Results of the KENTUCKY GRAIN SORGHUM PERFORMANCE TESTS 1958

By J. F. Shane and H. R. Richards

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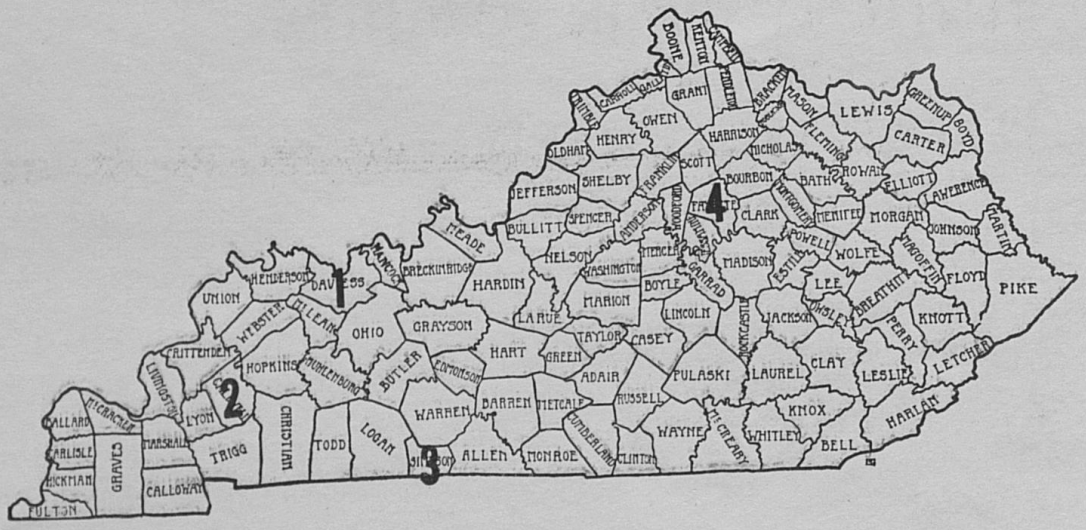
LOCATIONS OF THE 1958 GRAIN SORGHUM PERFORMANCE TESTS



Location	Crop	Cooperator
1. Owensboro	Grain Sorghum	J. W. West
2. Princeton	Grain Sorghum	Western Ky. Substation
3. Franklin	Grain Sorghum	H. B. Ferguson
4. Lexington	Grain Sorghum	Ky. Agr. Exp. Sta.

RESULTS OF THE KENTUCKY GRAIN SORGHUM PERFORMANCE TESTS - 1958

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This report presents yield and other agronomic data obained from grain sorghum plantings made at various locations in the state. Each planting consisted of 36 hybrids and varieties. Each hybrid or variety was planted in 2-row plots 13 feet long in each of 4 replications.

Heads in the test at Lexington were bagged when they were in the early dough stage to prevent bird damage. Birds began to damage the bags and the test was harvested September 18. The tests at Princeton and Owensboro were not harvested because of poor stands due to excessive moisture and extensive bird damage. Part of the test area at Owensboro was under water for three days as late as the middle of July.

Excessive moisture during the early part of the growing season made cultivation difficult. The test at Franklin was quite weedy and probably reduced yields.

The average yield for the tests at Franklin and Lexington in 1958 was 92.5 bushels per acre. The average yield at Franklin was 72.4 bushels per acre and was 40.2 bushels below the Lexington average of 112.6 bushels per acre. Data for the test at Franklin are presented in Table 1, that for Lexington in Table 2 and a summary of the two locations in Table 3.

EXPLANATION OF TERMS USED IN THIS REPORT

1. Yield. Yields of grain sorghum are reported as bushels per acre of threshed grain at 13.0 percent moisture and 56 pounds per bushel. Adjustments were made for bird damage and for significant variations in stand.

2. Moisture. Samples for moisture determinations were taken from the bulked grain of all replications.

3. Height. The distance from the base of the plant to the top leaf (flag leaf) and to the top of the plant is reported in inches.

4. Head Exsertion. The distance between the top leaf and the base of the head. This characteristic is reported as G - good, F - fair, and P - poor. Varieties with good head exsertion are more easily combined because less plant material will be passed through the combine.

5. Lodging. Plants leaning at an angle of more than 30 degrees from the vertical are considered lodged.

6. Broken Peduncles. Plants that are broken between the top leaf and the head.

7. Test Weight. Test weight or weight per bushel is one of the quality factors used in determining the grade that is assigned in commercial marketing of grain. The higher the test weight, the higher the market value unless the grain is down-graded by another factor.

