Grain Sorghum

2005 Missouri Crop Performance

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Missouri 2005 Grain Sorghum Performance Tests

This report is a contribution of the Division of Plant Science, University of Missouri College of Agriculture, Food and Natural Resources. The work was supported by fees paid by the companies submitting hybrids for evaluation. The University of Missouri began its performance testing program for grain sorghum hybrids in 1958. The number of commercial entries in the program increased from 40 in 1958 to 134 in 1982. The number has declined during recent years and was 27 hybrids in 2005. To select a commercial hybrid intelligently, producers need a reliable, unbiased, up-to-date source of information that will permit valid comparisons among available hybrids. The objective of the University of Missouri's performance testing program is to provide this information. The tests are conducted under as uniform conditions as possible. Small plots are used to reduce the chance of soil and climatic variations occurring from one plot to another. Results obtained should aid the individual grower in judging the relative merits of many of the commercial grain sorghum hybrids available in Missouri today.

Comparing Hybrids

The performance of a hybrid cannot be measured with absolute precision. Uncontrollable variability is involved in the determination of each yield average. This variability sometimes occurs because the soil is not uniform, but many other conditions may contribute to it. Because variability exists in all field experimentation, statistics are used as a tool to assist in making decisions. The statistical tool used in these tests is the test of least significant difference (L.S.D.). The L.S.D. is quite simple to apply. When two entries are compared and the difference between them is greater than the L.S.D., the entries are judged to be significantly different. Differences smaller than the L.S.D. may have occurred by chance and are judged to be not significant.

Hybrid performance may seem inconsistent from location to location and from year to year because of differences in rainfall, temperature, soil fertility, diseases, insects, and other factors. To obtain an improved estimate of relative hybrid performance, results from more than one location or year should be considered. In this publication, the authors have tried to facilitate comparisons across years and locations.

In each test, the "top yielding" hybrids have been identified. These hybrids are those that did not yield significantly less than the highest yielding hybrid in the test. They are denoted in the tables by an asterisk (*) next to their yields. Thus, by going down a column, readers can readily identify the highest yielding hybrids in a test. By going across, readers can evaluate the relative performance of a hybrid during several years or at several locations. From the standpoint of yield, the most desirable hybrids will be those that are among the "top yielding" hybrids (that is, those that have an asterisk) the greatest number of times.

Although yield usually receives first consideration, other agronomic characteristics may be equally important when selecting a grain sorghum hybrid. Moisture content at harvest, stalk strength and resistance to insects and diseases are among the hybrid characteristics that deserve careful consideration. High moisture content at harvest, whether due to later maturity or slow dry-down, may indicate an increased drying requirement. Poor stalk strength or susceptibility to pests may decrease harvestable yield because of lodging or stand loss. Therefore, when selecting a hybrid, producers should also consider the data presented on agronomic characteristics other than yield.

The Missouri Variety Testing Program does not recommend specific hybrids. Farmers growing a new hybrid for the first time should consider the information contained in this report and then grow a small acreage to determine adaptability. This should be the practice for all new hybrids regardless of origin.

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The authors recognize and express their appreciation to the following individuals for their part in making the 2005 grain sorghum performance tests possible: Bud and Ron Beetsma, Mooresville; Bill Cason, Macon; Jim Jerman, Vandalia; Kenny Tevis, Hughesville; Kurt Gretzinger, Urich; Eric Lawrence, Lamar; Charles Lang, Marston; Charles & Dale Glenn, Bertrand; and Jake Fisher, Superintendent, Delta Research Center, Portageville.

Experimental Procedures

Entries: All producers of hybrid seed were eligible to enter hybrids in the 2005 evaluation tests. Participation was voluntary. The testing coordinator exercised no control over which hybrids or how many hybrids were entered. However, to help finance the evaluation program, a fee of $100 per location was charged for each hybrid entered by the seed producer.

Plot Management: The tests were planted and harvested with equipment designed for small-plot work. Row spacing for grain sorghum tests in the North/Central and Southwest Regions was 15 inches. Row spacing for grain sorghum tests in the Southeast Region was 30 inches. Seeding rate for the 15 and 30 inch row spacing was 122,000 seeds/Acre. Fertilizer was applied at each site at the discretion of the farmer. Herbicides were used for weed control and plots were hand weeded as necessary. Management details varied from location to location and are specified in the regional crop management summaries.

Data Recorded: Agronomic characteristics were evaluated at harvest. Lodging was taken immediately before harvest. Interpretation of the scale is as follows: 1 = all plants erect, 3 = all plants leaning moderately or 20 to 50% down, 5 = all plants down. Yield is measured in bushels (56 pounds) per acre at a moisture content of 14.0 percent. An electronic moisture tester is used for all moisture readings.

Accessibility of Data: The results of the 2005 Crop performance tests are also available online at http://agebb.missouri.edu/cropperf/vartest . If you need assistance in accessing the system; call 573-882-4827 for help.

