

Purdue University

Purdue e-Pubs

Historical Documents of the Purdue
Cooperative Extension Service

Department of Agricultural Communication

1-1-1900

1966 Purdue University Grain Sorghum Yield Trials

A. R. Campbell

R. C. Pickett

Follow this and additional works at: <https://docs.lib.purdue.edu/agext>

Agronomy Guide

Campbell, A. R. and Pickett, R. C., "1966 Purdue University Grain Sorghum Yield Trials" (1900). *Historical Documents of the Purdue Cooperative Extension Service*. Paper 268.

<https://docs.lib.purdue.edu/agext/268>

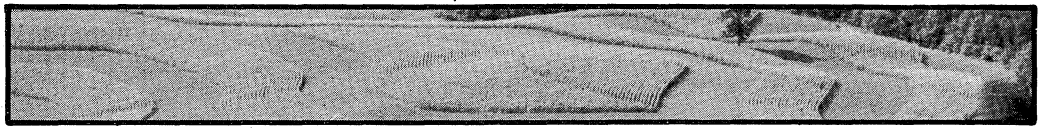
For current publications, please contact the Education Store: <https://mdc.itap.purdue.edu/>

This document is provided for historical reference purposes only and should not be considered to be a practical reference or to contain information reflective of current understanding. For additional information, please contact the Department of Agricultural Communication at Purdue University, College of Agriculture: <http://www.ag.purdue.edu/agcomm>

This document has been made available through Purdue e-Pubs, a service of the Purdue University Libraries. Please contact epubs@purdue.edu for additional information.

Admin
Magt Yes

Revision Replaces one dated Mar. 1966



AGRONOMY GUIDE



**PURDUE
UNIVERSITY**



Mimeo AY-161

1966 PURDUE UNIVERSITY GRAIN SORGHUM YIELD TRIALS

A. R. Campbell and R. C. Pickett, Department of Agronomy

Grain sorghum yield trials were grown at the Purdue University Agronomy Farm near Lafayette, Indiana, the Southern Indiana Forage Farm in Dubois County, Indiana, and the Sand Experimental Farm in Marshall County, Indiana. Results are shown in Tables 1-8. Two and three-year averages are included for those entries tested in 1964, 1965, and 1966. Diseases were not a factor on lodging and yield as they have been in previous years.

Yields at Lafayette were higher in 1966 than in 1965 in all trials even though there was a drouth condition. None of the grain sorghum at the Southern Indiana Forage Farm was harvested because of severe drouth stress. The trials at the Forage Farm were planted in 14-inch row spacings, and there was not sufficient water for growth and seed development. The high population test at Lafayette, also planted in 14-inch row spacings, was not harvested for the same reason. The tests at the Forage Farm will be in wider row spacings in 1967.

At the Purdue Sand Experimental Farm, yields were much lower than at Lafayette. The plots were irrigated once every three weeks, but the dry weather affected the yields drastically because of the very low water holding capacity of the soil.

Bird damage trials were conducted at Lafayette and at the Sand Farm. The results show a tremendous difference in yields. Most of this difference can be attributed to the difference in the panicle types. Those entries with tighter panicles were eaten much more extensively than those with looser panicles.

In all other trials bird damage was controlled by a mixture of DDT, Toxaphene, and Captan. This mixture was sprayed on weekly from the onset of seed development until the hard dough stage.

The Sand Experimental Farm will be one of the locations used in 1967 and the bird damage trial will be continued. This will allow comparisons to be made over years, which was not possible in 1966 for these trials.

Cooperative Extension Work in Agriculture and Home Economics
State of Indiana, Purdue University
and the United States Department of Agriculture Cooperating
H. G. Diesslin, Director, Lafayette, Indiana
Issued in furtherance of the Acts of May 8 and June 30, 1914.