8. Date Headed. The number of days after July 1 when 50 percent of the heads have emerged from the leaf sheath.

9. L. S. D. The abbreviation "L.S.D." means least significant difference. Two varieties differing in yield by less than the L.S.D. cannot be said to differ in yield in that particular test if one wishes to be correct at least 95 percent of the time.

VARIETIES AND HYBRIDS TESTED

Varieties	Hybrids	
Caprock	AMAK	R-10
Combine Kafir-60		R-12
Combine Shallu	DeKalb	C-44A
Early Kalo		D-50A
Martin		E-56A
Midland		F-62A
Norghum		Exp. 1
Plainsman	P.A.G.	405 S
Redbine-58		425 S
Redbine-60		435 S
Redlan		515 S
Reliance	RS	501
Texas 04		590
Texas 07		610
Texas 74		650
Westland	Texas	601
		611
		620
		Early Exp.

Pedigrees of Experiment Station and Regional grain sorghum hybrids tested in 1958.

RS 501	(ms Combine Kafir-60	x Norghum	)
RS 590	("	x Redbine-60	)
RS 610	("	x SA7078	)
RS 650	("	x Plainsman	)
Texas 601	("	x Texas 04	)
Texas 611	("	x Texas 74	)
Texas 620	("	x Texas 07	)

Table 1. Summary of agronomic data recorded on the grain sorghum performance test grown at Franklin, Kentucky in 1958

Variety or hybrid	Yield Bu/acre	Moisture %	Height in ins. to Top Leaf	Height in ins. to Top of Plant	Head Exsertion	Root Lodging %	Broken Peduncles %	Test Weight lb/bu
P.A.G. 515S	96.7	13.2	39	55	G-			54.4
E-56A	68.5	12.3	35	51	G		2	56.8
Texas 601	75.2	15.4	40	55	G			57.1
Caprock	88.8	15.6	36	49	F-		3	54.7
Texas 74	70.4	14.0	35	48	G-			53.0
Tx Early Exp.	67.8	14.9	36	51	G			54.7
P.A.G. 435S	90.5	12.8	34	48	G-		3	57.7
Early Kalo	68.6	14.1	36	51	G-			57.3
F-62A	71.2	14.2	39	55	G			57.9
P.A.G. 405S	70.8	14.0	38	54	G-		1	59.4
Combine 7078	67.6	13.8	29	42	P			54.6
RS 590	68.2	15.1	38	55	G			58.4
Westland	57.8	14.0	29	43	G-			57.7
Texas 611	71.7	13.8	40	54	G			57.4
Reliance	26.1	14.7	34	48	G		9	52.0
Plainsman	88.2	16.0	36	49	F		1	56.0
Midland	63.0	13.1	34	48	F			54.8
Combine Shallu	71.6	14.7	47	65	G	25		59.0

Combine Kafir-60	67.0	13.9	40	53	F			57.6
Exp. 1	78.2	15.2	35	47	F			56.6
Norghum	30.6	13.9	34	49	G			-
RS 501	80.5	16.1	40	53	F			58.3
Redbine-58	63.8	13.2	39	54	G		5	58.9
Texas 07	70.1	14.0	35	49	G		6	57.5
AMAK R-10	74.5	14.5	34	48	G-			57.8
Martin	67.3	13.3	34	48	G			60.4
Redlan	78.0	15.5	42	57	F			56.5
D-50A	94.0	14.0	42	56	F		5	57.7
Texas 620	71.9	13.0	38	52	F			59.4
Redbine-60	58.2	15.1	39	55	G			57.1
AMAK R-12	104.3	13.4	40	54	G-		12	57.4
P.A.G. 425S	86.2	14.5	35	50	G			59.0
RS 650	76.4	13.0	37	51	F			58.3
Texas 04	65.2	15.0	37	51	G-		20	58.5
RS 610	83.0	14.1	35	49	G		1	56.6
C-44A	76.0	14.2	34	48	F			55.0
Means	72.4	14.2	37	51		0.7	1.9	57.0
L.S.D.	13.2							

Table 2. Summary of agronomic data recorded on the grain sorghum performance test grown at Lexington, Kentucky in 1958.

