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Performance Of Grain Sorghum Hybrids In Alabama, 1987

TABLE OF CONTENTS

PERFORMANCE OF GRAIN SORGHUM HYBRIDS IN ALABAMA, 1987

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INTRODUCTION

Grain sorghum performance tests are conducted annually throughout Alabama by the Alabama Agricultural Experiment Station. These tests give a comparison of hybrid performance under the conditions at a particular location. The locations used represent major soil and climatic areas of the State. The performance of hybrids varies with location. Therefore, this report should be carfully studied before a hybrid is selected.

EXPERIMENTAL PROCEDURES

Cultural practices were uniform for all hybrids within a given test. The experimental design for all tests was a randomized complete block with four replications. Test plots were two 36-inch rows, 20 or 30 feet in length. The target plant population was 60,000 plants per acre, with a seeding rate 25 percent higher to ensure a good stand. Test cultural practices are listed in table 1.

Grain yields were obtained by harvesting the whole test plot with a plot combine, and adjusting harvested grain weight and moisture to a standard 14 percent moisture and 56 pounds per bushel.

Lodging is given as the percentage of plants broken or leaning at an angle of more than 45 degrees. The seedheads of lodged plants were not included in the yields reported.

Days to mid-bloom is one measure of relative maturity. This is taken as days from planting to the date when approximately one-half of the heads in the plot are in bloom.

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[1] Associate Professor and Professor of Agronomy and Soils.

The preliminary grain sorghum hybrid tests, tables 13 and 14, are used to evaluate new hybrids and experimental lines. If a new hybrid does well in the preliminary test, it is planted in the regular test the next year.

Bird damage was heavy and relatively uniform at the following locations: Tennessee Valley Substation, Belle Mina; Black Belt Substation, Marion Junction; E. V. Smith Research Center, Shorter; Wiregrass Substation, Headland, and Gulf Coast Substation, Fairhope. Damage was moderate at Sand Mountain Substation, Crossville, and Prattville Field, Prattville, but it was primarily on the earlier maturing hybrids. Damage was light at Monroeville Field, Monroeville. Bird damage can be a problem in small fields. In selecting a hybrid, consideration should be given to bird populations; if damage is anticipated, bird-resistant hybrids should be used. Bird-resistant grain sorghum hybrids are sometimes difficult to market and may have lower feed value than the non-bird-resistant hybrids.

Yields were severely reduced at the Wiregrass Substation, Headland, by a severe infestation of green-bugs as the grain of most hybrids was maturing.

VARIETY COMPARISONS

The performance of hybrids varies among years and locations. Small yield differences among hybrids may be the result of slight environmental or cultural differences rather than differences in yield potential among hybrids. To aid in determining real differences, a statistical analysis of variance was performed on the data from each location. The L.S.D. (least significant difference) at the 5 percent level is reported to help determine real differences between hybrid yields for each location in 1987. If the yield difference is greater than the L.S.D. value between

two hybrids at a given location, the two hybrids are considered to be significantly different in yield. The C.V. (coefficient of variation) is a measure of test variability. An increase in its value indicates a decrease in the precision of the test data.

The list of acceptable hybrids is based on 3-year-average grain yield and lodging data. The list is divided into three regions, north, central, and south. Since all acceptable hybrids are not equal in performance, a review of the data from several years at the test location similar to your situation is the most reliable method for selecting a hybrid best suited for your farming needs.

Anthracnose has become a major factor in grain sorghum production in Alabama, and there were sporadic outbreaks of this disease during the 1987 growing season. In prior years, however, grain sorghum in many northeast and west central Alabama counties was devastated by anthracnose. Some fields yielded 50 to 75 percent less grain than expected. Feed quality of much of the harvested grain from diseased fields was also poor. Resistant grain sorghum hybrids have been the best defense against anthracnose. Of available adapted grain sorghum hybrids, Funk's G-1711 and Pioneer Brand 8333 have the best resistance to this disease. Other hybrids with some anthracnose resistance are DeKalb DK-64, Cargill 1022, Northrup King 2244, Coker 7737, and Pioneer Brand 8222. Good management plus use of disease resistant grain sorghum hybrids are necessary to reduce losses to anthracnose.

There was not a second or ratoon crop of sorghum in 1987 at any location due to severe dry condition at time of harvest of first crop.

Plant height of grain sorghum hybrids is reported as regional averages (central, northern, southern) and single locations of Marion Junction and Fairhope, table 15.

ACKNOWLEDGMENTS

The performance trials were conducted in cooperation with the following substation and experiment field superintendents and their staffs whose quality work makes this report a reliable source of information for farmers in their areas.

Northern Alabama

Tennessee Valley Substation, Belle Mina - W. B. Webster, V. H. Calvert, II

Sand Mountain Substation, Crossville - J. T. Eason, M. E. Ruf

Upper Coastal Plain Substation, Winfield - R. A. Moore, Jr.,

Central Alabama

Black Belt Substation, Marion Junction - H.W. Grimes, J. L. Holliman

Prattville Experiment Field, Prattville - D. P. Moore

E. V. Smith Research Center, Shorter - R. Duffield

Southern Alabama

Monroeville Experiment Field, Monroeville - J. R. Akridge

Wiregrass Substation, Headland - H. W. Ivey, L. Wells

Gulf Coast Substation, Fairhope - E. L. Carden, N. R. McDaniel, M.D. Pegues

Appreciation is also expressed to W. H. Hearn, Mien-Huei Tzeng, and Sally Bagwell, Research Data Analysis, for the computation, summarization, and analysis of the data in this report.

Table 1. Locations and Cultural Practices for the 1987 Grain Sorghum Hybrid Tests

Location	Planting date	Nitrogen rate	Plant population	Harvest date	Herbicides	Insecticides
Tennessee Valley Substation (Belle Mina)	May 12	90	60,000	September 1	Atrazine[1]	None
Sand Mountain Substation (Crossville)	May 33	125	60,000	August 18,19, & 21	Atrazine	Lannate Furadan
E. V. Smith Research Center (Shorter)	May 20	125	60,000	August 27	Atrazine & Dual	None
Prattville Experiment Field (Prattville)	May 14	120	60,000	August 19	Atrazine	Nudrin
Black Belt Substation (Marion Junction)	May 26	120	60,000	September 26	Atrazine	Ethyl Parathion
Monroeville Experiment Field (Monroeville)	April 13	120	60,000	July 30	Atrazine	None
Wiregrass Substation (Headland)	April 15	108	60,000	August 17	None	None
Gulf Coast Substation (Fairhope)	April 16	130	60,000	August 10	Atrazine	None

[1] All Atrazine was applied broadcast when the sorghum was approximately 4 inches high.

