



## General Area Crop Progress

Fields are starting to dry out after this month’s early rains. Some fields of **Grain Sorghum** and **Soybeans** are yet to be harvested. The **Cotton** crop continues to open bolls. Defoliation and harvest should start soon. There are visible differences in varieties with some self defoliating and others still bright green. If the pattern of the past few years of wet fall weather continues, cotton should be harvested as soon as possible. This will preserve the quality of the crop. White blooms were tagged on 26 varieties in our Fairlie, TX variety trial on September 1st. 96% of these blooms have been aborted. See the Figure below.

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Figure 1. White first position cotton blooms tagged on Sept. 1, 2020. Aborted fruiting position, left, growing boll on the right.

Most likely blooms were dropped from the August moisture stress and then lack of sugars during the early September rainy days. This indicates that we do not have the late crop of bolls as in previous years where greater than 50 percent of fruit was retained. With warm weather in the forecast harvest aids with Thidiazuron (Dropp) and a boll opener should work well. To slow regrowth after defoliation, looking at data from previous year’s trials; using a Ginstar product (Thidiazuron + Diuron) slows regrowth or applying Gramoxone and killing tissues following defoliation has shown the best success in our area.

The rains have breathed new life into weeds and sprouted fall weeds. Inside this newsletter is a fall herbicide study targeted at **Controlling Annual Ryegrass**.

Fall Annual forages will soon be planted with **Grasshoppers** and **Fall Armyworms** still in high numbers delaying planting or frequent scouting is necessary. Recommendations to control these and other forage pests can be found in the Extension publication. Managing Insect Pests of Texas Forage Crops. <http://agrilife.org/lubbock/files/2017/08/Managing-Insect-Pests-of-Texas-Forage-Crops-ENTO-064-2017.pdf>

Enclosed are the **Corn and Grain sorghum variety trial results** for the Hunt County trial and State Uniform Trials.

Statewide results are also posted to <http://varietytesting.tamu.edu/>

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## Annual Ryegrass Control in Northeast Texas Fallow Fields

Volunteer annual ryegrass is an important weed in cultivated Texas fields, especially following wheat crops and in years with abundant precipitation (Figure 1.) Further complicating this situation is that several biotypes of annual herbicide resistant ryegrass have been selected, especially to wheat herbicides and some biotypes have been reported to be resistant to broad spectrum herbicides such as glyphosate. A weed control and cropping system experiment was initiated on November 15, 2019 near Commerce, TX to identify control recommendations (Figure 2.). An annual ryegrass infested location was treated with several herbicides and management strategies for control. Gramoxone (paraquat) and Roundup Powermax (glyphosate) were used as broad spectrum non-residual treatments and were compared and combined with residual herbicides and evaluated for control throughout the winter and spring then in April soybeans were planted into the plots. Weed control was evaluated in season. See Tables 1 & 2.



Figure 1. Volunteer annual ryegrass seedlings in cultivated blackland fields November 2019



Figure 2. Annual ryegrass control plots near Commerce, TX November 2019. Green untreated plots, and a Gramoxone treated plot, front left; 11 days after treatment.

Table 1. Treatments to control annual ryegrass in fallow cropland following wheat with brand names, rates, and active ingredients

Treatments	Active Ingredient(s)
Untreated Check	
Gramoxone 3 SL 32 fl oz + Dual Magnum EC 20 fl oz	Paraquat dichloride + S-metolachlor
Gramoxone 3 SL 32 fl oz + Dual Magnum EC 20 fl oz + Metribuzin 4 oz	Paraquat dichloride + S-metolachlor + Metribuzin
Gramoxone 3 SL 32 fl oz + Valor SX 2 oz	Paraquat dichloride + Flumioxazin
Gramoxone 3 SL 32 fl oz + Zidua SC 3.5 fl oz	Paraquat dichloride + Pyroxasulfone
Gramoxone 3 SL 32 fl oz + Boundary 28.8 fl oz	Paraquat dichloride + S-metolachlor + Metribuzin
Gramoxone 3 SL 32 fl oz	Paraquat dichloride
Roundup PowerMax 32 fl oz	Glyphosate
Roundup PowerMax 32 fl oz + Atrazine 32 fl oz	Glyphosate + Atrazine
Gramoxone 3 SL 32 fl oz + Diuron 1.6 Qts	Paraquat dichloride + Diuron
Gramoxone 3 SL 32 fl oz + Atrazine 32 fl oz	Paraquat dichloride + Atrazine
Roundup PowerMax 32 fl oz on Feb 8, 2020	Glyphosate
Gramoxone 3 SL 32 fl oz on Feb 8, 2020	Paraquat dichloride

