2	0.8	0.9	1.3	2.0	2.6	1.2	0.3

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 center pivot irrigated Enlist technology cotton variety trial, George Farm, Hart, TX, 2024.

Variety 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
PHY 205 W3FE	1				1	•							•		
4206649	31-1	3	1	2	33	4.7		•	29.2	78.5	8.3	2	81.6	104	50.75
4206650	31-1	3	1	3	33	5.1			28.3	77.5	8.5	3	80.2	103	48.05
4206651	31-1	3	1	3	33	5.5	•	•	30.5	77.2	8.5	3	81.2	103	46.75
4206652	31-1	3	1	2	33	5.1		•	29.2	77.6	8.5	2	80.1	104	48.25
4206653	31-1	3	1	3	33	5.0		•	29.4	77.0	8.4	3	81.3	103	48.10
4206654	31-1	3	1	3	33	5.0		•	30.7	77.2	8.5	3	80.7	103	48.25
4206655	31-1	3	1	3	33	5.3		•	29.6	77.0	8.5	2	80.3	103	46.60
4206656	31-1	3	1	3	34	4.9		•	30.9	77.0	8.5	3	79.2	105	52.55
Average		3.0	1.0	2.8	33.1	5.08	none	none	29.7	77.4	8.5	2.6	80.6	103.5	48.66
PHY 210 W3FE															
4206657	31-1	3	1	2	35	4.9	•		30.0	78.0	8.2	2	81.7	109	54.65
4206658	31-1	3	1	2	34	4.9	•		31.0	78.3	8.2	2	81.0	106	53.25
4206659	31-2	3	1	3	34	4.9			30.8	77.3	8.2	3	81.1	107	53.00
4206660	31-1	3	1	2	34	4.9			30.1	78.4	8.3	2	81.6	107	53.10
4206661	31-1	3	1	1	34	4.8	•		29.7	78.1	8.5	1	79.6	106	52.50
4206662	31-1	3	1	2	34	5.0			30.5	78.6	8.2	2	80.6	106	50.60
4206663	31-1	3	1	2	33	5.0	•		30.1	78.8	8.2	2	80.5	104	48.40
Average		3.0	1.0	2.0	34.0	4.91	none	none	30.3	78.2	8.3	2.0	80.9	106.4	52.21
PHY 250 W3FE															
4206664	31-1	3	1	2	34	4.8			28.9	78.2	8.2	2	81.0	107	52.90
4206665	31-1	3	1	3	34	4.9			29.3	77.6	8.0	2	79.6	107	52.40
4206666	31-2	3	1	2	34	4.9			28.2	77.1	8.2	2	80.6	106	52.90
4206667	31-2	3	1	3	33	4.8			28.6	77.4	8.2	3	80.1	103	50.55
4206668	21-2	2	1	2	34	4.8		•	28.1	78.5	8.5	2	80.8	107	53.50
4206669	31-1	3	1	2	35	4.9			29.0	78.5	8.3	2	81.9	108	54.50
4206670	31-1	3	1	3	34	5.0		•	28.4	77.9	8.2	2	81.4	106	50.30
Average		2.9	1.0	2.4	34.0	4.87	none	none	28.6	77.9	8.2	2.1	80.8	106.3	52.44



Table 4 (continued). Commercial classing data for the center pivot irrigated Enlist technology cotton variety trial, George Farm, Hart, TX, 2024.