TABLE 2. YIELD AND LODGING AVERAGES FOR NORTHERN ALABAMA[1], 1985-87

BRAND-HYBRID	YIELD PER ACRE BU.	LODGED STALKS PCT.
N-K SAVANNA 5 *	103	10.6
DEKALB M-565	93	8.7
ASGROW TOPAZ	93	7.6
FUNK'S G-522DR	93	5.0
SUMMIT HT 126DR	92	7.1
HYPERFORMER 1225DR	91	7.0
AGRATECH GK 802G	90	6.8
COKER 7675	89	7.7
NORTHRUP KING 2660	87	7.6
AGRATECH GK 712G	86	6.6
FFR 421 DR	86	6.0
PIONEER 8333	86	3.6
STAUFFER S-9750	85	6.6
CARGILL 5572	85	6.4
PENN PENNGRAIN DR	85	8.8
DEKALB DK-648R *	84	28.0
FUNK'S G-1711	84	6.2
CARGILL R1090	84	11.5
FUNK'S G-522A	84	5.7
HYPERFORMER 1330DR	83	12.2
DEKALB DK 64	82	7.1
CARGILL 4462	80	12.1
FFR 321	80	8.7
HYPERFORMER HONCHO	79	5.4
AGRATECH GK 552G	68	7.0

[1] BELLE MINA AND CROSSVILLE; WINFIELD DATA NOT INCLUDED DUE TO POOR STAND.

* BIRD-RESISTANT HYBRID.

TABLE 3. CROSSVILLE GRAIN SORGHUM HYBRID TRIAL, 1987

BRAND-HYBRID	1987 YIELD	1986-87 2-YR. AV.	1985-87 3-YR. AV.	1987 MID-BLOOM	1987 BIRD DAMAGE	1987 LODGED STALKS
	BU.	BU.	BU.	MO./DAY	PCT.	PCT.
N-K SAVANNA 5 *	108	88	105	7/4	0.0	0.0
ASGROW TOPAZ	111	93	101	7/7	0.0	1.3
DEKALB M-565	109	94	101	7/6	1.3	6.3
NORTHRUP KING 2660	99	89	97	7/6	3.8	6.3
FFR 421 DR	102	88	97	7/4	5.0	1.7
AGRATECH GK 802G	95	85	96	7/6	6.3	3.8
HYPERFORMER 1225DR	105	90	95	7/7	1.3	2.5
COKER 7675	103	85	95	7/5	2.5	3.0
SUMMIT HT 126DR	101	84	94	7/6	2.5	10.0
FUNK'S G-522DR	90	80	93	7/6	5.0	8.8
STAUFFER S-9750	96	85	92	7/6	16.3	3.8
FUNK'S G-1711	84	81	92	7/7	7.5	1.3
CARGILL 5572	89	78	91	7/7	12.5	1.3
DEKALB DK-648R *	101	75	90	7/3	0.0	0.0
PIONEER 8333	88	78	89	7/4	6.3	0.0
HYPERFORMER 1330DR	84	83	88	7/7	20.0	7.5
FUNK'S G-522A	79	80	88	7/5	3.8	13.8
AGRATECH GK 712G	83	80	88	7/3	6.3	13.8
DEKALB DK 64	91	76	87	7/3	16.3	0.0
PENN PENNGRAIN DR	92	81	86	7/5	3.8	13.8
FFR 321	71	74	86	7/7	23.8	5.0
CARGILL R1090	84	76	84	7/6	8.8	13.8
HYPERFORMER HONCHO	72	72	82	7/5	8.8	0.0
CARGILL 4462	84	68	80	7/3	28.8	7.5
AGRATECH GK 552G	58	59	68	7/2	50.0	1.3
SUMMIT HT124	99	92	-	7/3	7.5	5.0
ASGROW CHAPPARAL	98	91	-	7/6	2.5	1.3
ASGROW SIERRA	89	87	-	7/5	2.5	1.3
FUNK'S RA 787	83	82	-	7/5	10.0	12.5
CARGILL 1022	92	81	-	7/3	35.0	0.0
HYPERFORMER WINGS	110	-	-	7/6	2.5	3.8
PIONEER 8226	105	-	-	7/7	3.8	0.0
DEKALB DK49	97	-	-	7/10	2.5	3.8
FUNK'S HW6624	96	-	-	7/7	2.5	0.0
CARGILL DR1125	92	-	-	7/7	3.8	3.8
COKER 7638	91	-	-	7/5	3.8	2.5
DEKALB X5531	90	-	-	7/7	3.8	2.5
COKER 7737	88	-	-	7/7	5.0	2.5
CARGILL 6670	87	-	-	7/8	18.8	1.3
FUNK'S G1602	87	-	-	7/9	0.0	0.0
STAUFFER S9740Y	84	-	-	7/4	16.3	0.0
NORTHRUP KING 2244	81	-	-	7/3	17.5	2.5
CARGILL 1096Y	73	-	-	7/10	16.3	2.5
DEKALB X684	69	-	-	7/4	6.3	17.5
TEST MEAN	91					
L.S.D. (.05)	27.1					
C.V. (%)	21.3					

* BIRD-RESISTANT HYBRID.