Field Plot Design: Statistical designs used to analyze the field data included randomized lattice with 3 replications and randomized complete block with 4 replications, depending on the size of the test. Individual plots were four rows wide. Row length was 25 feet for both 15 and 30 inch row spacing. All four rows of each plot were harvested for the 15 inch row spacing test and only the center two rows of each plot were harvested for the 30 inch row spacing to determine yield.

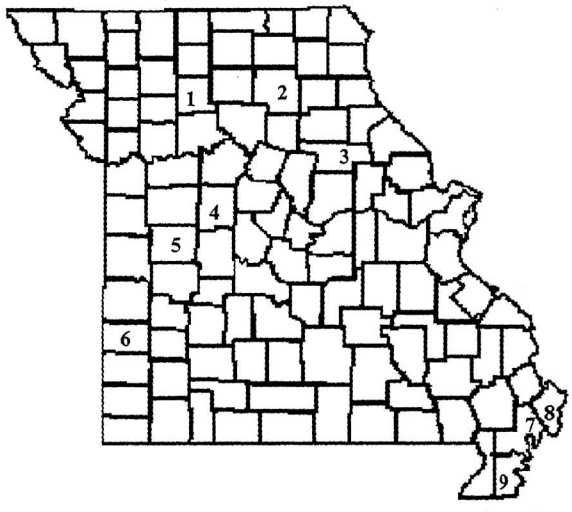
Locations

On the basis of geographical characteristics, the state is divided into regions. Grain sorghum hybrid evaluation tests are located in the North/Central, Southwest, and Southeast regions of the state. In 2005, the locations for these tests were:

North/Central
1. Beetsma farm near Mooresville in Livingston County
2. Bill Cason farm near Macon in Macon County
3. Jim Jerman farm near Vandalia in Audrain County

Southwest
4. Kenny Tevis farm near Hughesville in Pettis County
5. Kurt Gretzinger farm near Urich in Henry County
6. Eric Lawrence farm near Lamar in Barton County

Southeast
7. Charles Lang farm near Marston in New Madrid County
8. Glenn farm near Bertrand in Mississippi County
9. Delta Research Ctr. near Portageville in Pemiscot County



North/Central Region Crop Management Summary

There are three locations in the north/central region of Missouri for grain sorghum hybrid testing. They are located in counties where a significant number of acres of grain sorghum are grown according to the Missouri Agricultural Statistics Service. Cultural practices vary from location to location, but tend to reflect those followed by farmers in the area.

Planting dates ranged from May 6 to May 18 with soil conditions being normal at Mooresville and Macon but being very dry at Vandalia. Very poor emergence at the Vandalia site prompted a replant on June 20. Little or no rain fell for 6 weeks after the replant and the experiment was abandoned due to poor stands. Yields at Mooresville and Macon were about normal for the season.

Climatological information for the growing season for North Missouri (May 1 – September 30) is summarized below.

Average temperature = 72.0 degrees, 2.4 degrees above normal
Average precipitation = 16.9", 4.2" below normal

Table 1. North/Central Region Crop Management Summary

Location	Planting date	Harvest date	N	P_2O_5	K_2O	Tillage	Herbicide Pre	Herbicide Post	Insecticide
Standard Grain Sorghum Tests									
Mooresville	05-18	10-12	120	20	180	Conv.	Outlook, Atrazine	None	None
Macon	05-10	10-11	130	60	100	Min.	Atrazine	Buctril, Paramount	None
Vandalia	05-06	10-25	120	80	120	Conv.	Bicep II Magnum, Atrazine	None	None

TABLE 2. **Standard Grain Sorghum Test**
North/Central Region: Mooresville, MO (Livingston County)
Soil Type: Grundy Silt Loam Soil Test: pH=NA, OM=NA, P=NA, K=NA
Rainfall: May= 3.1, June= 6.8, July= 0.7, Aug.= 3.7, Sept.= 2.4 Total=16.7 in.

Brand-Variety	Seed Treatment +	2005 Moisture	2005 Plant Height	2005 Lodging	Yield 2005	Yield 2004	Yield 2 Yr. Mean
		(%)	(in)		bu/acre		
Pioneer 84G62	6	12.3	49	1	131.3**	101.8	116.6
ASGROW A567	4, 7	12.1	53	1	124.6*	126.2**	125.4
DEKALB DKS53-11	4, 7	13.2	51	1	121.7	85.8	103.8
DEKALB DKS54-00	4, 7	11.9	47	1	119.1	85.8	102.5
Garst 5401	5, 6	13.2	49	1	116.8	--	--
Pioneer 84G50	3	13.1	58	1	112.9	--	--
Golden Harvest H-512	1, 2, 4	12.1	55	1	111.9	104.0	108.0
Pioneer 85G01	3	12.0	49	1	108.6	--	--
Garst 5360	5, 6	12.3	45	1	105.8	--	--
Golden Harvest EX5513	1, 4, 5	12.0	56	1	105.0	--	--
TEST AVERAGE		**12.4**	**51**	**1**	**115.8**	**95.4**	**105.6**
L.S.D. AT .10		**0.6**			**9.1**	**NS**	
C.V. %		**4.0**			**6.5**	**23.2**	