Treatments were applied to 2-4 leaf annual ryegrass on November 15, 2019 using flat fan nozzles and a total spray volume of 15 gallons per acre. Plots were rated at 3, 11, 32, 66, 93, and 130 days after treatment (dat) for control of annual ryegrass. Figure 3 and Table 2 show the results as percent of annual ryegrass controlled.

Figure 3. Percent annual ryegrass controlled 3 to 130 days after herbicide treatment (dat) at Commerce 2019-2020.

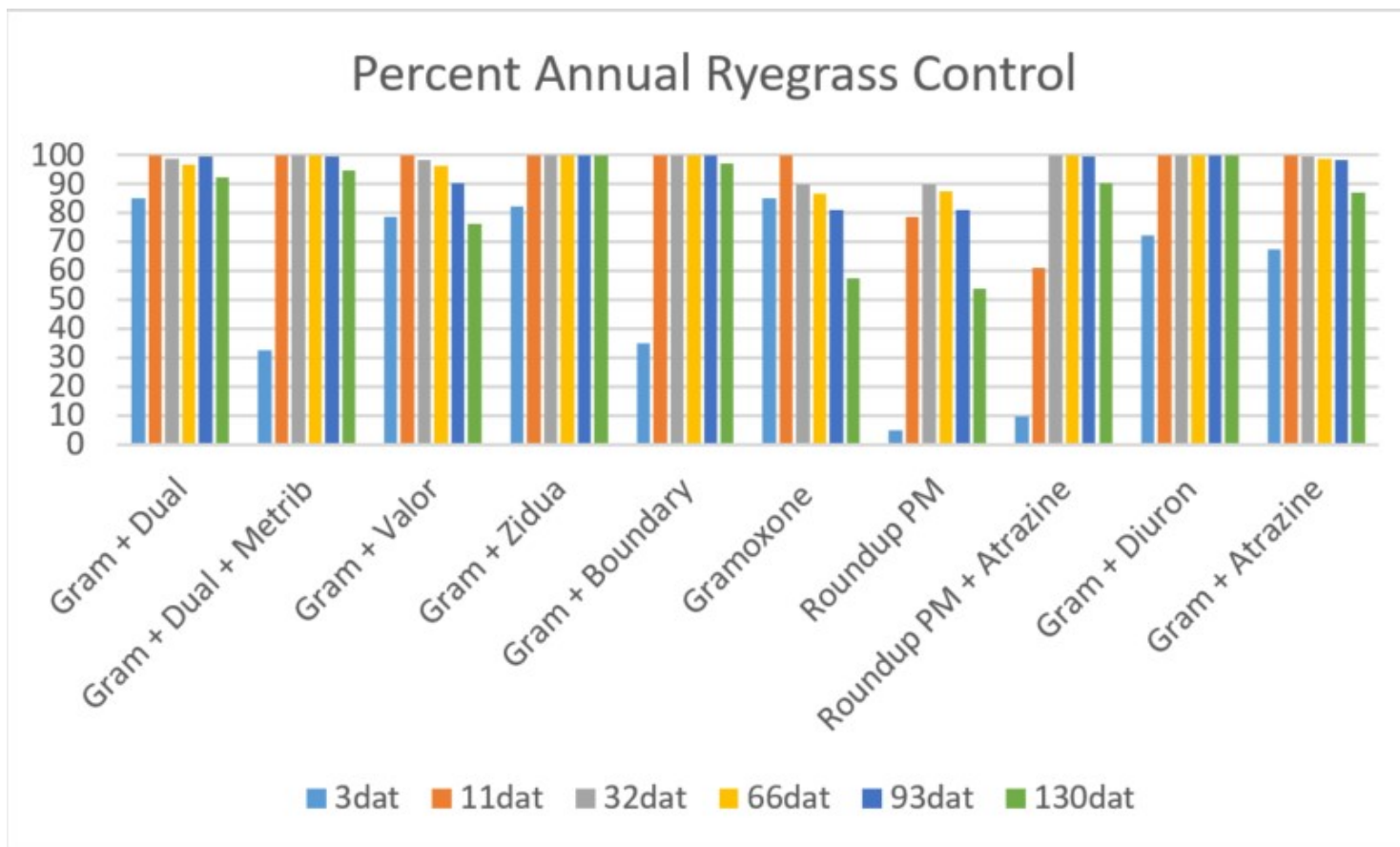


Table 2. Percent annual ryegrass controlled 3 to 130 days after herbicide treatment (dat) at Commerce 2019-2020.