TABLE 4. BELLE MINA GRAIN SORGHUM HYBRID TRIAL, 1987

BRAND-HYBRID	1987 YIELD	1986-87 2-YR. AV.	1985-87 3-YR. AV.	1987 MID-BLOOM	1987 BIRD DAMAGE	1987 LODGED STALKS
	BU.	BU.	BU.	MO./DAY	PCT.	PCT.
N-K SAVANNA 5 *	118	100	113	7/7	-	2.2
FUNK'S G-522DR	84	91	105	7/8	40.0	2.7
PIONEER 8333	88	84	104	7/7	10.0	2.2
CARGILL R1090	92	89	102	7/7	50.0	4.7
AGRATECH GK 712G	87	84	100	7/4	-	12.5
SUMMIT HT 126DR	90	84	100	7/7	10.0	6.5
DEKALB M-565	83	81	98	7/7	55.0	12.7
ASGROW TOPAZ	79	80	98	7/7	7.5	7.2
AGRATECH GK 802G	91	83	97	7/7	15.0	10.0
HYPERFORMER 1225DR	83	79	97	7/7	25.0	7.0
FUNK'S G-522A	82	80	96	7/7	30.0	0.2
NORTHRUP KING 2660	72	74	95	7/7	15.0	5.0
PENN PENNGRAIN DR	93	84	93	7/7	10.0	2.2
STAUFFER S-9750	73	75	92	7/8	50.0	2.2
FFR 421 DR	90	79	92	7/7	35.0	0.5
COKER 7675	85	76	92	7/7	14.0	5.2
CARGILL 4462	88	77	91	7/5	21.7	4.2
CARGILL 5572	65	70	91	7/7	27.3	3.5
DEKALB DK-648R *	82	80	89	7/7	5.0	9.0
HYPERFORMER HONCHO	69	66	89	7/6	10.0	11.2
HYPERFORMER 1330DR	59	72	88	7/7	53.3	13.7
FFR 321	51	66	88	7/7	35.0	12.2
FUNK'S G-1711	74	69	88	7/10	43.3	3.5
DEKALB DK 64	76	67	86	7/7	26.3	4.2
AGRATECH GK 552G	74	73	73	7/3	15.0	7.0
FUNK'S RA 787	84	86	-	7/7	20.0	2.2
SUMMIT HT124	89	84	-	7/6	-	1.0
ASGROW CHAPPARAL	81	82	-	7/7	27.5	2.7
CARGILL 1022	93	78	-	7/4	10.0	6.7
ASGROW SIERRA	80	77	-	7/7	10.0	1.7
FUNK'S G1602	107	-	-	7/7	5.0	1.5
DEKALB X684	101	-	-	7/7	26.7	7.2
DEKALB X5531	97	-	-	7/7	20.0	1.7
DEKALB DK49	85	-	-	7/9	40.0	3.5
HYPERFORMER WINGS	84	-	-	7/8	35.0	2.7
STAUFFER S9740Y	84	-	-	7/7	-	5.7
CARGILL 6670	81	-	-	7/8	31.7	9.0
CARGILL DR1125	79	-	-	7/8	41.7	8.5
PIONEER 8226	78	-	-	7/7	40.0	0.5
FUNK'S HW6624	77	-	-	7/9	45.0	0.5
COKER 7638	76	-	-	7/7	-	10.2
CARGILL 1096Y	74	-	-	7/8	35.0	8.2
COKER 7737	73	-	-	7/8	30.0	1.5
NORTHRUP KING 2244	63	-	-	7/5	13.3	0.0
TEST MEAN	82					
L.S.D. (.05)	22.9					
C.V. (%)	19.9					

* BIRD-RESISTANT HYBRID.

TABLE 5. YIELD AND LODGING AVERAGES FOR CENTRAL ALABAMA[1], 1985-87

BRAND-HYBRID	YIELD PER ACRE BU.	LODGED STALKS PCT.
DEKALB DK-648R *	61	21.3
FUNK'S G-1711	56	1.1
N-K SAVANNA 5 *	56	1.7
HYPERFORMER 1330DR	55	1.7
FUNK'S G-522DR	55	1.3
STAUFFER S-9750	54	0.6
NORTHRUP KING 2660	54	0.7
SUMMIT HT 126DR	54	1.0
PIONEER 8333	53	0.7
PENN PENNGRAIN DR	53	1.8
FUNK'S G-522A	53	0.4
AGRATECH GK 712G	53	0.1
AGRATECH GK 802G	52	1.6
DEKALB M-565	52	1.7
COKER 7675	52	1.8
ASGROW TOPAZ	51	1.3
FFR 421 DR	51	0.6
CARGILL 5572	51	0.3
DEKALB DK 64	51	3.7
HYPERFORMER 1225DR	51	0.9
FFR 321	51	1.9
CARGILL R1090	50	3.3
CARGILL 4462	49	6.2
HYPERFORMER HONCHO	47	0.1
AGRATECH GK 552G	41	1.8

[1] SHORTER, PRATTVILLE, AND MARION JUNCTION.
* BIRD-RESISTANT HYBRID.

TABLE 6. PRATTVILLE GRAIN SORGHUM HYBRID TRIAL, 1987

BRAND-HYBRID	1987 YIELD	1986-87 2-YR. AV.	1985-87 3-YR. AV.	1987 MID-BLOOM	1987 BIRD DAMAGE	1987 LODGED STALKS
	BU.	BU.	BU.	MO./DAY	PCT.	PCT.
PIONEER 8333	65	53	55	7/12	7.5	1.3
FUNK'S G-522DR	52	46	53	7/10	10.0	11.3
SUMMIT HT 126DR	50	44	52	7/10	7.5	8.8
NORTHRUP KING 2660	49	46	52	7/10	10.0	6.3
FUNK'S G-522A	60	47	51	7/8	7.5	1.3
DEKALB DK-648R *	54	46	51	7/12	8.8	6.3
AGRATECH GK 712G	56	49	51	7/8	8.8	1.3
AGRATECH GK 802G	47	43	50	7/10	7.5	12.5
PENN PENNGRAIN DR	47	45	49	7/9	10.0	15.0
CARGILL 5572	47	44	49	7/11	13.8	2.5
CARGILL R1090	38	40	48	7/9	6.3	22.5
FFR 321	36	39	48	7/11	31.3	8.8
HYPERFORMER 1225DR	39	40	48	7/9	26.3	6.3
STAUFFER S-9750	48	42	47	7/12	11.3	3.8
COKER 7675	43	42	47	7/10	8.8	15.0
ASGROW TOPAZ	46	43	47	7/11	8.8	10.0
FUNK'S G-1711	43	39	47	7/12	15.0	10.0
DEKALB M-565	37	35	47	7/9	13.8	13.8
FFR 421 DR	46	45	45	7/10	16.3	5.0
HYPERFORMER 1330DR	35	36	44	7/11	20.0	11.3
HYPERFORMER HONCHO	35	37	43	7/8	11.3	1.3
N-K SAVANNA 5 *	46	41	42	7/12	3.8	8.8
DEKALB DK 64	35	37	41	7/11	28.8	5.0
CARGILL 4462	34	38	40	7/8	8.8	35.0
AGRATECH GK 552G	42	38	39	7/7	16.3	11.3
SUMMIT HT124	49	48	-	7/8	8.8	5.0
FUNK'S RA 787	54	47	-	7/12	13.8	1.3
ASGROW SIERRA	50	46	-	7/12	5.0	0.0
ASGROW CHAPPARAL	46	43	-	7/12	13.8	0.0
CARGILL 1022	40	41	-	7/7	13.8	15.0
FUNK'S G1602	53	-	-	7/11	6.3	6.3
COKER 7737	52	-	-	7/13	10.0	7.5
CARGILL DR1125	52	-	-	7/11	8.8	5.0
FUNK'S HW6624	46	-	-	7/11	15.0	1.3
DEKALB X684	45	-	-	7/12	12.5	8.8
STAUFFER S9740Y	44	-	-	7/11	12.5	0.0
COKER 7638	44	-	-	7/9	7.5	6.3
NORTHRUP KING 2244	42	-	-	7/9	3.8	10.0
CARGILL 6670	41	-	-	7/11	13.8	20.0
CARGILL 1096Y	40	-	-	7/13	18.8	3.8
DEKALB X5531	37	-	-	7/11	7.5	12.5
DEKALB DK49	36	-	-	7/14	42.5	0.0
HYPERFORMER WINGS	35	-	-	7/12	31.3	8.8
PIONEER 8226	33	-	-	7/20	26.3	0.0
TEST MEAN	45					
L.S.D. (.05)	15.2					
C.V. (%)	24.3					