-- Data not available.
** Highest yielding hybrid in the test.
* Hybrid which did not yield significantly less than the highest yielding hybrid in the test.
NS Not Significant
+ Seed Treatments: 1= Allegiance (Metalaxyl); 2= Apron XL (Mefenoxam); 3= Apron Maxx (Mefenoxam, Fludioxonil) 4= Captan; 5=Concep (Fluxofenim); 6= Cruiser (Thiamethoxam); 7= Gaucho (Imidacloprid)

TABLE 3. **Standard Grain Sorghum Test**

North/Central Region: Macon, MO (Macon County)

Soil Type: Mexico Silt Loam Soil Test: pH=5.6,OM=2.2%, P=74, K=171

Rainfall: May= 1.8, June= 7.2, July= 2.8, Aug.= 4.6, Sept.= 2.1 Total=18.5 in.

		2005			Yield		
Brand-Variety	Seed Treatment +	Moisture	Plant Height	Lodging	2005	2004	2 Yr. Mean
		(%)	(in)		----------bu/acre----------		
DEKALB DKS54-00	4, 7	15.0	46	1	125.2**	46.4	85.8
ASGROW A567	4, 7	16.0	48	1	122.3*	71.4**	96.9
Pioneer 84G62	6	17.4	48	1	121.5*	56.2*	88.9
DEKALB DKS53-11	4, 7	16.0	47	1	112.5	52.9	82.7
Garst 5401	5, 6	17.9	53	1	107.8	--	--
Pioneer 85G01	3	18.8	46	1	106.3	--	--
Pioneer 84G50	3	18.1	52	1	105.4	--	--
Golden Harvest H-512	1, 2, 4	17.6	45	1	103.4	62.0*	82.7
Golden Harvest EX5513	1, 4, 5	14.9	53	1	98.9	--	--
Garst 5360	5, 6	18.6	39	1	93.8	--	--
TEST AVERAGE		**17**	**48**	**1**	**109.7**	**52.5**	**81.1**
L.S.D. AT .10		**1.3**			**6.6**	**17.8**	
C.V. %		**6.6**			**5.0**	**18.8**	

-- Data not available.

** Highest yielding hybrid in the test.

* Hybrid which did not yield significantly less than the highest yielding hybrid in the test.

+ Seed Treatments: 1= Allegiance (Metalaxyl); 2= Apron XL (Mefenoxam); 3= Apron Maxx (Mefenoxam, Fludioxonil) 4= Captan; 5=Concep (Fluxofenim); 6= Cruiser (Thiamethoxam); 7= Gaucho (Imidacloprid)

TABLE 4. Performance of Standard Hybrids evaluated at Two North/Central Missouri locations (Mooresville, Macon) during 2005.

Mooresville
Planted: 05-18
Harvested: 10-12
Growing Season Rainfall: 16.7 in.

Macon
Planted: 05-10
Harvested: 10-11
Growing Season Rainfall: 18.5 in.

	Yield (Bu/Acre)		
Brand-Hybrid	Mooresville	Macon	Mean
	Standard		
Pioneer 84G62	131.3**	121.5*	126.4**
ASGROW A567	124.6*	122.3*	123.4*
DEKALB DKS54-00	119.1	125.2**	122.1*
DEKALB DKS53-11	121.7	112.5	117.1
Garst 5401	116.8	107.8	112.3
Pioneer 84G50	112.9	105.4	109.2
Golden Harvest H-512	111.9	103.4	107.6
Pioneer 85G01	108.6	106.3	107.4
Golden Harvest EX5513	105.0	98.9	102.0
Garst 5360	105.8	93.8	99.8
TEST AVERAGE	**115.8**	**109.7**	**112.8**
L.S.D. AT .10	**9.1**	**6.6**	**5.5**
C.V. %	**6.5**	**5.0**	**5.8**

** Highest yielding hybrid in the test.

* Hybrid which did not yield significantly less than the highest yielding hybrid in the test.

Note: To view seed treatments for these hybrids refer to the location table or the characteristics chart.

Southwest Region Crop Management Summary

There are three locations in the southwestern region of Missouri for grain sorghum hybrid testing. They are located in counties where a significant number of acres of grain sorghum are grown according to the Missouri Agricultural Statistics Service. Cultural practices vary from location to location, but tend to reflect those followed by farmers in the area.

Planting dates ranged from May 3 to May 12 with soil conditions being good at all locations. Erosion from a mid-May storm and some insect damage diminished the stand at Lamar and the experiment was replanted on June 17. With the crop maturing late, birds flocked into the field and ate a significant portion of the grain leaving much variability among the plots, so this experiment was abandoned. Yields at Hughesville and Urich were about normal for the season.