	3dat	11dat	32dat	66dat	93dat	130dat
Gramoxone + Dual	85	100	98.8	96.8	99.5	92.5
Gram + Dual + Metribuzin	32.5	100	99.8	100	99.5	94.8
Gram + Valor	78.8	100	98.5	96.5	90.5	76.3
Gram + Zidua	82.5	100	100	100	100	99.8
Gram + Boundary	35	100	100	100	99.8	97.3
Gramoxone	85	100	90	86.8	81.3	57.5
Roundup PM	5	78.8	90	87.5	81.3	53.8
Roundup PM + Atrazine	10	61.3	99.8	100	99.75	90.5
Gram + Diuron	72.5	100	99.8	100	100	100
Gram + Atrazine	67.5	99.8	99.5	98.8	98.5	87.3
					8dat	45dat
Roundup PM 8 Feb 2020	0	0	0	0	33.8	90
Gramoxone 8 Feb 2020	0	0	0	0	86.3	76.3

A subset of plots were left untreated to evaluate:

- later herbicide treatments (February 8th, March 26th, and April 22nd)
- clipped treatments to simulate grazing and forage production (clippings in late January and March 25th)
- untreated until prior to planting as a cover crop.

The average forage yield for a late January clipping was 592 pounds of dry matter per acre. The average forage yield for plots clipped in March prior to cover crop burn down was 2468 pounds of dry matter per acre. All plots with significant weeds present were terminated with Gramoxone or Glyphosate on March 26, 2020 prior to no-till seeding soybeans on April 21, 2020. Plots that had been treated with products containing S-metolachlor + Metribuzin, Pyroxasulfone, and Glyphosate + Atrazine did not need a burndown application prior to planting with the exception of Gramoxone + Atrazine which had weed growth in some but not all plots.

Soybeans were rated for emergence and weed control. A final weed control rating was done prior to a post emergence application of Tavium (S-metolachlor + dicamba) and Roundup Powermax on May 20, 2020. Plots will be harvested for soybean yield.

Pictures of the plots at various stages follow. The soil type is a Wilson Silt Loam. Also note that **product labeling and crop rotation is very important when evaluating the results of this study for potential use on-farm**. Some crop phyto-toxicity on the soybeans was observed from the diuron and atrazine treatments justifying the labeling and crop rotations on these products. Product brand names are used for clarity. We would like to thank Syngenta for partial funding of this study.