* BIRD-RESISTANT HYBRID.

TABLE 7. MARION JUNCTION GRAIN SORGHUM HYBRID TRIAL, 1987

BRAND-HYBRID	1987 YIELD	1986-87 2-YR. AV.	1985-87 3-YR. AV.	1987 MID-BLOOM	1987 BIRD DAMAGE	1987 LODGED STALKS
	BU.	BU.	BU.	MO./DAY	PCT.	PCT.
HYPERFORMER 1330DR	43	56	66	-	32.5	0.0
DEKALB DK-648R *	51	61	63	-	15.0	0.0
DEKALB DK 64	40	58	62	-	45.0	0.0
PENN PENNGRAIN DR	41	56	61	-	23.8	0.0
FUNK'S G-522DR	36	54	60	-	16.3	0.0
FUNK'S G-1711	29	51	60	-	10.0	0.0
CARGILL 5572	32	52	59	-	15.0	0.0
COKER 7675	38	56	59	-	13.8	0.0
N-K SAVANNA 5 *	35	50	58	-	5.0	0.0
STAUFFER S-9750	34	52	58	-	16.3	0.0
FFR 321	34	50	57	-	36.3	0.0
SUMMIT HT 126DR	38	50	57	-	21.3	0.0
NORTHRUP KING 2660	35	49	56	-	16.3	0.0
CARGILL R1090	36	50	55	-	15.0	0.0
FUNK'S G-522A	39	52	55	-	16.3	0.0
DEKALB M-565	30	47	54	-	15.0	0.0
AGRATECH GK 802G	30	48	54	-	20.0	0.0
FFR 421 DR	35	49	54	-	35.0	0.0
CARGILL 4462	28	43	52	-	40.0	0.0
HYPERFORMER 1225DR	34	43	52	-	15.0	0.0
PIONEER 8333	28	44	51	-	51.3	0.0
ASGROW TOPAZ	17	40	50	-	20.0	0.0
AGRATECH GK 712G	29	47	50	-	17.5	0.0
HYPERFORMER HONCHO	29	45	44	-	13.8	0.0
AGRATECH GK 552G	33	42	43	-	36.3	0.0
FUNK'S RA 787	36	55	-	-	12.5	0.0
ASGROW CHAPPARAL	37	53	-	-	23.8	0.0
ASGROW SIERRA	33	49	-	-	18.8	0.0
SUMMIT HT124	37	44	-	-	28.8	0.0
CARGILL 1022	23	43	-	-	43.8	0.0
DEKALB X684	47	-	-	-	30.0	0.0
DEKALB DK49	45	-	-	-	12.5	0.0
DEKALB X5531	43	-	-	-	13.8	0.0
FUNK'S G1602	40	-	-	-	27.5	0.0
CARGILL 6670	39	-	-	-	11.3	0.0
COKER 7737	36	-	-	-	22.5	0.0
CARGILL DR1125	35	-	-	-	18.8	0.0
FUNK'S HW6624	34	-	-	-	25.0	0.0
CARGILL 1096Y	34	-	-	-	16.3	0.0
HYPERFORMER WINGS	32	-	-	-	10.0	0.0
STAUFFER S9740Y	30	-	-	-	37.5	0.0
COKER 7638	30	-	-	-	16.3	0.0
NORTHRUP KING 2244	27	-	-	-	55.0	0.0
PIONEER 8226	24	-	-	-	8.8	0.0
TEST MEAN	34					
L.S.D. (.05)	10.4					
C.V. (%)	21.7					

* BIRD-RESISTANT HYBRID.