Climatological information for the growing season for Southwest Missouri (May 1 – September 30) is summarized below.

Average temperature = 74.6 degrees, 2.4 degrees above normal
Average precipitation = 20.7", 2.3" below normal

Table 5. Southwest Region Standard Location Crop Management Summary

Location	Planting date	Harvest date	Fertilizer N	P_2O_5	K_2O	Tillage	Herbicide Pre	Post	Insecticide
Standard Grain Sorghum Tests									
Hughesville	05-05	10-04	140	60	50	Conv.	Guardsman	None	None
Urich	05-12	10-04	120	60	120	Min.	Bicep II Magnum, Atrazine	None	None
Lamar	05-03	Not Harvested	80	60	60	Conv.	Bicep II Magnum, Atrazine	None	Lorsban

TABLE 6. **Standard Grain Sorghum Test**
Southwest Region: Hughesville, MO (Pettis County)
Soil Type: Arispe Silt Loam Soil Test: pH=5.5, OM=2.2%, P=74, K=176
Rainfall: May= 1.2, June= 5.4, July= 1.6, Aug.= 10.7, Sept.= 3.2 Total=22.1 in.

Brand-Variety	Seed Treatment +	2005 Moisture	2005 Plant Height	2005 Lodging	Yield 2005	Yield 2004	Yield 2 Yr. Mean
		(%)	(in)		bu/acre		
Pioneer 84G62	6	12.5	50	1	111.7**	147.1*	129.4
Pioneer 85G01	3	15.1	53	1	109.8*	--	--
DEKALB DKS53-11	4, 7	14.0	55	1	106.0*	136.2	121.1
DEKALB DKS54-00	4, 7	11.8	51	1	104.2	134.0	119.1
Garst 5401	5, 6	15.7	54	1	104.1	--	--
ASGROW A567	4, 7	14.6	53	1	103.6	150.6**	127.1
Pioneer 84G50	3	14.6	56	1	103.0	--	--
DEKALB DKS42-20	4, 7	12.6	55	1	94.5	133.6	114.1
Garst 5360	5, 6	14.2	48	1	87.4	--	--
TEST AVERAGE		**13.9**	**53**	**1**	**102.7**	**132.7**	**117.7**
L.S.D. AT .10		**2.3**			**7.4**	**14.2**	
C.V. %		**13.9**			**5.9**	**9.0**	

-- Data not available.
** Highest yielding hybrid in the test.
* Hybrid which did not yield significantly less than the highest yielding hybrid in the test.
+ Seed Treatments: 1= Allegiance (Metalaxyl); 2= Apron XL (Mefenoxam); 3= Apron Maxx (Mefenoxam, Fludioxonil) 4= Captan; 5=Concep (Fluxofenim); 6= Cruiser (Thiamethoxam); 7= Gaucho (Imidacloprid)

TABLE 7. **Standard Grain Sorghum Test**
Southwest Region: Urich, MO (Henry County)
Soil Type: Hartwell Silt Loam Soil Test: pH=6.5,OM=2.2%, P=26, K=200
Rainfall: May= 2.6, June= 5.2, July= 1.7, Aug.= 9.6, Sept.= 3.6 Total=22.7 in.

Brand-Variety	Seed Treatment+	2005 Moisture (%)	2005 Plant Height (in)	2005 Lodging	Yield 2005 (bu/acre)	Yield 2003 (bu/acre)	Yield 2 Yr. Mean (bu/acre)
DEKALB DKS54-00	4, 7	15.4	57	1	124.5**	144.2**	134.4
ASGROW A567	4, 7	16.9	55	1	123.1*	--	--
Pioneer 84G62	6	16.7	53	1	122.9*	142.8*	132.9
DEKALB DKS42-20	4, 7	14.8	54	1	112.3	123.7	118.0
Pioneer 84G50	3	19.0	58	1	111.7	--	--
Garst 5401	5, 6	16.6	60	1	111.6	--	--
DEKALB DKS53-11	4, 7	18.0	55	1	107.2	--	--
Pioneer 85G01	3	17.0	51	1	105.0	--	--
Garst 5360	5, 6	16.9	50	1	98.6	--	--
TEST AVERAGE		**16.8**	**55**	**1**	**113.0**	**129.0**	**121.0**
L.S.D. AT .10		**1.8**			**7.4**	**8.7**	
C.V. %		**9.0**			**5.4**	**4.9**	

-- Data not available.
** Highest yielding hybrid in the test.
* Hybrid which did not yield significantly less than the highest yielding hybrid in the test.
+ Seed Treatments: 1= Allegiance (Metalaxyl); 2= Apron XL (Mefenoxam); 3= Apron Maxx (Mefenoxam, Fludioxonil) 4= Captan; 5=Concep (Fluxofenim); 6= Cruiser (Thiamethoxam); 7= Gaucho (Imidacloprid)

TABLE 8. Performance of Standard Hybrids evaluated at Two Southwest Missouri locations (Hughesville, Urich) during 2005.