Table 1. 1966 Commercial grain sorghum yield trial, Purdue University Agronomy Farm, Lafayette, Ind. ^{1/}

Entry	Days to half bloom	Height (in.)	Exert. (in.)	Pan. type ^{2/}	Pan. length (cm.)	Lodging (%)	Pan. per plot	Gms. per pan.	Thresh %	Bushels per acre	Duncan's test ^{3/}
WAC 750	79	43	4.7	4.0	21.5	0	133	65	68	184.2	
DeKalb BR-60	82	50	7.0	5.5	20.7	0	154	54	87	170.5	
DeKalb BR-62	83	52	5.5	5.5	21.2	0	139	65	84	162.9	
Taylor-Evans 77	79	45	4.5	4.7	21.5	0	128	60	84	162.1	
DeKalb F-64	77	55	5.0	6.5	28.2	0	129	56	83	161.9	
Northrup-King 222A	82	45	2.5	6.5	28.0	0	112	60	84	160.7	
Taylor-Evans 88	77	46	5.0	3.5	25.0	0	124	67	82	159.2	
Taylor-Evans Grainmaster	76	44	3.7	3.7	21.5	0	137	52	84	156.2	
Northrup-King X3084	80	46	4.7	5.0	21.0	0	119	61	85	155.5	
Taylor-Evans 66	74	41	3.7	4.5	20.7	0	128	53	83	154.9	
Northrup-King 275	76	44	2.7	5.2	19.0	0	112	62	83	153.5	
Northrup-King Savanna	69	44	3.2	7.2	25.7	0	139	54	81	152.2	
AKS 614	72	46	2.5	7.0	26.0	0	137	48	83	151.8	
Asgrow Double T	79	45	4.5	3.5	23.0	0	128	64	84	151.3	
Northrup-King 212	70	44	4.2	3.7	19.7	0	141	45	85	149.2	
DeKalb E-57	75	47	2.7	6.2	26.0	0	128	50	81	146.9	
RS 610	70	44	6.0	4.5	20.0	0	114	56	84	146.9	

Redlan	81	45	3.7	4.2	18.7	0	106	55	84	142.8
Taylor-Evans Mucho	70	42	5.0	3.5	19.0	0	131	58	84	141.9
Ga 615	77	52	1.2	7.7	27.7	0	104	67	81	141.9
RS 617	71	48	3.5	7.5	23.7	0	78	64	83	141.7
Asgrow Rico	73	43	5.0	3.7	22.0	0	125	54	84	141.0
Northrup-King 222	69	42	6.0	6.2	25.5	0	145	49	84	140.6
Taylor-Evans Grainmaster A	71	44	5.5	4.2	20.5	0	138	61	84	139.8
Martin	71	40	5.5	5.7	20.0	0	152	40	70	125.5
Northrup-King 133	64	40	3.0	7.2	25.2	0	135	43	81	114.4
C.V.	1.8	4.2	27.9	10.9	7.4	0.0	11.0	16.8	10.0	8.1
Mean	74.9	45.2	4.3	5.3	22.8	0.0	127.3	56.1	82.2	150.4

1/ Planted May 7 in randomized block design with 4 replications. Plot size was 2 rows, 38" apart and 15' long; thinned to 120,000 plants/acre; 20' of row was harvested.

2/ 1-9 rating (1 = tightest panicle).

3/ Any two means spanned by the same line are not significantly different at the 5 percent level.

Table 2. Two- and three-year averages of commercial grain sorghum hybrids, Purdue University Agronomy Farm, Lafayette, Indiana.