TABLE 8. SHORTER GRAIN SORGHUM HYBRID TRIAL, 1987

BRAND-HYBRID	1987 YIELD	1986-87 2-YR. AV.	1985-87 3-YR. AV.	1987 MID-BLOOM	1987 BIRD DAMAGE	1987 LODGED STALKS
	BU.	BU.	BU.	MO./DAY	PCT.	PCT.
DEKALB DK-648R *	64	55	70	7/2	7.0	15.0
N-K SAVANNA 5 *	75	56	67	7/4	5.8	1.3
FUNK'S G-1711	55	46	62	7/6	11.0	0.0
STAUFFER S-9750	62	46	58	7/5	5.0	0.0
AGRATECH GK 712G	56	47	58	6/30	13.0	0.0
ASGROW TOPAZ	61	44	57	7/2	8.5	0.2
HYPERFORMER 1330DR	54	41	57	7/5	26.0	2.7
CARGILL 4462	50	44	56	6/30	29.5	0.0
NORTHRUP KING 2660	51	39	55	7/3	28.0	0.0
DEKALB M-565	57	43	55	7/2	17.3	0.0
FFR 421 DR	55	42	55	7/1	14.5	0.0
PIONEER 8333	52	45	54	6/30	14.5	0.0
HYPERFORMER HONCHO	48	42	54	6/30	11.3	0.0
FUNK'S G-522A	55	40	53	6/30	18.8	0.0
SUMMIT HT 126DR	56	38	53	7/3	21.3	0.2
HYPERFORMER 1225DR	47	36	53	7/4	16.0	0.0
FUNK'S G-522DR	52	37	53	7/2	26.3	0.2
AGRATECH GK 802G	45	36	52	7/3	20.8	0.0
COKER 7675	47	33	49	7/4	18.8	0.0
PENN PENNGRAIN DR	51	36	49	7/3	17.5	0.0
DEKALB DK 64	33	36	49	7/2	43.0	3.0
FFR 321	44	31	47	7/5	38.8	5.7
CARGILL R1090	43	35	46	7/3	45.0	2.0
CARGILL 5572	47	33	45	7/5	20.5	0.2
AGRATECH GK 552G	36	29	41	6/29	51.8	0.0
ASGROW SIERRA	73	55	-	7/5	16.8	0.0
ASGROW CHAPPARAL	55	52	-	7/4	26.3	0.0
FUNK'S RA 787	56	43	-	7/3	14.8	0.5
CARGILL 1022	52	43	-	6/29	24.3	0.0
SUMMIT HT124	51	40	-	6/29	24.0	0.0
COKER 7737	65	-	-	7/5	27.3	0.0
DEKALB X5531	63	-	-	6/30	12.0	1.7
FUNK'S G1602	60	-	-	6/30	12.0	0.0
FUNK'S HW6624	59	-	-	7/3	31.8	0.0
PIONEER 8226	59	-	-	7/5	16.3	0.0
DEKALB X684	58	-	-	7/2	40.0	8.5
DEKALB DK49	58	-	-	7/5	26.3	0.5
NORTHRUP KING 2244	57	-	-	6/30	17.5	0.2
CARGILL 1096Y	56	-	-	7/7	17.3	0.5
CARGILL 6670	56	-	-	7/6	19.0	0.0
COKER 7638	55	-	-	7/1	8.8	0.0
HYPERFORMER WINGS	53	-	-	7/4	23.0	3.8
CARGILL DR1125	46	-	-	7/3	8.8	0.0
STAUFFER S9740Y	45	-	-	7/1	19.5	0.0
TEST MEAN	54					
L.S.D. (.05)	19.4					
C.V. (%)	25.6					

* BIRD-RESISTANT HYBRID.

TABLE 9. YIELD AND LODGING AVERAGES FOR SOUTHERN ALABAMA,[1] 1985-87

BRAND-HYBRID	YIELD PER ACRE	LODGED STALKS
	BU.	PCT.
PICNEER 8333	64	1.5
AGRATECH GK 712G	63	3.5
AGRATECH GK 802G	63	4.2
CARGILL R1090	63	12.0
SUMMIT HT 126DR	63	1.5
N-K SAVANNA 5 *	63	5.9
DEKALB DK-64BR *	61	16.5
COKER 7675	61	1.6
DEKALB M-565	61	3.8
NORTHRUP KING 2660	61	2.9
FFR 321	61	6.3
ASGROW TOPAZ	61	1.9
CARGILL 4462	60	12.1
PENN PENNGRAIN DR	60	2.4
FFR 421 DR	60	3.3
FUNK'S G-522A	59	2.1
FUNK'S G-522DR	59	2.8
HYPERFORMER HONCHO	59	0.3
FUNK'S G-1711	59	3.3
HYPERFORMER 1225DR	58	3.2
DEKALB DK 64	57	6.9
STAUFFER S-9750	55	3.4
HYPERFORMER 1330DR	55	7.4
CARGILL 5572	54	1.7
AGRATECH GK 552G	54	4.9

[1] HEADLAND, MONROEVILLE, AND FAIRHOPE.
* BIRD-RESISTANT HYBRID.

TABLE 10. MONROEVILLE GRAIN SORGHUM HYBRID TRIAL, 1987

BRAND-HYBRID	1987 YIELD	1986-87 2-YR. AV.	1985-87 3-YR. AV.	1987 MID-BLOOM	1987 BIRD DAMAGE	1987 LODGED STALKS
	BU.	BU.	BU.	MO./DAY	PCT.	PCT.
PIONEER 8333	72	62	70	6/16	-	0.0
HYPERFORMER 1330DR	77	70	69	6/15	-	12.5
DEKALB M-565	71	64	68	6/15	-	0.0
AGRATECH GK 802G	69	60	68	6/14	-	0.0
DEKALB DK-648R *	80	63	67	6/16	-	13.8
NORTHRUP KING 2660	73	62	67	6/14	-	0.0
SUMMIT HT 1260R	74	64	67	6/14	-	0.0
COKER 7675	70	63	67	6/14	-	0.0
FUNK'S G-1711	67	63	66	6/15	-	0.0
CARGILL R1090	73	64	66	6/14	-	0.0
FFR 321	69	63	65	6/14	-	20.5
DEKALB DK 64	75	61	65	6/14	-	13.8
FUNK'S G-522A	64	59	64	6/14	-	0.0
FUNK'S G-522DR	67	61	64	6/14	-	0.0
PENN PENNGRAIN DR	73	62	63	6/14	-	0.0
N-K SAVANNA 5 *	75	52	62	6/14	-	0.5
AGRATECH GK 712G	70	54	61	6/13	-	1.3
CARGILL 5572	59	56	61	6/16	-	0.0
HYPERFORMER 1225DR	65	58	61	6/15	-	0.0
STAUFFER S-9750	65	60	61	6/15	-	1.7
ASGROW TOPAZ	71	55	60	6/14	-	0.0
HYPERFORMER HONCHO	66	50	60	6/14	-	0.0
FFR 421 DR	54	54	57	6/13	-	0.5
CARGILL 4462	64	51	55	6/12	-	0.0
AGRATECH GK 552G	56	49	52	6/11	-	2.5
ASGROW CHAPPARAL	73	65	-	6/15	-	0.5
FUNK'S RA 787	76	64	-	6/15	-	1.3
SUMMIT HT124	62	59	-	6/13	-	0.0
ASGROW SIERRA	74	55	-	6/14	-	0.5
CARGILL 1022	66	50	-	6/12	-	0.0
DEKALB X684	86	-	-	6/13	-	2.2
DEKALB DK49	77	-	-	6/18	-	0.0
PIONEER 8226	76	-	-	6/16	-	1.3
STAUFFER S9740Y	74	-	-	6/17	-	5.0
CARGILL 6670	73	-	-	6/15	-	0.0
HYPERFORMER WINGS	73	-	-	6/16	-	7.5
COKER 7737	71	-	-	6/14	-	5.0
CARGILL 1096Y	71	-	-	6/18	-	1.3
CARGILL DR1125	69	-	-	6/15	-	0.0
FUNK'S HW6624	69	-	-	6/15	-	1.3
FUNK'S G1602	66	-	-	6/12	-	0.0
COKER 7638	61	-	-	6/14	-	0.0
NORTHRUP KING 2244	58	-	-	6/12	-	0.0
DEKALB X5531	57	-	-	6/15	-	0.0
TEST MEAN	69					
L.S.D. (.05)	10.2					
C.V. (%)	10.5					

