

Tri-State Grain Sorghum Performance Tests

2013

Maria Balota
Ron Heiniger
Christopher Ray
Hillary Mehl
Laban Rutto

Clemson University
Clemson University Experiment Station
Clemson, SC 29634

North Carolina State University
North Carolina Cooperative Extension
Raleigh, NC 27695

Virginia Polytechnic Institute and State University
Virginia Agricultural Experiment Station
Tidewater Agricultural Research and Extension Center
Suffolk, Virginia 23437



**King's
AgriSeeds** Inc. 
60 N. Ronks Rd.
Suite K
Ronks, PA 17572
(717) 687-6224
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Clemson University Experiment Station

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Pioneer

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Contents

Introduction	1
Virginia Materials and Methods	1
Results Summary	1
Grain Sorghum Performance Measurements	2
Table 1. Performance of Non-Irrigated Full Season Early Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field #23, 2013	3
Table 2. Performance of Non-Irrigated Full Season Medium Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 23, 2013	4
Table 3. Performance of Non-Irrigated Full Season Late Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field #23, 2013	5
Table 4. Percentage of mold and anthracnose for Full Season, Early Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field #23, 2013	6
Table 5. Percentage of mold for Full Season, Medium Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 23, 2013	7
Table 6. Percentage of mold for Full Season, Late Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 23, 2013	8
Table 7. Mycotoxins results for Full Season Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 23, 2013	9
Table 8. Performance of Full Season Early Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 26, 2013	11
Table 9. Performance of Full Season Medium Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 26, 2013	12
Table 10. Performance of Full Season Late Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 26, 2013	13
Table 11. Percentage of mold and anthracnose for Full Season, Early Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 26, 2013	14
Table 12. Percentage of mold for Full Season, Medium Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 26, 2013	15
Table 13. Percentage of mold for Full Season, Late Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 26, 2013	16
Table 14. Mycotoxins results for Full Season Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 26, 2013	17
Table 15. Performance of Irrigated, Full Season Early Maturing Grain Sorghum Hybrids, Sussex Co., VA, 2013	19
Table 16. Performance of Irrigated, Full Season Medium Maturing Grain Sorghum Hybrids, Sussex Co., VA, 2013	20
Table 17. Performance of Irrigated, Full Season Late Maturing Grain Sorghum Hybrids, Sussex Co., VA, 2013	21
Table 18. Performance of Non-Irrigated Full Season Early Maturing Grain Sorghum Hybrids, Sussex Co., VA, 2013	22
Table 19. Performance of Non-Irrigated Full Season Medium Maturing Grain Sorghum Hybrids, Sussex Co., VA, 2013	23
Table 20. Performance of Non-Irrigated Full Season Late Maturing Grain Sorghum Hybrids, Sussex Co., VA, 2013	24

Contents

Table 21. Percentage of mold for Full Season Early Maturing Grain Sorghum Hybrids, Sussex Co., VA, 2013	25
Table 22. Percentage of mold for Full Season Medium Maturing Grain Sorghum Hybrids, Sussex Co., VA, 2013	26
Table 23. Percentage of mold for Full Season Late Maturing Grain Sorghum Hybrids, Sussex Co., VA, 2013	27
Table 24. Performance of Full Season Early Maturing Grain Sorghum Hybrids, Petersburg, VA, 2013	28
Table 25. Performance of Full Season Medium Maturing Grain Sorghum Hybrids, Petersburg, VA, 2013	29
Table 26. Performance of Full Season Late Maturing Grain Sorghum Hybrids, Petersburg, VA, 2013	30
Table 27. Performance of Double Crop Early Maturing Grain Sorghum Hybrids, TAREC(Suffolk), VA, 2013	31
Table 28. Performance of Double Crop Late Maturing Grain Sorghum Hybrids, TAREC(Suffolk), VA, 2013	32
Table 29. Percentage of mold and anthracnose for Double Crop Early Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, 2013	33
Table 30. Percentage of mold and anthracnose for Double Crop Late Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, 2013	34
Table 31. Performance of Double Crop Early Maturing Grain Sorghum Hybrids, Isle of Wight Co., VA, 2013	35
Table 32. Performance of Double Crop Late Maturing Grain Sorghum Hybrids, Isle of Wight Co., VA, 2013	36
Introduction	37
North Carolina Materials and Methods	37
Results Summary	37
Grain Sorghum Performance Measurements	38
Table 33. Performance of Full Season Grain Sorghum Hybrids, Goldsboro, NC, 2013	39
Table 34. Performance of Full Season Grain Sorghum Hybrids, Kinston, NC, 2013	41
Table 35. Performance of Full Season Grain Sorghum Hybrids, Rocky Mount, NC, 2013	43
Table 36. Performance of Double Crop Grain Sorghum Hybrids, Kinston, NC, 2013	45
Table 37. Performance of Double Crop Grain Sorghum Hybrids, Rocky Mount, NC, 2013	46
Introduction	47
South Carolina Materials and Methods	47
Results Summary	47
Grain Sorghum Performance Measurements	48
Table 38 Performance of Full Season Early Maturing Grain Sorghum Hybrids, Pendleton, SC, 2013	49
Table 39 Performance of Full Season Medium Maturing Grain Sorghum Hybrids, Pendleton, SC, 2013	50