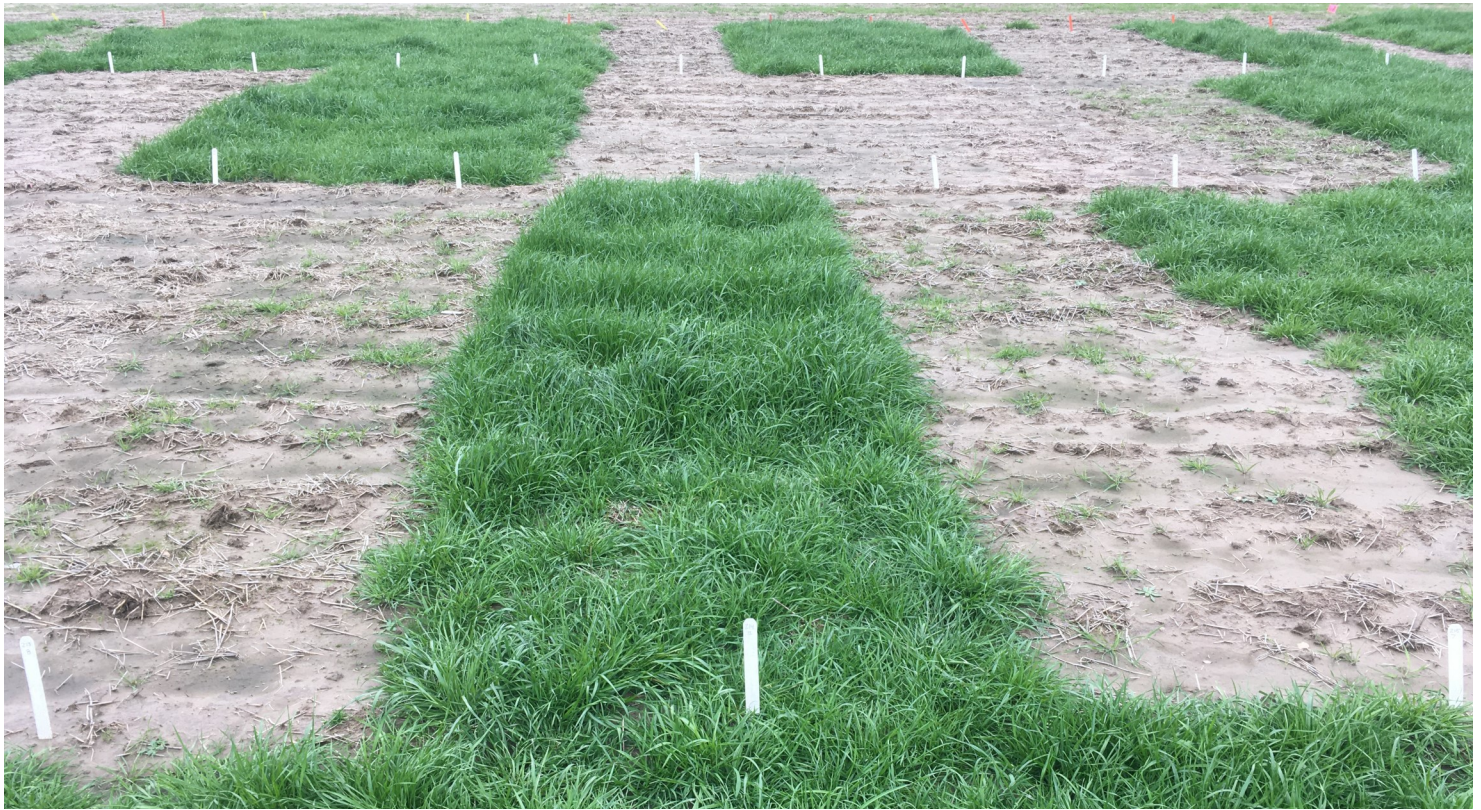


Figure 4. Ryegrass control plots on January 21, 2020, 67 days after treatment. Glyphosate treatment top left, untreated top center, Gramoxone treatment top right. All showing some weed growth. A very clean Gramoxone with Dual Magnum treatment plot bottom left. An untreated plot that was clipped to simulate grazing and yielded 418 pounds of dry matter per acre, bottom left.





Figure 5. Herbicide plots on May 4, 2020 after soybean emergence. The upper left plot was treated with glyphosate + atrazine in November 15, 2020. The upper right was treated with glyphosate on February 8 and burned down with Gramoxone on March 26, 2020. The lower left was harvested for forage on January 25, 2020, allowed to regrow, then terminated on March 26, 2020 with Gramoxone. The lower right image was allowed to grow all winter, simulated ryegrass cover crop; and terminated with Gramoxone on March 26, 2020.





Figure 6. Herbicide plots on July 31, 2020. The upper left plot was treated with glyphosate + atrazine in November 15, 2020. The upper right was treated with glyphosate on February 8 and burned down with Gramoxone on March 26, 2020. The lower left was harvested for forage on January 25, 2020, allowed to regrow, then terminated on March 26, 2020 with Gramoxone. The lower right image was allowed to grow all winter, simulated ryegrass cover crop; and terminated with Gramoxone on March 26, 2020. All plots were treated with a post emergence tank mix of Tavium @ 56.5 fl oz + Roundup PowerMax @ 22 fl oz on May 20, 2020