Entry	Days to half bloom	Height (in.)	Exert. (in.)	Pan. type <u>1</u> /	Pan. per plot	Thresh %	Bushels per acre
<u>1964-65-66 Average:</u>							
Taylor-Evans 77	77	56	6.7	2.9	139	81	152.0
Taylor-Evans 88	76	53	6.5	3.2	137	81	144.0
Taylor-Evans Grainmaster	74	51	5.6	3.4	147	81	138.5
RS 610	70	49	6.4	3.5	134	80	138.4
Redlan	78	52	5.5	2.1	133	81	134.2
Northrup-King 212	71	48	5.3	3.6	152	81	133.0
Northrup-King 222	70	43	6.9	6.6	151	80	118.5
Martin	72	48	7.0	4.8	169	77	113.8
Northrup-King 133	63	43	5.5	7.7	142	77	102.5
<u>1965-66 Average:</u>							
Taylor-Evans 77	78	52	6.4	3.5	142	84	162.3
Northrup-King 275	75	47	3.9	4.2	131	83	153.9
Taylor-Evans 88	77	41	5.9	3.4	134	83	152.1
Taylor-Evans Grainmaster	76	49	4.4	3.5	149	84	149.2
RS 610	71	48	6.0	3.9	135	83	145.9
Redlan	80	51	5.5	2.6	138	84	144.2
Northrup-King 212	72	47	5.1	3.8	155	85	143.1
Asgrow Rico	74	46	5.8	3.4	146	83	136.7
Northrup-King 222	70	42	6.1	6.5	153	84	130.4
Martin	73	46	6.9	6.0	176	77	121.6
Northrup-King 133	65	47	5.0	7.7	147	81	115.3

1/ 1-9 rating (1 = tightest panicle).

Table 3. 1966 late planted commercial grain sorghum yield trial, Purdue University Agronomy Farm, Lafayette, Ind. ^{1/}

Entry	Stand (%)	Days to half bloom	Height (in.)	Exert. (in.)	Pan. type ^{2/}	Pan. length (cm.)	Lodging (%)	Pan. per plot	Gms. per pan.	Thresh %	Bushels per acre	Duncan's test ^{3/}
Ga 615	76	63	50	2.5	7.7	26.7	25	99	55	76	123.9	
Taylor-Evans Mucho	65	55	40	4.7	5.7	23.2	0	87	63	79	117.9	
DeKalb C-446	77	53	48	4.0	7.0	25.2	0	95	57	80	116.5	
AKS 614	60	57	48	3.5	7.5	26.7	5	79	58	75	113.4	
DeKalb DD-50	58	56	47	4.2	6.0	24.2	0	67	64	78	111.6	
RS 617	59	54	50	2.7	7.5	26.7	4	80	57	76	109.8	
Paymaster Kiowa	55	57	44	4.7	4.5	24.0	0	78	47	81	104.6	
Martin	64	57	45	6.5	6.0	26.2	0	98	47	82	101.9	
Paymaster Pawnee	75	50	44	3.5	5.5	29.5	0	92	63	77	100.6	
Taylor-Evans Grainmaster	63	61	50	5.7	4.7	23.7	0	71	74	78	99.0	
RS 610	55	55	50	5.2	5.0	23.5	0	72	74	78	96.0	
Taylor-Evans Grainmaster A	55	56	44	4.7	5.2	23.2	0	68	57	80	94.4	
Redlan	38	70	50	5.2	3.0	21.0	0	56	49	69	64.0	
C. V.	32.7	2.7	4.3	20.5	16.9	8.3	90.4	29.2	24.0	3.8	21.7	
Mean	61.4	57.2	46.8	4.4	5.8	24.9	2.6	80.0	58.7	77.6	104.1	

^{1/} Planted June 20 in randomized block design with 4 replications. Plot size was 2 rows, 38" apart and 15' long; thinned to 120,000 plants/acre; 20' of row was harvested.

^{2/} 1-9 rating (1 = tightest panicle).

^{3/} Any two means spanned by the same line are not significantly different at the 5 percent level.

Table 4. Two- and three-year averages of late planted commercial grain sorghum hybrids, Purdue University Agronomy Farm, Lafayette, Ind.

Entry	Days to half bloom	Height (in.)	Exert. (in.)	Pan. type <u>1/</u>	Pan. per plot	Thresh %	Bushels per acre
<u>1964-65-66 Average:</u>							
Taylor-Evans Grainmaster	63	51	5.5	3.9	102	77	109.0
RS 610	57	51	5.9	4.1	97	77	106.0
Martin	59	46	6.5	5.1	114	78	96.9
Redlan	71	51	5.6	2.2	99	72	84.1
<u>1965-66 Average:</u>							
Taylor-Evans Grainmaster	65	50	5.5	3.6	90	78	99.2
RS 610	59	50	5.1	3.9	86	78	98.8
Martin	61	45	6.3	6.1	107	81	95.9
Redlan	72	50	5.2	2.1	83	72	69.7

1/ 1-9 rating (1 = tightest panicle).