* BIRD-RESISTANT HYBRID.

TABLE 11. FAIRHOPE GRAIN SORGHUM HYBRID TRIAL, 1987

BRAND-HYBRID	1987 YIELD	1986-87 2-YR. AV.	1985-87 3-YR. AV.	1987 MID-BLOOM	1987 BIRD DAMAGE	1987 LODGED STALKS
	BU.	BU.	BU.	MO./DAY	PCT.	PCT.
CARGILL 4462	82	96	92	6/16	30.0	1.3
AGRATECH GK 712G	58	78	87	6/17	27.5	12.5
PIONEER 8333	66	84	87	6/19	35.0	0.0
SUMMIT HT 126DR	60	81	86	6/20	42.5	0.0
N-K SAVANNA 5 *	51	77	86	6/20	40.0	0.0
CARGILL R1090	60	85	86	6/21	45.0	0.0
ASGROW TOPAZ	55	78	85	6/22	47.5	0.0
FFR 421 DR	60	77	85	6/18	27.5	0.0
AGRATECH GK 802G	58	80	82	6/21	45.0	1.3
PENN PENNGRAIN DR	64	83	81	6/21	45.0	1.3
COKER 7675	49	77	80	6/22	50.0	0.0
DEKALB M-565	49	75	80	6/22	45.0	0.0
HYPERFORMER HONCHO	53	68	79	6/19	41.3	0.0
FUNK'S G-522DR	45	74	79	6/23	50.0	0.0
FUNK'S G-522A	56	77	78	6/18	35.0	0.0
NORTHRUP KING 2660	49	80	78	6/22	47.5	0.0
FFR 321	33	69	77	6/21	58.8	0.0
AGRATECH GK 552G	45	70	75	6/16	55.0	0.0
HYPERFORMER 1225DR	34	66	73	6/23	52.5	0.0
STAUFFER S-9750	42	73	72	6/24	37.5	0.0
FUNK'S G-1711	41	74	72	6/23	46.3	0.0
DEKALB DK-64BR *	40	68	72	6/23	47.5	0.0
CARGILL 5572	43	67	69	6/22	56.3	0.0
DEKALB DK 64	27	59	65	6/25	55.0	0.0
HYPERFORMER 1330DR	30	50	61	6/21	52.5	0.0
SUMMIT HT124	65	85	-	6/18	36.3	0.0
ASGROW CHAPPARAL	64	82	-	6/20	25.0	0.0
CARGILL 1022	57	77	-	6/18	45.0	1.3
ASGROW SIERRA	51	72	-	6/19	25.0	3.8
FUNK'S RA 787	28	63	-	6/25	56.3	0.0
PIONEER 8226	70	-	-	6/21	35.0	0.0
COKER 7638	62	-	-	6/18	32.5	1.3
FUNK'S HW6624	56	-	-	6/22	45.0	0.0
STAUFFER S9740Y	52	-	-	6/19	36.3	0.0
NORTHRUP KING 2244	50	-	-	6/17	27.5	0.0
FUNK'S G1602	50	-	-	6/23	31.3	1.3
DEKALB X5531	44	-	-	6/24	31.3	0.0
CARGILL DR1125	41	-	-	6/21	50.0	0.0
DEKALB X684	34	-	-	6/22	61.3	0.0
HYPERFORMER WINGS	34	-	-	6/24	48.8	0.0
DEKALB DK49	34	-	-	6/23	47.5	0.0
CARGILL 6670	33	-	-	6/23	47.5	0.0
CARGILL 1096Y	33	-	-	6/23	42.5	0.0
COKER 7737	31	-	-	6/23	53.8	0.0
TEST MEAN	49					
L.S.D. (.05)	17.1					
C.V. (%)	25.2					

* BIRD-RESISTANT HYBRID.