	Color Grade-Quadrant	Color	Color	Leaf	Ctoulo	Missansina	Extraneous	Remarks	Chuanath	Rd	+b	Trash	Haifamaita.	Laurath	I con voto
Variety and Bale Number	grade-quadrant	digit 1		grade	Staple 32nds inch	units	matter	remarks 	Strength	ка %	+b %	% area	Uniformity %	Length 100ths inch	Loan rate
Date Nulliber	graue-quaurant	uigit 1	digit 2	graue	32Hus Hich	units	matter		g/tex	70	70	% area	70	100ths inch	cents/ib
PHY 332 W3FE															
4206671	31-3	3	1	2	36	4.9			30.0	75.7	9.2	2	82.9	111	56.25
4206672	31-3	3	1	2	34	5.0			29.8	75.9	9.3	2	80.5	106	50.45
4206673	21-4	2	1	2	34	5.0			30.4	76.5	9.5	2	80.2	107	51.20
4206674	31-3	3	1	3	35	5.2			25.0	76.1	9.5	3	82.0	108	46.85
4206675	32-1	3	2	2	34	5.0			28.3	75.5	9.6	2	79.9	107	48.15
4206676	22-1	2	2	2	34	4.9			28.5	77.4	9.8	2	80.1	106	52.55
4206677	22-1	2	2	2	35	5.0			28.6	77.0	9.7	2	81.6	109	51.20
4206678	32-1	3	2	2	34	5.0			27.9	75.8	9.7	2	79.1	105	48.15
Average		2.6	1.5	2.1	34.5	5.00	none	none	28.6	76.2	9.5	2.1	80.8	107.4	50.60
PHY 411 W3FE															
4206679	31-1	3	1	3	34	4.6			29.8	77.0	8.5	4	81.7	106	52.85
4206680	31-1	3	1	3	33	4.6			28.2	77.7	7.9	3	80.1	102	50.55
4206681	31-2	3	1	3	33	4.9			27.5	77.0	8.2	4	80.0	102	50.55
4206682	31-1	3	1	2	32	5.0			27.4	79.4	8.4	2	80.5	100	46.70
4206683	31-1	3	1	3	32	5.1	•		27.7	78.9	8.2	3	80.0	100	46.55
4206684	31-1	3	1	3	32	5.1			29.0	78.6	8.1	3	79.9	101	46.15
4206685	31-1	3	1	3	32	5.2			28.5	77.9	8.1	3	80.2	101	46.55
Average		3.0	1.0	2.9	32.6	4.93	none	none	28.3	78.1	8.2	3.1	80.3	101.7	48.56
PHY 415 W3FE															
4206687	31-4	3	1	4	34	4.9	•		28.5	74.8	9.1	4	81.4	105	52.55
4206688	31-3	3	1	3	35	4.7			30.9	75.7	9.2	3	79.9	108	54.00
4206689	31-3	3	1	4	35	4.7		•	30.8	76.0	9.0	4	80.9	110	53.65
4206690	31-4	3	1	4	34	4.7			29.2	74.9	9.1	4	81.7	106	52.60
4206691	31-4	3	1	4	34	4.8			29.1	74.9	8.9	4	80.8	107	52.60
4206692	31-4	3	1	4	35	4.6			30.4	75.1	9.1	5	80.8	108	53.65
Average		3.0	1.0	3.8	34.5	4.73	none	none	29.8	75.2	9.1	4.0	80.9	107.3	53.18



Table 5. Mean commercial classing data across all bales by treatment for the center pivot irrigated Enlist technology cotton variety trial, George Farm, Hart, 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
PHY 205 W3FE	3.0	1.0	2.8	33.1	5.08	none	none	29.7	77.4	8.5	2.6	80.6	103.5	48.66	56.31
PHY 210 W3FE	3.0	1.0	2.0	34.0	4.91	none	none	30.3	78.2	8.3	2.0	80.9	106.4	52.21	61.36
PHY 250 W3FE	2.9	1.0	2.4	34.0	4.87	none	none	28.6	77.9	8.2	2.1	80.8	106.3	52.44	61.59
PHY 332 W3FE	2.6	1.5	2.1	34.5	5.00	none	none	28.6	76.2	9.5	2.1	80.8	107.4	50.60	61.24
PHY 411 W3FE	3.0	1.0	2.9	32.6	4.93	none	none	28.3	78.1	8.2	3.1	80.3	101.7	48.56	56.43
PHY 415 W3FE	3.0	1.0	3.8	34.5	4.73	none	none	29.8	75.2	9.1	4.0	80.9	107.3	53.18	62.52
Mean	2.9	1.1	2.7	33.8	4.92	•	•	29.2	77.2	8.6	2.7	80.7	105.4	50.94	59.91

^{*}Value based on cash bids for each variety on January 6 at 68.50 cent March 2025 futures using commercial ginning and USDA-AMS classing results.