Contents

Table 40 Performance of Full Season Late Maturing Grain Sorghum Hybrids, Pendleton, SC, 2013	51
Table 41 Performance of Full Season Early Maturing Grain Sorghum Hybrids, Newberry, SC, 2013	52
Table 42 Performance of Full Season Medium Maturing Grain Sorghum Hybrids, Newberry, SC, 2013	53
Table 43 Performance of Full Season Late Maturing Grain Sorghum Hybrids, Newberry, SC, 2013	54
Table 44 Performance of Full Season Early Maturing Grain Sorghum Hybrids, Blackville, SC, 2013	55
Table 45 Performance of Full Season Medium Maturing Grain Sorghum Hybrids, Blackville, SC, 2013	56
Table 46 Performance of Full Season Late Maturing Grain Sorghum Hybrids, Blackville, SC, 2013	57
Table 47 Performance of Late Planted Early Maturing Grain Sorghum Hybrids, Pendleton, SC, 2013	58
Table 48 Performance of Late Planted Late Maturing Grain Sorghum Hybrids, Pendleton, SC, 2013	59
Table 49 Performance of Late Planted Early Maturing Grain Sorghum Hybrids, Blackville, SC, 2013	60
Table 50 Performance of Late Planted Late Maturing Grain Sorghum Hybrids, Blackville, SC, 2013	61

Virginia Grain Sorghum Performance Tests 2013

Trial conducted by: D. Redd, F. Bryant
Variety Test Coordinators: M. Balota, Ph.D., H. Mehl, Ph.D., L. Rutto, Ph.D.

INTRODUCTION

The 2013 grain sorghum OVT tests contained 45 hybrids planted as a full season crop and 22 as double crop. Full season tests were conducted at three locations, at the Tidewater Agricultural Research and Extension Center (TAREC) in Suffolk, VA, in a farmer field near Homeville, VA, in Sussex County, and at the Virginia State University's Randolph Farm near Petersburg, VA. The double crop sorghum trials were conducted at two locations, at the TAREC and in a farmer field near Windsor, VA, in the Isle of Weight County.

MATERIALS AND METHODS

Based on the information provided by the participating companies, hybrids were divided in three maturity groups for the full season and two maturity groups for the double crop. Therefore, the experimental design was a split plot with maturity group as the main split and the hybrids arranged in a randomized complete block design with three replications within each maturity group. In Sussex Co., the main plot was irrigation, sub-plot was maturity group, and sub-sub-plot was genotype. Detailed information on planting, crop maintenance, harvest, and weather are presented within each location, irrigation treatment (where available), and maturity group.

RESULTS SUMMARY

With the exception of plots at Sussex, at all other locations average yields were around 100 bu/A. At Sussex, sorghum was planted after sorghum as previous crop and this in addition to extreme soil moisture conditions changing from very wet to very dry in repeated cycles was probably the cause of much lower yields in comparison with the other three locations. Therefore, little to no credit should be given to the results at this location. A couple of hybrids performed right at or above the average of all hybrids, consistently at TAREC, Petersburg, and Isle of Weight. They are for the full season planted sorghum 86P90, AG2115, DKS37-07, and 86G32 from the early group; DKS44-20, DKS53-67, DKS49-45, 83G17, M77GB52, NK6638, NK7633, DKS51-01, and DKS54-00 from the medium group; and TRX15401, 06173, and SP7868 from the late maturing group. In the double crop plantings, the best performing hybrids were M75GB39, AG103, and DKS37-07 for the early group and 3552, GX13661, 5556, and AG3201 for the late maturing group. Some of these hybrids also performed well in previous tests in Virginia. They are DeKalb DKS44-20, DKS53-67, DKS49-45, and DKS54-00; Dyna-Gro M77GB52 and M75GB39; Pioneer 83G17; Sorghum Partners NK6638; Triumph TRX15401; and Richardson Seed 06173.