TABLE 12. HEADLAND GRAIN SORGHUM HYBRID TRIAL, 1987

BRAND-HYBRID	1987 YIELD	1986-87 2-YR. AV.	1985-87 3-YR. AV.	1987 MID-BLOOM	1987 BIRD DAMAGE	1987 LODGED STALKS
	BU.	BU.	BU.	MO./DAY	PCT.	PCT.
DEKALB DK-648R *	21	34	45	6/16	12.5	2.5
AGRATECH GK 712G	11	28	42	6/16	42.5	0.0
DEKALB DK 64	11	30	41	6/19	61.3	1.5
FFR 321	7	28	40	6/17	57.5	7.5
N-K SAVANNA 5 *	17	30	40	6/14	26.3	2.5
AGRATECH GK 802G	8	26	39	6/14	45.0	1.0
HYPERFORMER 1225DR	10	28	39	6/16	30.0	1.0
FUNK'S G-1711	10	34	38	6/18	25.0	0.0
NORTHRUP KING 2660	10	29	38	6/16	35.0	0.0
COKER 7675	17	29	37	6/13	52.5	0.0
CARGILL R1090	8	29	37	6/13	40.0	0.0
HYPERFORMER HONCHO	6	28	37	6/16	46.3	0.0
FFR 421 DR	9	22	37	6/16	61.3	0.0
ASGROW TOPAZ	12	23	36	6/16	41.3	0.0
PIONEER 8333	12	30	36	6/13	48.8	0.0
AGRATECH GK 552G	5	19	36	6/14	70.0	0.0
FUNK'S G-522A	12	24	36	6/16	46.3	0.0
SUMMIT HT 126DR	9	24	35	6/17	42.5	0.5
DEKALB M-565	11	25	35	6/16	45.3	0.0
PENN PENNGRAIN DR	8	26	35	6/17	42.5	0.0
CARGILL 4462	7	20	34	6/14	63.8	0.0
CARGILL 5572	8	25	34	6/16	32.5	0.0
FUNK'S G-522DR	12	28	33	6/14	43.8	0.0
HYPERFORMER 1330DR	7	24	33	6/16	36.3	5.0
STAUFFER S-9750	9	25	32	6/17	41.3	0.0
FUNK'S RA 787	6	26	-	6/16	38.8	5.0
ASGROW SIERRA	11	26	-	6/14	53.8	0.0
SUMMIT HT124	6	25	-	6/17	35.0	0.0
ASGROW CHAPPARAL	10	25	-	6/17	52.5	2.0
CARGILL 1022	7	18	-	6/16	47.5	2.5
DEKALB X5531	17	-	-	6/19	30.0	1.5
DEKALB DK49	14	-	-	6/16	57.5	0.0
CARGILL 6670	13	-	-	6/14	45.0	0.0
COKER 7737	12	-	-	6/21	43.8	0.0
FUNK'S G1602	12	-	-	6/16	42.5	0.0
DEKALB X684	11	-	-	6/19	61.3	0.0
HYPERFORMER WINGS	10	-	-	6/16	26.3	3.5
COKER 7638	10	-	-	6/16	36.3	0.0
FUNK'S HW6624	10	-	-	6/21	47.5	0.0
PIONEER 8226	10	-	-	6/13	35.0	0.0
STAUFFER S9740Y	9	-	-	6/16	47.5	1.0
CARGILL DR1125	9	-	-	6/19	32.5	0.0
NORTHRUP KING 2244	8	-	-	6/16	70.0	0.0
CARGILL 1096Y	8	-	-	6/17	36.3	0.0
TEST MEAN	10					
L.S.D. (.05)	6.2					
C.V. (%)	43.0					

* BIRD-RESISTANT HYBRID.

TABLE 13. PRELIMINARY GRAIN SORGHUM HYBRID TRIAL[1], 1987

BRAND-HYBRID	1987 YIELD	1986-87 2-YR. AV.	1987 MID-BLOOM	1987 BIRD DAMAGE	1987 LODGED STALKS
	BU.	BU.	MO./DAY	PCT.	PCT.
FUNK'S HW 7380	106	-	7/7	-	2.2
NORTHRUP KING 2779	103	-	7/7	-	7.2
N-K SAVANNA 5 *	101	-	7/8	-	7.2
SUMMIT S-69	99	-	7/8	15.7	6.7
CAPEHART CHALLENGER	98	-	7/8	20.0	15.5
HYPER HSC CHEROKEE	97	-	7/7	10.0	20.5
CARGILL 70	97	-	7/7	-	11.0
FUNK'S G-522DR	97	-	7/8	13.3	4.7
CAPEHART CONTENDER	95	-	7/7	20.0	12.2
ASGROW GS-712	93	-	7/9	20.0	26.7
ASGROW OSAGE	92	-	7/7	30.0	6.0
FFR EXP 752	91	-	7/9	23.3	11.7
CAPEHART CHARGER	88	-	7/7	20.0	5.2
DEKALB DK X-664	88	-	7/9	20.0	34.0
DEKALB DK X-733	87	-	7/7	30.0	15.0
PIONEER 8333	87	-	7/7	13.3	9.0
DEKALB DK X-6656	84	-	7/8	15.0	12.7
DEKALB DK-648R	84	-	7/7	-	28.7
DEKALB DK-69	73	-	7/7	23.3	28.7
DEKALB DK X-756	72	-	7/8	30.0	18.0
DEKALB DK X-732	71	-	7/10	10.0	16.5
FFR 332	71	-	7/7	15.0	34.5
CAPEHART CHAMPION	59	-	7/8	17.5	15.2
TEST MEAN	88				
L.S.D. (.05)	25.1				
C.V. (%)	20.1				

[1] BELLE MINA.
* BIRD-RESISTANT HYBRID.

TABLE 14. PRELIMINARY GRAIN SORGHUM HYBRID TRIAL[1], 1987

BRAND-HYBRID	1987 YIELD	1986-87 2-YR. AV.	1987 MID-BLOOM	1987 BIRD DAMAGE	1987 LODGED STALKS
	BU.	BU.	MO./DAY	PCT.	PCT.
PIONEER 8333	45	36	7/2	18.5	0.0
N-K SAVANNA 5 *	82	-	7/4	2.5	0.0
ASGROW OSAGE	73	-	7/4	9.8	0.0
FUNK'S HW 7380	70	-	7/5	7.3	0.0
CAPEHART CHALLENGER	70	-	7/5	13.0	0.0
HYPER HSC CHEROKEE	69	-	7/3	22.5	0.0
DEKALB DK X-664	68	-	7/7	20.5	6.0
DEKALB DK-648R	67	-	7/4	2.5	2.0
SUMMIT S-69	65	-	7/4	28.0	0.0
DEKALB DK X-732	64	-	7/7	22.0	0.0
ASGROW GS-712	63	-	7/6	17.8	0.0
CAPEHART CONTENDER	62	-	7/3	13.3	0.0
DEKALB DK X-6656	62	-	7/4	23.5	0.0
DEKALB DK X-756	59	-	7/6	23.8	0.0
DEKALB DK-69	57	-	7/5	20.5	1.3
FUNK'S G-522DR	57	-	7/2	14.8	0.0
DEKALB DK X-733	56	-	7/2	26.3	0.0
FFR 332	54	-	7/2	30.5	0.2
CAPEHART CHAMPION	54	-	7/5	23.8	0.0
CAPEHART CHARGER	46	-	6/30	27.5	0.0
FFR EXP 752	44	-	7/4	33.8	0.0
NORTHRUP KING 2779	38	-	6/30	31.3	0.0
CARGILL 70	35	-	6/30	23.8	0.0
TEST MEAN	59				
L.S.D. (.05)	21.5				
C.V. (%)	25.8				

[1] SHORTER.
* BIRD-RESISTANT HYBRID.