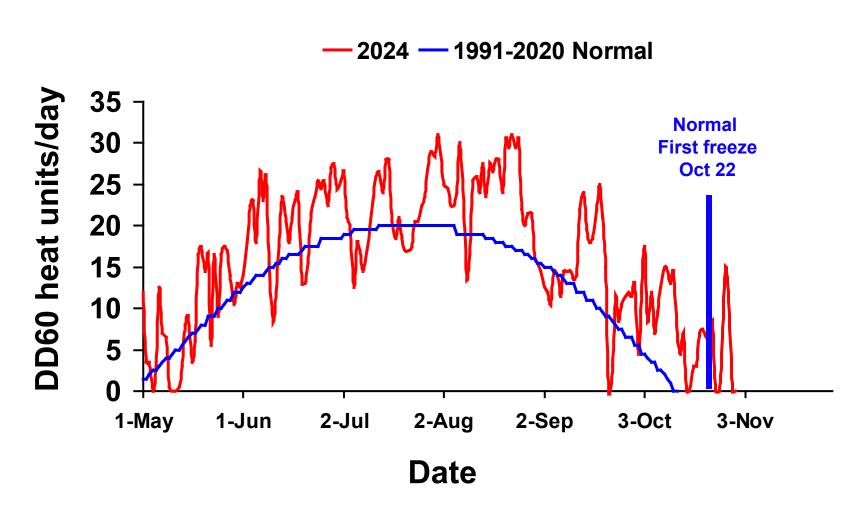
Appendix

Amarillo 2024 cotton heat units and weather data.

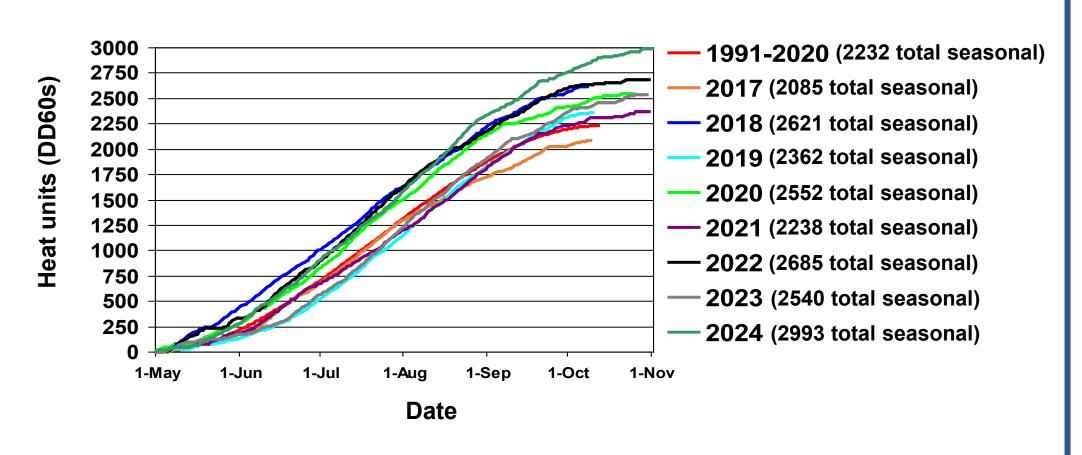




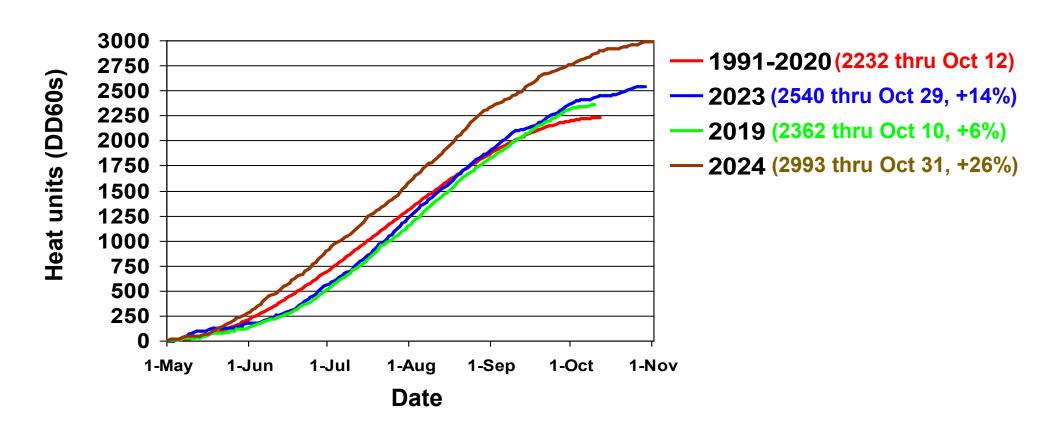
Amarillo 30-Year Normal (1991-2020) and 2024 Daily Heat Units