GRAIN SORGHUM PERFORMANCE MEASUREMENTS

Yield: Yields are calculated from the weight of the threshed grain from each plot and are expressed as bushels per acre (BU/A) at 14% moisture.

Grain Moisture: Expressed as percent moisture of grain at harvest.

Plant Height: Average height in inches from the soil surface to the top of the grain head.

% Mold & Anthracnose: Head mold and anthracnose (when present) were rated between physiological maturity and harvest (mid-September for full season and mid-October for double crop sorghum). The percentage of total grain with signs of fungal colonization was estimated for each plot. When present, anthracnose was rated as the percentage of total leaf area within a plot with lesions characteristics of anthracnose. However, anthracnose incidence and severity was low to absent in the Virginia OVT.

Table 1. Performance of Non-Irrigated Full Season, Early Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 23, 2013.

Company or Brand Name	Hybrid	Yield (BU/A)	Harvest Moisture (%)	Test Weight (LB/BU)	100% Headed (Date)	Plant Height
Pioneer	86P90	109.3	16.0	60.1	7/29	--
Dyna-Gro	M75GB39	109.0	16.6	60.3	7/29	--
Advanta	AG2101	107.0	17.5	58.5	8/1	--
Gayland Ward	XP9058	107.0	15.6	58.7	7/29	--
Triumph	TR424	106.7	16.0	56.8	7/26	--
Golden Acres	5556	103.7	16.4	61.0	7/29	--
Advanta	AG2115	103.0	16.1	58.2	7/29	--
Advanta	AG2103	101.3	16.8	60.1	7/29	--
Triumph	TR438	98.7	15.2	59.3	7/29	--
Dekalb	DKS37-07	97.3	16.3	60.7	7/29	--
Pioneer	86G32	96.5	15.7	59.0	7/26	--
Advanta	AG3101	90.3	16.8	60.5	7/29	--
Triumph	TR463	90.0	17.0	58.6	8/1	--
Dekalb	DKS38-88	87.7	16.7	59.4	7/29	--
Advanta	AG1401	87.3	15.3	58.1	7/29	--
Averages		99.4	16.3	59.3	7/29	--
HSD ¹		25.4				
CV%		8.4				

¹ Tukey's Honestly Significant Difference

Soil Series Emporia & Uchee
 Soil pH 6.57
 Previous Crop Peanut
 Row Width 36"
 Planting Date May 31
 Irrigation None
 Fertilizer Nitrogen 24-0-0-3 60 lbs/A (May 31); Nitrogen 20-0-0-6.7 60 lbs/A (June 25)
 Manganese Sulfate 3 lbs/A (July 16); Manganese 4% 1 qt/A + ENC 1 qt/A (Aug. 5)
 Herbicides Round-up Weather Max 1 qt/A (May 30); Intrro 1 qt/A+ Bicep 2 qt/A (May 31)
 Insecticides Asana 6 oz/A (July 19); Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
 Fungicides Headline 6 oz/A (July 19)
 Desiccation Round-up 1.5 qt/A (Sep. 13)
 Harvest Date October 1

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	3.6	8.1	3.5	6.5	2.0	2.8	26.5
Avg. Temp. (°F)	66	75	79	75	68	69	72
Min. Temp. (°F)	56	66	70	65	56	58	62
Max. Temp. (°F)	78	86	90	86	82	83	84

Table 2. Performance of Non-Irrigated, Full Season, Medium Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 23, 2013.