**Table 3:** 2020 Corn @ Greenville, TX Northeast Texas Agricultural Research Farm

## Hunt County Hybrid Comparison Test

COMPANY/HYBRID‡	Yield (bu/ac)	Test Weight (lb/bu)	Days to Silk
DKC 65-99	97.6 a	57.9 abc	65.3 de
Axis 65T29	94.5 ab	58.2 ab	67.0 bc
DKC 67-99	87.3 abc	57.2 a-d	64.5 e
Axis 64B28	86.5 a-d	55.5 cde	65.3 de
Pioneer P1213 YHR	80.0 a-d	56.2 b-e	64.3 e
DKC 65-94	79.4 bcd	58.8 a	66.3 cd
NK 1677-3110	78.7 bcd	54.5 ef	69.3 a
Pioneer P0805 YHR	75.7 cd	55.7 cde	63.8 e
Axis 65H25	74.6 cd	57.3 a-d	64.8 de
Pioneer 2042 VYHR	73.8 cd	55.1 def	69.0 a
NK 1748-3110	73.1 cd	52.6 f	69.0 a
Axis 64P25	72.4 cd	55.8 b-e	68.0 ab
Pioneer 1464 VYHR	69.4 d	54.1 ef	69.0 a
Pioneer P1847 VYHR	69.4 d	55.8 b-e	68.3 ab
<i>LSD (P = .05)</i>	<i>17.62</i>	<i>2.52</i>	<i>1.75</i>
<i>CV (%)</i>	<i>15.49</i>	<i>3.14</i>	<i>1.83</i>
<i>GRAND MEAN</i>	<i>79.45</i>	<i>56.04</i>	<i>66.68</i>

†Mean Separation: LSD @ 5%

‡ Ranked according to Yield

NS – Not Significant

Date Planted: April 15, 2020

Date Harvested: August 24, 2020

Planting Rate: 24,000 seeds/acre

Row Width (in): 30

Plot Length (ft): 31

Number of rows harvested: 2

Yields Corrected to 15.5% Moisture





**Greenville**  
**2020 Corn**  
**Performance Trial**

Brand	Hybrid	GE Trait(s)	Days to 50% Silk	Plant Height (in)	Ear Height (in)	Plants per Acre	Moisture %	Test Weight (lb/bu)	Yield (bu/acre)
LG Seeds	64C30	Genuity Trecepta	64	70	27	23,888	9.0	56.8	85
Progeny	PGY2015	Genuity VT Double PRO	68	73	28	21,218	9.6	59.2	83
LG Seeds	67C45	SmartStax	69	76	29	24,309	8.9	56.3	82
Integra	6621	Genuity DG VT Double PRO	65	76	26	23,817	8.7	56.3	81
Integra	6695	Genuity Trecepta	66	72	26	22,553	9.0	57.8	81
Integra	6540	Genuity Trecepta	64	73	27	23,677	8.4	56.3	81
Dyna-Gro	D54VC14	Genuity VT Double PRO	67	73	25	23,396	8.9	57.4	80
Progeny	EXP1913	Genuity VT Double PRO	66	76	28	23,888	7.8	55.2	80
Progeny	PGY9114	Genuity VT Double PRO	64	71	25	23,045	8.7	57.5	78
Dyna-Gro	D58SS65	Genuity SmartStax	68	67	23	22,272	9.2	57.8	77
Dyna-Gro	D53TC19	Genuity Trecepta	65	67	24	22,483	8.1	56.0	76
Integra	6588	Genuity VT Double PRO	69	76	26	23,045	8.6	56.1	74
Progeny	PGY8116	SmartStax	70	76	28	24,239	8.7	57.3	74
Dyna-Gro	D57VC51	Genuity VT Double PRO	68	74	25	23,466	8.0	55.4	74
Progeny	EXP2018	SmartStax	68	77	31	22,764	8.6	56.8	71
Dyna-Gro	D55VC80	Genuity VT Double PRO	69	77	26	22,553	8.6	56.5	70
Progeny	EXP2013	Genuity VT Double PRO	68	71	26	22,272	7.7	55.4	70
Progeny	PGY9117	Genuity VT Double PRO	70	76	24	22,904	8.2	56.4	68
Integra	6720	Genuity DG VT Double PRO	71	75	26	23,747	8.2	56.5	68
Integra	6410	SmartStax	66	70	23	22,904	8.4	56.7	64
Integra	6533	Genuity VT Double PRO	68	70	27	21,429	8.2	55.9	62
Progeny	PGY2012	Genuity VT Double PRO	67	72	24	22,834	7.2	54.5	62
LG Seeds	68C59		72	76	24	23,396	6.6	52.6	61
Agventure	AV8216	N/A	68	82	28	23,466	7.7	54.6	60
Progeny	EXP1912	Genuity VT Double PRO	67	74	25	23,536	7.2	54.5	56
Progeny	EXP1915	SmartStax	68	72	25	23,747	7.6	54.9	54
Pioneer	P1903		72	79	26	24,239	6.2	51.5	54

\*Yields highlighted in yellow are not significantly different (L.S.D., p=0.05) from the top ranked hybrid.