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

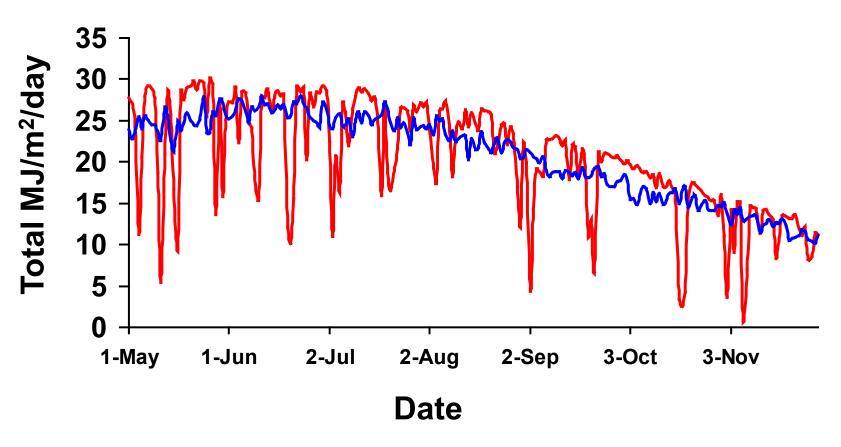


Amarillo 30-Yr Normal (1991-2020) vs. 2019, 2023 and 2024 Cotton Heat Unit Accumulation From May 1



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

— 2024 — Muleshoe 18-Yr Mean

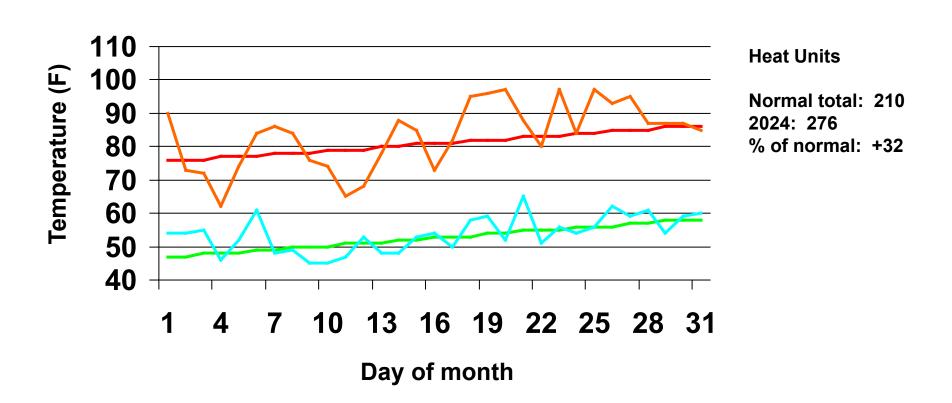


Total solar energy, in MJ/meter², calculated from the hourly average global solar radiation rates and converted to energy by integrating over time.

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

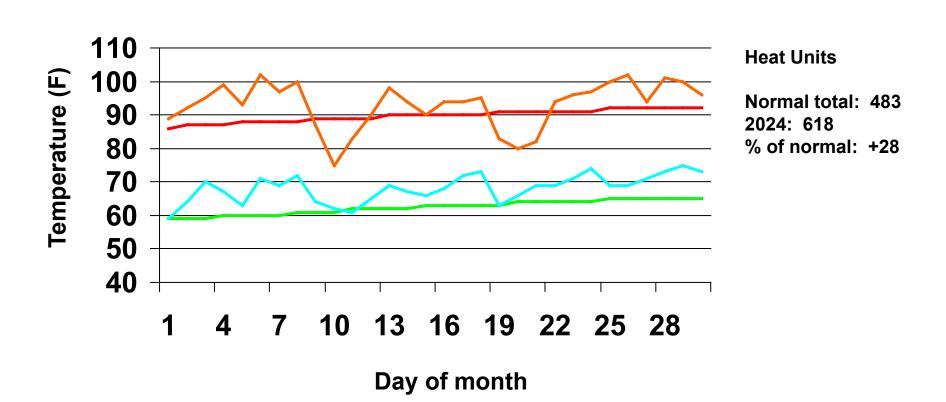
Amarillo 30-Yr Normal (1991-2020) and May 2024 Air Temperatures