Variety or hybrid	Yield Bu/acre	Moisture %	Height in ins. to Top Leaf	Height in ins. to Top of Plant	Head Exsertion	Date Headed
P.A.G. 515S	125.1	34.7	39	51	F	34
E-56A	129.2	29.2	37	52	F	30
Texas 601	137.2	28.8	36	52	F	31
Caprock	108.8	30.9	33	45	F	36
Texas 74	124.8	30.2	37	48	G-	35
Tx Early Exp.	111.5	33.8	35	48	G-	34
P.A.G. 435S	103.4	30.6	34	47	G-	31
Early Kalo	114.2	30.2	34	47	F-	27
F-62A	123.5	27.5	30	52	G-	31
P.A.G. 405S	98.3	26.2	33	50	G	29
Combine 7078	116.1	32.8	30	42	P	35
RS 590	112.0	31.8	36	53	F	30
Westland	90.4	27.5	28	41	F-	30
Texas 611	124.1	34.4	37	50	G	31
Reliance	--	--	--	--	--	--
Plainsman	133.4	31.2	33	45	F	36
Midland	96.4	28.2	33	45	G-	30
Combine Shallu	98.0	28.1	46	61	G-	36

Combine Kafir-60	83.5	33.7	41	54	F	35
Exp. 1	110.6	36.2	38	52	F	42
Norghum	--	--	--	--	--	--
RS 501	81.8	28.5	40	55	G	26
Redbine-58	104.8	30.8	35	51	G	31
Texas 07	115.1	30.9	35	49	F	34
AMAK R-10	113.4	30.4	32	45	F	30
Martin	84.7	25.5	33	48	G-	31
Redlan	89.6	34.5	38	51	F	36
D-50A	139.3	27.6	40	55	G-	27
Texas 620	123.7	28.6	39	53	G	29
Redbine-60	104.3	29.7	37	53	G	30
AMAK R-12	114.1	33.0	38	51	F-	34
P.A.G. 425S	125.0	31.7	31	45	F	29
RS 650	117.9	28.5	33	46	G-	30
Texas 04	109.8	26.9	34	48	F	33
RS 610	133.5	27.3	35	48	F	30
C-44A	132.4	30.9	35	47	F-	31
Means	112.6	30.3	35	49		32
L.S.D.	15.8					

Table 3. Summary of agronomic data recorded on grain sorghum tests in Kentucky, 1958. (Averages for Franklin and Lexington).

Variety or hybrid	Yield Bu/acre	Moisture %	Height in ins. to Top Leaf	Height in ins. to Top of Plant	Head Exsertion	Root Lodging %	Broken Peduncles %	Test Weight lb /bu	Date Headed
P.A.G. 515S	110.9	24.0	39	53	F+			54.4	34
E-56A	98.9	20.8	36	52	G-		1.0	56.8	30
Texas 601	106.2	22.1	38	54	G-			57.1	31
Caprock	98.8	23.3	35	47	F		1.5	54.7	36
Texas 74	97.6	22.1	36	48	G-			53.0	35
Tx Early Exp.	89.7	24.4	36	50	G-			54.7	34
P.A.G. 435S	97.0	21.7	34	48	G-		1.5	57.7	31
Early Kalo	91.4	22.2	35	49	F+			57.3	27
F-62A	97.4	20.9	35	54	G-			57.9	31
P.A.G. 405S	84.6	20.1	36	52	G-		0.5	59.4	29
Combine 7078	91.9	23.3	30	42	P			54.6	35
RS 590	90.1	23.5	37	54	G-			58.4	30
Westland	74.1	20.8	29	42	F+			57.7	30
Texas 611	97.9	24.1	39	52	G			57.4	31
Reliance	--	--	--	--	--			--	--
Plainsman	110.8	23.6	35	47	F		0.5	56.0	36
Midland	79.7	20.7	34	47	F+			54.8	30
Combine Shallu	84.8	21.4	47	64	G-	12.5		59.0	36

Combine Kafir-60	75.3	23.8	41	54	F			57.6	35
Exp. 1	94.4	25.7	37	50	F			56.6	42
Norghum	--	--	--	--	--			--	--
RS 501	81.2	22.3	40	54	G-			58.3	26
Redbine-58	84.3	22.0	37	53	G		2.5	58.9	31
Texas 07	92.6	22.5	35	49	G-		3.0	57.5	34
AMAK R-10	94.0	22.5	33	47	F=			57.8	30
Martin	76.0	19.4	34	48	G-			60.4	31
Redlan	83.8	25.0	39	54	F			56.5	36
D-50A	116.7	20.8	41	56	F+		2.5	57.7	27
Texas 620	97.8	20.8	39	53	G-			59.4	29
Redbine-60	81.3	22.4	38	54	G			57.1	30
AMAK R-12	109.2	21.7	39	53	F+		6.0	57.4	34
P.A.G. 425S	105.6	23.1	33	48	G-			59.0	29
RS 650	97.2	20.8	35	49	F+			58.3	30
Texas 04	87.5	21.0	36	50	F+		10.0	58.5	33
RS 610	108.3	20.7	35	49	G-		0.5	56.6	30
C-44A	104.2	22.6	35	48	F-			55.0	31
Means	92.5	22.3	36	50	--	0.3	1.9	57.0	32

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