Table 15. Plant Height of Grain Sorghum Hybrids by Region or Location[1/], 1987

Brand	Hybrid	Plant height by region				
		Northern	Central	Marion Junction	Southern	Fairhope
		In.	In.	In.	In.	In.
AgraTech	GK 802G	52	53	31	38	56
AgraTech	GK 712G	47	48	29	36	53
AgraTech	GK 552G	55	55	34	37	62
Asgrow	Chapparal	53	54	34	40	55
Asgrow	Sierra	50	52	31	37	52
Asgrow	Topaz	50	52	31	36	54
Cargill	6670	53	54	33	40	54
Cargill	5572	52	54	33	40	55
Cargill	4462	52	53	35	39	58
Cargill	DR 1125	51	53	31	38	53
Cargill	1096 Y	54	57	34	41	56
Cargill	R 1090	51	50	31	39	54
Cargill	1022	52	52	33	37	54
Coker	7737	54	56	34	40	56
Coker	7675	50	52	32	38	55
Coker	7638	48	48	31	34	50
DeKalb	DK 64	54	58	39	39	56
DeKalb	DK 648R	59	63	44	46	63
DeKalb	DK 49	55	57	36	42	59
DeKalb	M-565	52	52	31	38	53
DeKalb	X 5531	51	51	34	37	54
Dekalb	X 684	54	55	38	41	58
FFR	421 DR	53	55	35	41	57
FFR	321	59	62	36	43	67
Funk's	G-1602	47	51	35	37	53
Funk's	G-1711	53	54	32	39	55
Funk's	G-522 A	48	48	31	36	48
Funk's	G-522 DR	52	52	32	38	53
Funk's	HW 6624	54	55	36	40	59
Funk's	RA 787	55	55	34	41	57
HyPerformer	1330DR	63	61	38	44	67
HyPerformer	1225DR	50	52	33	37	51
HyPerformer	Honcho	47	46	30	33	47
HyPerformer	Wings	56	55	32	38	57
Northrup King	2660	52	52	31	37	55
Northrup King	2244	47	48	34	35	51
Northrup King	Savanna 5	64	66	39	43	65
Pennington	Penngrain DR	51	52	33	37	54
Pioneer	8333	48	49	34	37	54
Pioneer	8226	53	52	38	41	57
Stauffer	S-9750	54	55	32	39	51
Stauffer	S-9740 Y	54	53	35	40	61
Summit	HT 126DR	51	53	33	39	56
Summit	HT 124	49	49	30	36	49

[1/] Northern region (Belle Mina and Crossville); central region (Prattville and Shorter); scuthern region (Monroeville and Headland).

Sources of Seed for the 1987 Grain Sorghum Tests

Entry designation	Source of seed
AgraTech brand hybrids	AgraTech Seeds, Inc. P.O. Box 644 Ashburn, GA 31714
Asgrow brand hybrids	Asgrow Seed Company 7000 Portage Road Kalamazoo, MI 49001
Capehart brand hybrids	Capehart Seed Service P.O. Box 10 Holland, MO 63853
Cargill brand hybrids	Cargill Seed Division Box 5645 Minneapolis, MN 55440
Coker brand hybrids	Coker's Pedigreed Seed Company P.O. Box 2629, 406 Woods West Memphis, AR 72301
DeKalb brand hybrids	DeKalb Pfizer Genetics Route 2, Box 56 Lubbock, TX 79415
FFR brand hybrids	Alabama Farmer's Cooperative P.O. Box 2227 Decatur, AL 35602
FFR Exp brand hybrids	FFR Cooperative 4112 E. State Road 225 W. Lafayette, IN 47906
Funk's brand hybrids	Funk Seeds International P.O. Box 280 Senatobia, MS 38668
HyPerformer brand hybrids	HyPerformer Seed Company 5100 Poplar Avenue Memphis, TN 38137
Northrup King brand hybrids	Northrup King Company P.O. Drawer 889 Laurinburg, NC 38352

(continued on the following page)

Sources of Seed for the 1987 Grain Sorghum Tests (continued)

Entry designation	Source of seed
Pennington brand hybrids	Pennington Seed, Inc. P.O. Box 290 Madison, GA 30650
Pioneer brand hybrids	Pioneer Hi-Bred International, Inc. 100 West Jefferson Street Tipton, IN 46072
Stauffer brand hybrids	Stauffer Seeds, Inc. Box 377 Lone Tree, IA 52755
Summit brand hybrids	Summit Seed Company P.O. Box 10121 Lubbock, TX 79408

ACCEPTABLE HYBRIDS FOR 1988

All acceptable hybrids have been tested for 3 consecutive years in the region listed. All of the acceptable hybrids are not equal in performance. It is suggested that this report be carefuly studied before choosing a hybrid. The hybrids are listed in descending order of 3-year-average yield for each region.

NORTHERN ALABAMA

Brand name	Hybrid
Northrup King	Savanna 5*
DeKalb	M-565
Asgrow	Topaz
Funk's	G-522DR
Summit	HT 126DR
HyPerformer	1225DR
AgraTech	GK 802G
Coker	7675
Northrup King	2660
AgraTech	GK 712G
FFR	421DR
Pioneer	8333
Funk's	G-522A*
HyPerformer	1330DR**

CENTRAL ALABAMA

Brand name	Hybrid
DeKalb	DK 64BR*
Funk's	G-1711
Northrup King	Savanna 5*
HyPerformer	1330DR
Funk's	G-522DR
Stauffer	S-9750
Northrup King	2660
Summit	HT 126DR
Pioneer	8333
Pennington	Penngrain DR
Funk's	G-522A
AgraTech	GK 712G
AgraTech	GK 802G
DeKalb	M-565
Coker	7675
HyPerformer	1225DR**

SOUTHERN ALABAMA

Brand name	Hybrid
Pioneer	8333
AgraTech	GK 712G
AgraTech	GK 802G
Cargill	R 1090
Northrup King	Savanna 5*
Summit	HT 126DR
Asgrow	Topaz
Coker	7675
DeKalb	DK 64BR*
DeKalb	M-565
FFR	321
Northrup King	2660
Cargill	4462
Pennington	Penngrain DR
FFR	421DR
Funk's	G-522A
Funk's	G-522DR
HyPerformer	Honcho
Funk's	G-1711
HyPerformer	1225DR**
DeKalb	DK 64**
HyPerformer	1330DR**

*Bird-resistant hybrid.
**If the present trend of these varieties continues, they will be dropped.