Hughesville
Planted: 05-05
Harvested: 10-04
Growing Season Rainfall: 22.1 in.

Urich
Planted: 05-12
Harvested: 10-04
Growing Season Rainfall: 22.7 in.

Brand-Hybrid	Yield (Bu/Acre) Hughesville	Urich	Mean
	Standard		
Pioneer 84G62	111.7**	122.9*	117.3**
DEKALB DKS54-00	104.2	124.5**	114.3*
ASGROW A567	103.6	123.1*	113.3*
Garst 5401	104.1	111.6	107.8
Pioneer 85G01	109.8*	105.0	107.4
Pioneer 84G50	103.0	111.7	107.3
DEKALB DKS53-11	106.0*	107.2	106.6
DEKALB DKS42-20	94.5	112.3	103.4
Garst 5360	87.4	98.6	93.0
TEST AVERAGE	**102.7**	**113.0**	**107.9**
L.S.D. AT .10	**7.4**	**7.4**	**5.2**
C.V. %	**5.9**	**5.4**	**5.7**

** Highest yielding hybrid in the test.
* Hybrid which did not yield significantly less than the highest yielding hybrid in the test.
Note: To view seed treatments for these hybrids refer to the location table or the characteristics chart.

Southeast Region Crop Management Summary

There are three locations in the southeastern region of Missouri for grain sorghum testing. They are located in counties where a significant number of acres of grain sorghum are grown according to the Missouri Agricultural Statistics Service. Cultural practices vary from location to location, but tend to reflect those followed by farmers in the area.

Planting dates ranged from May 4 to May 5 with soil conditions being good at all locations. Growing conditions for the southeast Missouri grain sorghum crop were good. Yields at all locations were about normal for the region.

Climatological information for the growing season for Southeast Missouri (May 1 – September 30) is summarized below.

Average temperature = 75.2 degrees, 1.1 degrees above normal
Average precipitation = 16.5", 2.6" below normal

Table. 9 Southeast Region Crop Management Summary

Location	Planting date	Harvest date	Fertilizer N	P	K	Tillage	Herbicide Pre	Post	Insecticide
Marston	05-05	09-22	180	0	0	Conv.	Dual II Magnum, Atrazine		None
Bertrand	05-05	09-22	180	100	100	Conv.	Dual II Magnum, Atrazine	2,4-D	None
Portageville Loam	05-04	08-19	180	0	0	Conv.	Dual II Magnum, Atrazine		None

TABLE 10. **Standard Grain Sorghum Test**

Southeast Region: Marston, MO (New Madrid County)

Soil Type: Sharkey Clay Loam Soil Test: pH=4.6,OM=1.2%, P=129, K=588

Rainfall: May= 0.4, June= 1.2, July= 5.8, Aug.= 3.8, Sept.= 3.1 Total=14.3 in.

		2005			Yield		
Brand-Variety	Seed Treatment+	Moisture	Plant Height	Lodging	2005	2004	2 Yr. Mean
		(%)	(in)		----------bu/acre----------		
Dyna Gro X1743	4	10.8	48	1	156.4**	--	--
DEKALB DKS53-11	4, 7	12.9	54	1	150.8	115.5*	133.2
Dyna Gro X1739	4	12.7	49	1	149.9	95.2	122.6
DEKALB DKS54-00	4, 7	11.8	54	1	145.9	98.6	122.3
Dyna Gro 751B	4	13.3	53	1	145.1	97.3	121.2
Dyna Gro X1755	4	11.9	50	1	144.7	--	--
Golden World GW1467	1, 4, 5, 7	12.3	51	1	144.3	--	--
FFR 322	4, 7	13.1	54	1	142.9	102.1	122.5
Dyna Gro X1742	4	12.0	45	1	139.7	--	--
Dyna Gro X1759	4	13.7	45	1	138.4	--	--
Garst 5360	5, 6	11.9	39	1	135.6	--	--
Pioneer 84G62	6	11.8	50	1	135.2	96.6	115.9
Dyna Gro 780B	4	12.2	55	1	134.7	116.3*	125.5
ASGROW A567	4, 7	12.3	49	1	131.7	124.4**	128.1
Golden Harvest EX5513	1, 4, 5	11.1	53	1	131.3	--	--
Pioneer 83G15	6	10.7	48	1	130.1	--	--
Golden World GW5964	1, 4, 5, 7	12.8	47	1	129.1	--	--
Garst 5401	5, 6	13.1	56	1	127.5	--	--
Dyna Gro X1758	4	13.0	48	1	126.0	--	--
Golden Harvest H-502	1, 2, 4	13.6	48	1	125.7	96.1	110.9
FFR 317	4, 7	11.8	41	1	125.5	--	--
Golden World GW3167	1, 4, 5, 7	13.0	50	1	118.7	--	--
Dyna Gro X1785	4	12.5	39	1	109.3	--	--
TEST AVERAGE		**12.4**	**49**	**1**	**135.6**	**95.4**	**115.5**
L.S.D. AT .10		**1.0**			**NS**	**19.5**	
C.V. %		**5.9**			**13.5**	**13.8**	

-- Data not available.