Historic Document

Table 5. 1966 Bird damage commercial grain sorghum yield trial, Purdue University Agronomy Farm, Lafayette, Ind. ^{1/}

Entry	Days to half bloom	Height (in.)	Exert. (in.)	Pan. type ^{2/}	Pan. Length (cm.)	Lodg- ing (%)	Pan. per plot	Gms. per pan.	Thresh %	Bushels per acre	Duncan's test ^{3/}
RS 617	60	50	3.5	7.7	28.0	4	119	52	81	147.5	
Ga 615	68	51	2.7	6.7	26.2	30	125	53	76	130.4	
AKS 614	61	47	3.0	7.5	25.2	8	127	50	77	128.9	
Northrup-King Savanna	61	47	4.0	7.5	26.2	6	121	48	76	124.2	
Martin	60	45	6.7	5.2	24.2	0	136	27	74	84.0	
NB 505	54	49	6.5	4.0	23.2	0	125	11	47	31.5	
RS 610	58	51	6.0	3.2	25.0	0	120	8	31	23.4	
Taylor-Evans 77	72	51	6.7	2.7	21.7	0	112	5	23	15.8	
Redlan	72	52	5.5	2.2	20.0	0	116	4	20	11.9	
C. V.	1.3	4.3	23.3	15.8	8.9	186.3	7.5	27.1	14.4	19.6	
Mean	62.9	49.2	5.0	5.2	24.4	5.3	122.3	28.6	55.9	77.5	

^{1/} Planted June 1 in randomized block design with 4 replications. Plot size was 2 rows, 38" apart and 15' long; thinned to 120,000 plants/acre; 20' of row was harvested. No attempt was made to keep birds from feeding on the grain.

^{2/} 1-9 rating (1 = tightest panicle).

^{3/} Any two means spanned by the same line are not significantly different at the 5 percent level.

Table 6. 1966 USDA Uniform Yield Nursery, Purdue University Agronomy Farm, Lafayette, Ind. ^{1/}

Entry	Days to half bloom	Height (in.)	Exert. (in.)	Pan. type ^{2/}	Pan. length (cm.)	Lodging (%)	Pan. per plot	Gms. per pan	Thresh %	Bushels per acre	Duncan's test ^{3/}
62004 (Ark.)	80	55	4.7	7.5	31.0	0	152	45	81	159.5	
RS 671	76	44	3.0	4.0	18.7	0	163	55	84	156.5	
65LHO26	79	45	4.5	3.0	20.7	0	165	57	83	147.6	
633225 (Neb.)	69	47	6.5	6.0	23.2	0	144	54	84	142.7	
RS 622	76	41	5.2	4.0	22.5	0	182	44	83	141.0	
633491 (Neb.)	72	42	5.0	4.7	20.7	0	137	65	84	133.8	
RS 626	70	45	4.5	4.0	19.5	0	160	52	84	132.0	
RS 610	72	44	5.2	3.5	21.7	0	129	55	84	131.6	
RS 631	76	46	5.5	4.5	22.7	0	137	55	83	130.2	
RS 625	71	41	4.7	5.0	24.7	0	140	55	84	130.0	
633533 (Neb.)	73	39	4.7	4.7	21.0	0	91	64	83	110.8	
NB 505	67	41	6.0	6.2	22.7	0	151	37	81	103.5	
Colo. 606	72	49	8.5	4.0	21.7	0	136	42	79	100.6	
C. V.	3.9	3.8	24.2	11.7	8.9	0.0	8.9	18.2	1.8	6.0	
Mean	73.1	44.3	5.3	4.7	22.4	0.0	145.0	52.2	82.8	132.3	

^{1/} Planted May 10 in randomized block design with 4 replications. Plot size was 2 rows, 38" apart and 15' long; thinned to 120,000 plants/acre; 20' of row was harvested.

^{2/} 1-9 rating (1 = tightest panicle).

^{3/} Any two means spanned by the same line are not significantly different at the 5 percent level.