**Greenville**  
**2020 Corn**  
**Performance Trial**



Brand	Hybrid	GE Trait(s)	Days to 50% Silk	Plant Height (in)	Ear Height (in)	Plants per Acre	Moisture %	Test Weight (lb/bu)	Yield (bu/acre)	
<b>Agronomic information</b>			Mean	67	74	26	23,151	8.2	56.0	71
Plant Date	4/15/2020		C.V. %	2.7	5.1	9.9	7.0	9.6	2.3	17.4
Harvest Date	8/24/2020		P>f (hybrid)	0.000	0.000	0.009	0.538	0.000	0.000	0.002
Irrigated	No		L.S.D.	2.5	5.2	3.6		1.1	1.8	17.5
Row Spacing (in)	30		<b>Trial Notes</b>			Cooperator Texas A&M AgriLife				
Number of Rows	2		*Due to wet field conditions in the spring, test was planted later than the optimum plant date			Four replications of each hybrid are planted in a randomized block design. Model : yield = hybrid blk. LSD provided when hybrid significant at p < 0.05. Yields highlighted in yellow are not statistically different from the top ranked hybrid. Plots were planted using a SRES Advanced planter with Monosem units. Plots were harvested with a JD 3300 plot combine fitted with a Harvest Master GrainGage System. Precipitation data was recorded from January 1 through the harvest date.				
Seeds per Acre	24,000									
Precipitation (in)	31.3		* Mehlich 3 by ICP, soiltesting.tamu.edu ** Samples collected at planting, some locations may have applied fertilizer			For additional information contact: Dr. Ronnie Schnell / Katrina Horn ronschnell@tamu.edu / khorn@tamu.edu 979-845-2935 / 979-845-8505				
Irrigation (in)										
Herbicide			<b>Fertilizer Applied</b>			<b>Soil Analysis Report**</b>				
4/17/20: 1 qt/ac Roundup + 1 qt/ac Atrazine + 1 qt/ac Acuron + 1.5 pt/ac Dual II Magnum			N (lb/ac)	155	NO3-N (ppm)	26	pH		7.0	
Soil Type	Clay		P2O5 (lb/ac)	9	P (ppm)*	17	Conductivity (umho/cm)		322	
Tillage	Conventional		K2O (lb/ac)	2	K (ppm)*	501	Ca (ppm)*		8,306	
Previous Crop	Fallow		S (lb/ac)		S (ppm)*	7	Mg (ppm)*		345	
			Zn (lb/ac)	1 Qt Foliar Micros			Na (ppm)*		86	

This table with the plot plan and previous year's trial results are available online at:

<http://varietytesting.tamu.edu/corn/>



# Greenville 2020 Grain Sorghum Performance Trial



Brand	Hybrid	Days to 50% Flower	Plant Height (in)	Head Ex (in)	Lodging (%)	Moisture (%)	Test Weight (lbs/bu)	Yield * (lbs/acre)
Golden Acres	4880R	73	51	4	0	14.8	60.1	7,063
Dyna-Gro	M72GB71	75	50	6	0	14.7	59.6	6,808
Dyna-Gro	M71GR91	74	51	5	0	14.8	60.7	6,728
Pioneer	83G19	72	48	4	0	13.3	58.8	6,561
Dyna-Gro	GX19981	75	48	4	0	15.5	60.1	6,477
DEKALB	DKS 44-07	71	49	4	0	14.5	60.8	6,459
DEKALB	DKS 46-60	74	49	9	0	13.9	59.9	6,365
Dyna-Gro	M60GB31	73	46	5	0	14.7	59.4	6,344
DEKALB	DKS 36-07	67	48	7	0	14.7	59.4	6,311
Dyna-Gro	M74GB17	75	49	5	0	14.6	58.0	6,275
Dyna-Gro	M69GR88	75	46	5	0	14.2	57.6	6,212
Dyna-Gro	M62GB77	69	49	7	0	13.9	59.9	6,203
Golden Acres	3020B	72	46	5	0	14.1	58.0	6,106
DEKALB	DKS 54-07	76	51	5	0	14.6	60.0	6,096
Dyna-Gro	M69GB38	75	49	6	0	14.6	59.5	5,972
DEKALB	DKS 45-60	74	49	8	0	14.9	60.3	5,889
Alta Seeds	ADV G2275	73	47	7	0	16.6	59.2	5,873
Texas A&M AgriLife Research	ATx378xRTx430	74	51	6	0	14.3	56.5	5,834
Texas A&M AgriLife Research	ATx399xRTx430	73	42	5	0	13.4	57.0	5,466
Texas A&M AgriLife Research	ATx631xRTx436	77	50	3	0			