** Highest yielding hybrid in the test.

* Hybrid which did not yield significantly less than the highest yielding hybrid in the test.

NS Not Significant.

+ Seed Treatments: 1= Allegiance (Metalaxyl); 2= Apron XL (Mefenoxam); 3= Apron Maxx (Mefenoxam, Fludioxonil) 4= Captan; 5=Concep (Fluxofenim); 6= Cruiser (Thiamethoxam); 7= Gaucho (Imidacloprid)

TABLE 11. **Standard Grain Sorghum Test**

Southeast Region: Bertrand, MO (Mississippi County)

Soil Type: Sikeston Loam Soil Test: pH=5.8, OM=3.2%, P=171, K=447

Rainfall: May= 0.8, June= 2.4, July= 5.8, Aug.= 4.1, Sept.= 3.0 Total=16.1 in.

		2005			Yield		
Brand-Variety	Seed Treatment+	Moisture	Plant Height	Lodging	2005	2004	2 Yr. Mean
		(%)	(in)		----------bu/acre----------		
Pioneer 84G62	6	10.6	59	1	161.7**	148.0*	154.9
FFR 322	4, 7	10.7	64	1	160.7*	137.0	148.9
Dyna Gro 751B	4	11.0	63	1	160.0*	148.6*	154.3
DEKALB DKS54-00	4, 7	10.5	60	1	157.0*	155.0**	156.0
ASGROW A567	4, 7	10.9	56	1	156.5*	137.3	146.9
Golden Harvest H-502	1, 2, 4	10.7	62	1	156.2*	143.9*	150.1
Dyna Gro 780B	4	10.6	66	1	155.3*	147.3*	151.3
DEKALB DKS53-11	4, 7	11.1	57	1	151.9	145.8*	148.9
Golden Harvest EX5513	1, 4, 5	10.5	68	1	151.7	--	--
Garst 5401	5, 6	10.7	65	1	151.5	--	--
Golden World GW3167	1, 4, 5, 7	11.3	61	1	149.8	--	--
Dyna Gro X1739	4	10.2	58	1	149.6	135.1	142.4
Dyna Gro X1785	4	10.5	61	1	147.6	--	--
Dyna Gro X1755	4	10.5	60	1	147.0	--	--
Golden World GW1467	1, 4, 5, 7	10.3	58	1	146.2	--	--
Dyna Gro X1759	4	11.1	65	1	145.4	--	--
Dyna Gro X1743	4	9.2	55	1	143.6	--	--
Pioneer 83G15	6	10.5	60	1	142.1	--	--
Garst 5360	5, 6	10.1	54	1	139.7	--	--
Golden World GW5964	1, 4, 5, 7	10.6	54	1	136.1	--	--
FFR 317	4, 7	10.8	59	1	135.7	--	--
Dyna Gro X1742	4	10.5	56	1	135.6	--	--
Dyna Gro X1758	4	10.8	62	1	131.6	--	--
TEST AVERAGE		**10.6**	**60**	**1**	**148.4**	**137.1**	**142.8**
L.S.D. AT .10		**0.4**			**9.1**	**14.8**	
C.V. %		**2.5**			**4.2**	**7.5**	

-- Data not available.

** Highest yielding hybrid in the test.

* Hybrid which did not yield significantly less than the highest yielding hybrid in the test.

+ Seed Treatments: 1= Allegiance (Metalaxyl); 2= Apron XL (Mefenoxam); 3= Apron Maxx (Mefenoxam, Fludioxonil) 4= Captan; 5=Concep (Fluxofenim); 6= Cruiser (Thiamethoxam); 7= Gaucho (Imidacloprid)

TABLE 12. **Standard Grain Sorghum Test**

Southeast Region: Portageville Loam, MO (Pemiscot County)

Soil Type: Tiptonville Silt Loam Soil Test: pH=5.1, OM=1.2%, P=136, K=455

Rainfall: May= 0.6, June= 2.3, July= 4.4, Aug.= 6.2, Sept.= 2.2 Total=15.7 in.

Irrigation: 10 in.