Company or Brand Name	Hybrid	Yield (BU/A)	Harvest Moisture (%)	Test Weight (LB/BU)	100% Headed (Date)	Plant Height (in)
Deka1b	DKS44-20	121.7	14.9	61.1	7/30	60.8
Deka1b	DKS53-67	121.0	14.9	61.4	7/31	60.3
Deka1b	DKS49-45	120.0	14.7	61.3	7/30	65.3
Golden Acres	5613	117.7	14.7	59.8	8/1	65.7
Advanta	AG3201	116.7	14.9	59.4	8/1	62.0
Pioneer	83G17	114.0	15.9	58.4	7/31	63.7
Dyna-Gro	M77GB52	113.7	14.3	60.1	7/31	61.2
Sorghum Partners	NK6638	112.3	14.5	59.0	7/29	61.8
Sorghum Partners	NK7633	108.0	14.2	59.2	7/30	58.8
Pioneer	84P80	107.7	14.9	60.8	7/29	65.0
Golden Acres	3552	103.0	14.9	59.1	7/30	59.8
Gayland Ward	GW9320	101.0	15.4	60.5	8/1	65.3
Deka1b	DKS51-01	98.7	15.1	60.7	7/31	67.2
Deka1b	DKS54-00	98.7	15.1	60.7	7/30	64.0
Gayland Ward	GW9417	88.3	15.2	59.6	7/29	68.7
Averages		109.5	14.9	60.1	7/30	63.3
HSD ¹		31.2				
CV%		9.4				

¹ Tukey's Honestly Significant Difference

Soil Series Emporia & Uchee
 Soil pH 6.57
 Previous Crop Peanut
 Row Width 36"
 Planting Date May 31
 Irrigation None
 Fertilizer Nitrogen 24-0-0-3 60 lbs/A (May 31); Nitrogen 20-0-0-6.7 60 lbs/A (June 25)
 Manganese Sulfate 3 lbs/A (July 16); Manganese 4% 1 qt/A +ENC 1 qt/A (Aug. 5)
 Herbicides Round-up Weather Max 1 qt/A (May 30); Intrro 1 qt/A+ Bicep 2 qt/A (May 31)
 Insecticides Asana 6 oz/A (July 19); Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
 Fungicides Headline 6 oz/A (July 19)
 Desiccation Round-up 1.5 qt/A (Sep. 18)
 Harvest Date October 8

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	3.6	8.1	3.5	6.5	2.0	2.8	26.5
Avg. Temp. (°F)	66	75	79	75	68	69	72
Min. Temp. (°F)	56	66	70	65	56	58	62
Max. Temp. (°F)	78	86	90	86	82	83	84

Table 3. Performance of Full Season Non-Irrigated, Late Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 23, 2013.

Company or Brand Name	Hybrid	Yield (BU/A)	Harvest Moisture (%)	Test Weight (LB/BU)	100% Headed (Date)	Plant Height (in)
Triumph	TRX15401	119.3	15.0	60.4	8/2	61.5
Richardson	06173	118.3	15.5	59.5	8/3	74.0
Triumph	TR481	115.7	15.3	61.5	8/3	63.7
Gayland Ward	GW9480	113.0	15.0	60.0	7/30	64.5
Triumph	TR4941	112.7	14.8	59.5	7/29	62.8
Triumph	TRX85131	111.0	15.0	60.1	7/30	58.3
Dyna-Gro	GX13661	107.0	14.6	59.5	8/1	65.5
Sorghum Partners	SP7868	101.0	14.8	60.8	8/1	59.3
Dyna-Gro	765B	99.0	15.5	59.3	8/1	69.3
Sorghum Partners	NK8831	96.7	14.3	59.4	8/1	50.3
Sorghum Partners	NK7829	96.3	14.9	61.2	8/1	59.2
Sorghum Partners	NK8828	91.0	14.1	60.2	8/3	56.8
Sorghum Partners	NK8817	83.7	15.7	60.3	8/1	77.2
Sorghum Partners	NK8416	80.7	15.2	59.6	7/29	73.3
Richardson	8433	70.7	14.8	58.3	7/29	73.0
Averages		101.1	15.0	60.0	8/1	64.6
HSD ¹		35.0				
CV%		11.5				

¹ Tukey's Honestly Significant Difference

Soil Series	Emporia & Uchee
Soil pH	6.57
Previous Crop	Peanut
Row Width	36"
Planting Date	May 31
Irrigation	None
Fertilizer	Nitrogen 24-0-0-3 60 lbs/A (May 31); Nitrogen 20-0-0-6.7 60 lbs/A (June 25) Manganese Sulfate 3 lbs/A (July 16); Manganese 4% 1 qt/A + ENC 1 qt/A (Aug. 5)
Herbicides	Round-up Weather Max 1 qt/A (May 30); Intrro 1 qt/A+ Bicep 2 qt/A (May 31)
Insecticides	Asana 6 oz/A (July 19); Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
Fungicides	Headline 6 oz/A (July 19)
Desiccation	Round-up 1.5 qt/A (Sep. 18)
Harvest Date	October 8

Weather Information

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Max. Temp. (°F)	78	86	90	86	82	83	84

Table 4. Percentage of head mold and anthracnose for Full Season, Early Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field #23, 2013.