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



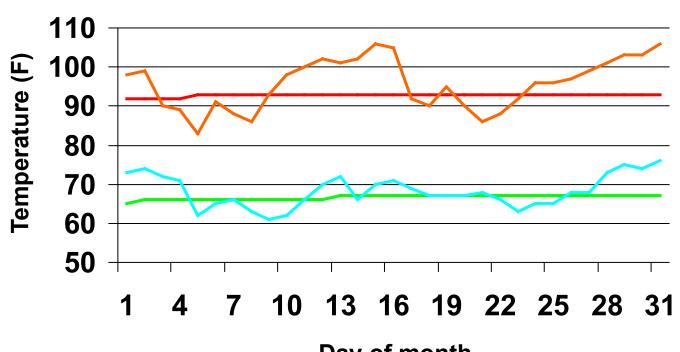
Amarillo 30-Yr Normal (1991-2020) and June 2024 Air Temperatures

— 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

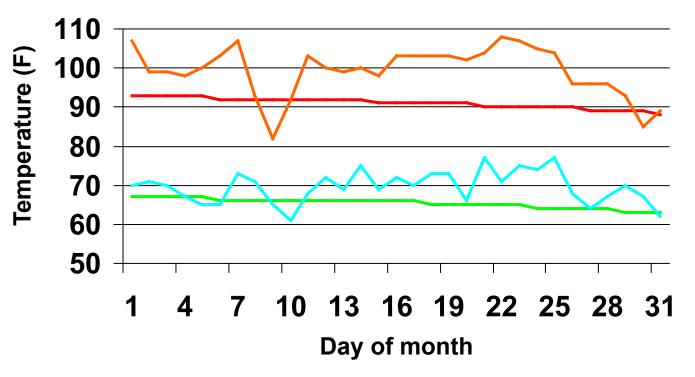
2024: 680

% 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

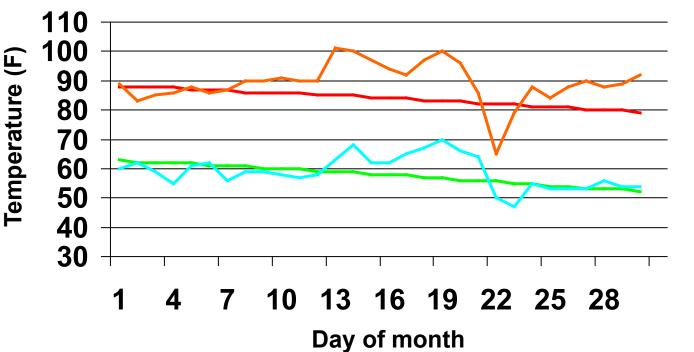
Normal total for month: 565

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

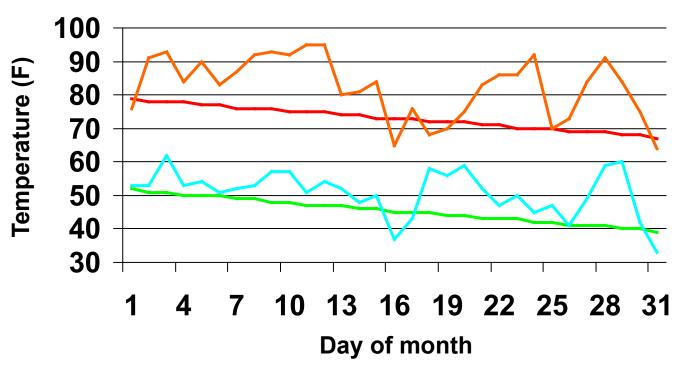
Normal Heat Units/Day

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