		2005			Yield		
Brand-Variety	Seed Treatment[+]	Moisture	Plant Height	Lodging	2005	2004	2 Yr. Mean
		(%)	(in)		----------bu/acre----------		
Pioneer 84G62	6	20.8	55	1	162.6**	107.2*	134.9
Dyna Gro 751B	4	20.5	60	1	148.6*	82.6	115.6
Dyna Gro X1755	4	19.6	55	1	146.6*	--	--
Pioneer 83G15	6	21.0	56	2	142.4	--	--
Dyna Gro X1743	4	15.4	56	1	140.8	--	--
Dyna Gro X1739	4	18.0	54	1	140.2	110.5*	125.4
Golden World GW1467	1, 4, 5, 7	20.4	54	1	139.6	--	--
Garst 5360	5, 6	19.2	54	1	137.1	--	--
FFR 322	4, 7	18.2	60	1	136.9	88.8*	112.9
DEKALB DKS54-00	4, 7	22.0	54	1	136.8	34.4	85.6
DEKALB DKS53-11	4, 7	21.8	60	1	135.3	83.5	109.4
Dyna Gro X1785	4	20.3	54	1	134.9	--	--
Golden Harvest H-502	1, 2, 4	18.2	60	1	132.0	78.5	105.3
ASGROW A567	4, 7	18.8	59	1	131.2	73.9	102.6
Golden World GW5964	1, 4, 5, 7	17.2	50	1	126.2	--	--
Dyna Gro 780B	4	19.0	62	1	123.9	87.0*	105.5
Golden World GW3167	1, 4, 5, 7	20.5	50	1	123.6	--	--
Dyna Gro X1758	4	16.3	55	1	123.4	--	--
Dyna Gro X1759	4	18.8	58	1	122.1	--	--
Garst 5401	5, 6	17.4	66	1	119.5	--	--
FFR 317	4, 7	15.6	50	1	119.0	--	--
Golden Harvest EX5513	1, 4, 5	20.0	60	1	115.3	--	--
Dyna Gro X1742	4	12.2	51	1	107.0	--	--
TEST AVERAGE		**18.7**	**56**	**1**	**132.4**	**79.1**	**105.8**
L.S.D. AT .10		**2.4**			**18.9**	**26.9**	
C.V. %		**7.5**			**8.2**	**25.6**	

-- Data not available.

** Highest yielding hybrid in the test.

* Hybrid which did not yield significantly less than the highest yielding hybrid in the test.

+ Seed Treatments: 1= Allegiance (Metalaxyl); 2= Apron XL (Mefenoxam); 3= Apron Maxx (Mefenoxam, Fludioxonil) 4= Captan; 5=Concep (Fluxofenim); 6= Cruiser (Thiamethoxam); 7= Gaucho (Imidacloprid)

TABLE 13. Performance of Standard Hybrids evaluated at Three Southeast Missouri locations (Marston, Bertrand, Portageville Loam) during 2005.

Marston	Bertrand	Portageville Loam
Planted: 05-05	Planted: 05-05	Planted: 05-04
Harvested: 09-22	Harvested: 09-22	Harvested: 08-19
Growing Season Rainfall: 14.3 in.	Growing Season Rainfall: 16.1 in.	Growing Season Rainfall: 15.7 in.
Irrigation: 0 in.	Irrigation: 0 in.	Irrigation: 10 in.

Brand-Hybrid	Yield (Bu/Acre) Marston	Bertrand	Portageville Loam	Mean
		Standard		
Pioneer 84G62	135.2	161.7**	162.6**	153.2**
Dyna Gro 751B	145.1	160.0*	148.6*	151.2*
Dyna Gro X1743	156.4**	143.6	140.8	146.9*
FFR 322	142.9	160.7*	136.9	146.8*
Dyna Gro X1739	149.9	149.6	140.2	146.6*
DEKALB DKS54-00	145.9	157.0*	136.8	146.6*
Dyna Gro X1755	144.7	147.0	146.6*	146.1*
DEKALB DKS53-11	150.8	151.9	135.3	146.0*
Golden World GW1467	144.3	146.2	139.6	143.4*
ASGROW A567	131.7	156.5*	131.2	139.8
Pioneer 83G15	130.1	142.1	142.4	138.2
Dyna Gro 780B	134.7	155.3*	123.9	138.0
Golden Harvest H-502	125.7	156.2*	132.0	138.0
Garst 5360	135.6	139.7	137.1	137.5
Dyna Gro X1759	138.4	145.4	122.1	135.3
Garst 5401	127.5	151.5	119.5	132.8
Golden Harvest EX5513	131.3	151.7	115.3	132.8
Golden World GW3167	118.7	149.8	123.6	130.7
Dyna Gro X1785	109.3	147.6	134.9	130.6
Golden World GW5964	129.1	136.1	126.2	130.5
Dyna Gro X1742	139.7	135.6	107.0	127.4
Dyna Gro X1758	126.0	131.6	123.4	127.0
FFR 317	125.5	135.7	119.0	126.7
TEST AVERAGE	**135.6**	**148.4**	**132.4**	**138.8**
L.S.D. AT .10	**NS**	**9.1**	**18.9**	**11.4**
C.V. %	**13.5**	**4.2**	**8.2**	**8.6**

** Highest yielding hybrid in the test.
* Hybrid which did not yield significantly less than the highest yielding hybrid in the test.
NS Not Significant
Note: To view seed treatments for these hybrids refer to the location table or the characteristics chart.