\*Yields highlighted in yellow are not significantly different (L.S.D., p=0.05) from the top ranked hybrid.

Brand	Hybrid	Days to 50% Flower	Plant Height (in)	Head Ex (in)	Lodging (%)	Moisture (%)	Test Weight (lbs/bu)	Yield * (lbs/acre)	
<b>Agronomic information</b>		Mean	73	48	5	0.0	14.5	59.2	6,265
Plant Date	4/15/2020	C.V. %	2.5	3.2	22.9		5.8	1.6	13.9
Harvest Date	8/25/2020	P>f (hybrid)	0.000	0.000			0.001	0.000	0.734
Irrigated	No	L.S.D.	2.7	2.2			1.2	1.4	
Row Spacing (in)	30	<b>Trial Notes</b>		<b>Cooperator: Texas A&amp;M AgriLife</b>					
Number of Rows	2			<p>Four replications of each hybrid are planted in a randomized block design. Model : yield = hybrid blk. SAS 9.4 was used for statistical analysis. LSD provided when hybrid significant at p &lt; 0.05. Yields highlighted in yellow are not statistically different from the top ranked hybrid. Plots were planted using a SRES Advanced planter with Monosem units. Plots were harvested with a JD 3300 plot combine fitted with a Harvest Master GrainGage System. Precipitation data was recorded from January 1 through the harvest date. For additional information contact:</p> <p>Dr. Ronnie Schnell / Katrina Horn ronschnell@tamu.edu / khorn@tamu.edu 979-845-2935 / 979-845-8505</p>					
Seeds per Acre	65,000								
Precipitation (in)	31.3								
Irrigation (in)									
Herbicide	4/17/20: 1 qt/ac Roundup + 1 qt/ac Atrazine + 1.5 pt/ac Dual II Magnum								
Soil Type	Clay	<b>Fertilizer Applied</b>		<b>Soil Analysis Report**</b>					
Tillage	Conventional	N (lb/ac)	155	NO3-N (ppm)	26	pH	6.5		
Previous Crop	Corn	P2O5 (lb/ac)	9	P (ppm)*	22	Conductivity (umho/cm)	251		
		K2O (lb/ac)	2	K (ppm)*	522	Ca (ppm)*	8,027		
		S (lb/ac)		S (ppm)*	9	Mg (ppm)*	375		
		Zn (lb/ac)	1 Qt Foliar Micronutrients			Na (ppm)*	72		

This table with the plot plan and previous year's trial results are available online at:

<http://varietytesting.tamu.edu/grainsorghum/>

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# Calendar

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Sept (date TBA) Virtual Hunt County Hay Day  
Nov 3—Dec 1 Weekly (Tuesdays at noon) Online CEU for Lamar County.  
Nov 4 In-person CEU's Sulfur Springs  
Nov 19 Hunt-Rockwall CEU Online Training  
Dec 8-10 Plant Protection Conference Online  
Dec 10 Ag Technology Conference

For information on COVID-19

The Texas A&M AgriLife Extension Service is leading an education effort helping local governments with the Coronavirus Aid, Relief, and Economic Security (CARES) Act.

<https://agrilifeextension.tamu.edu/coronavirus/>

Extension Disaster Education Network (EDEN)

EDEN information on the Coronavirus can be found at:

<https://texashelp.tamu.edu/coronavirus-information-resources/>

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