Characteristics of Grain Sorghum Hybrids

Brand Hybrid	Seed Treatment	Maturity Days	Grain Color	Special Traits	Green Bug Biotype Res.	Table Numbers
ASGROW A567	4, 7	74	BZ	None	S	2, 3, 4, 6, 7, 8, 10, 11, 12, 13
DEKALB DKS42-20	4, 7	66	BZ	None	C,D,E	6, 7, 8
DEKALB DKS53-11	4, 7	75	BZ	None	C,D,E,I	2, 3, 4, 6, 7, 8, 10, 11, 12, 13
DEKALB DKS54-00	4, 7	72	BZ	None	C,D,E,I	2, 3, 4, 6, 7, 8, 10, 11, 12, 13
Dyna Gro 751B	4	67	R	None	C,E	10, 11, 12, 13
Dyna Gro 780B	4	72	R	None	C,E	10, 11, 12, 13
Dyna Gro X1739	4	72	BZ	None	S	10, 11, 12, 13
Dyna Gro X1742	4	64	BZ	None	S	10, 11, 12, 13
Dyna Gro X1743	4	64	BZ	None	S	10, 11, 12, 13
Dyna Gro X1755	4	64	BZ	None	S	10, 11, 12, 13
Dyna Gro X1758	4	67	BZ	None	S	10, 11, 12, 13
Dyna Gro X1759	4	72	BZ	None	S	10, 11, 12, 13
Dyna Gro X1785	4	67	BZ	None	S	10, 11, 12, 13
FFR 317	4, 7	60	BZ	None	S	10, 11, 12, 13
FFR 322	4, 7	64	R	None	E	10, 11, 12, 13
Garst 5360	5, 6	69	R	None	S	2, 3, 4, 6, 7, 8, 10, 11, 12, 13
Garst 5401	5, 6	68	R	None	E	2, 3, 4, 6, 7, 8, 10, 11, 12, 13
Golden Harvest EX5513	1, 4, 5	72	BZ	None	S	2, 3, 4, 10, 11, 12, 13
Golden Harvest H-502	1, 2, 4	70	R	None	C,E	10, 11, 12, 13
Golden Harvest H-512	1, 2, 4	71	R	None	C,E	2, 3, 4
Golden World GW1467	1, 4, 5, 7	61	R	None	S	10, 11, 12, 13
Golden World GW3167	1, 4, 5, 7	61	R	None	S	10, 11, 12, 13
Golden World GW5964	1, 4, 5, 7	61	BZ	None	E	10, 11, 12, 13
Pioneer 83G15	6	63	BZ	None	S	10, 11, 12, 13
Pioneer 84G50	3	70	BZ	None	E	2, 3, 4, 6, 7, 8
Pioneer 84G62	6	64	BZ	None	E	2, 3, 4, 6, 7, 8, 10, 11, 12, 13
Pioneer 85G01	3	69	R	None	E	2, 3, 4, 6, 7, 8

* Descriptions were provided by the companies submitting them for evaluation
NA – Information Not Available
Seed Treatments: 1= Allegiance (Metalaxyl); 2= Apron XL (Mefenoxam); 3= Apron Maxx (Mefenoxam, Fludioxonil) 4= Captan; 5=Concep (Fluxofenim); 6= Cruiser (Thiamethoxam); 7= Gaucho (Imidacloprid)
Maturity Days: Days to 50% bloom
Grain Color: BZ = Bronze; R = Red; W = White

Brand	Firm and Address	Phone Number
Asgrow	Monsanto, 7159 N. 247th St. W, Mt. Hope, KS 67108	316-445-2290
Dekalb	Monsanto , 7159 N. 247th St. W., Mt. Hope, KS 67108	316-445-2290
Dyna Gro	UAP Midsouth, 57 Germantown Court Suite 200, Cordova, TN 38018	901-755-7566
FFR	FFR Seed, 969 Cloverleaf Dr., Southaven, MS 38671	901-652-0903
Garst	Garst Seed Co., 2369 330th Street , Slater, IA 50244	515-685-5234
Golden Harvest	Golden Harvest Seeds, Inc., P.O. Box 248, Pekin, IL 61555	563-320-7461
Golden World	Crosbyton Seed Co., PO Box 429, Crosbyton, TX 79322	806-675-2308
Pioneer	Pioneer Hi-Bred Int. Inc., 5700 Merle Hay Rd., Johnston, IA 50131	515-253-5889
Pioneer	Pioneer Hi-bred Int. Inc., 7501 Memorial Pkwy SW, Suite 205, Huntsville, AL 35802	800-331-2475

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