Company or Brand Name	Variety	% Mold	% Anthracnose
Pioneer	86G32	9.9	0.7
Pioneer	86P90	8.8	1.2
Triumph	TR424	10.1	2.8
Triumph	TR438	8.4	1.3
Triumph	TR463	4.4	0.9
Monsanto	DKS37-07	6.6	0.1
Monsanto	DKS38-88	4.1	0.1
Golden Acres	5556	4.6	1.9
Dyna-Gro	M75GB39	3.7	1.8
Advanta	AG2101	4.3	0.5
Advanta	AG1401	9.2	0.0
Advanta	AG2103	3.1	1.5
Advanta	AG2115	4.7	0.4
Advanta	AG3101	3.0	0.9
Gayland Ward	XP9058	4.3	0.1
Average		6.1	1.0
LSD		4.1	0.6

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 Previous Crop Peanut
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Table 5. Percentage of head mold for Full Season, Medium Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 23, 2013.

Company or Brand Name	Variety	% Mold
Pioneer	83G17	11.7
Pioneer	84P80	11.7
Monsanto	DKS49-45	11.7
Monsanto	DKS51-01	12.3
Monsanto	DKS53-67	16.7
Monsanto	DKS44-20	14.3
Monsanto	DKS54-00	22.5
Dyna-Gro	M77GB52	15.0
Sorghum Partners	NK7633	26.7
Sorghum Partners	NK6638	12.7
Advanta	AG3201	16.7
Golden Acres	3552	16.3
Golden Acres	5613	16.7
Gayland Ward	GW9417	15.0
Gayland Ward	GW9320	7.7
Average		15.0
LSD		8.5

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 Soil pH 6.57
 Previous Crop Peanut
 Row Width 36"
 Planting Date May 31
 Irrigation None
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Max. Temp. (°F)	78	86	90	86	82	83	84

Table 6. Percentage of head mold for Full Season, Late Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 23, 2013.

Company or Brand Name	Variety	% Mold
Richardson	06173	11.7
Richardson	8433	31.7
Triumph	TRX15401	8.3
Triumph	TR481	7.7
Triumph	TR4941	16.7
Triumph	TRX85131	7.7
Dyna-Gro	GX13661	26.7
Dyna-Gro	765B	11.7
Sorghum Partners	NK7829	11.0
Sorghum Partners	SP7868	13.3
Sorghum Partners	NK8416	8.7
Sorghum Partners	NK8817	8.7
Sorghum Partners	NK8828	11.0
Sorghum Partners	NK8831	15.0
Gayland Ward	GW9480	9.0
Average		13.2
LSD		8.0

Soil Series Emporia & Uchee
 Soil pH 6.57
 Previous Crop Peanut
 Row Width 36"
 Planting Date May 31
 Irrigation None
 Fertilizer Nitrogen 24-0-0-3 60 lbs/A (May 31); Nitrogen 20-0-0-6.7 60 lbs/A (June 25)
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Min. Temp. (°F)	56	66	70	65	56	58	62
Max. Temp. (°F)	78	86	90	86	82	83	84

Table 7. Mycotoxins results for Full Season Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 23, 2013

Company or Brand Name	Variety	Fum (PPM)	Aflatoxin (PPB)	Vomitoxin (PPM)
Pioneer	86G32	0.2	0.4	0.5
Pioneer	86P90	0.8	0.5	0.6
Triumph	TR424	0.2	0.5	0.9
Triumph	TR438	0.0	0.7	0.9
Triumph	TR463	0.0	1.6	1.1
Monsanto	DKS37-07	0.2	1.5	0.8
Monsanto	DKS38-88	0.0	1.6	0.8
Golden Acres	5556	0.0	5.8	0.5
Dyna-Gro	M75GB39	0.0	0.2	0.4
Advanta	AG2101	0.0	0.3	0.6
Advanta	AG1401	0.2	0.3	0.6
Advanta	AG2103	0.0	0.0	0.7
Advanta	AG2115	0.0	0.5	0.8
Advanta	AG3101	0.0	0.8	0.7
Gayland Ward	XP9058	0.0	1.0	0.2
Pioneer	83G17	0.1	1.5	0.2
Pioneer	84P80	0.1	1.7	0.4
Monsanto	DKS49-45	0.1	2.1	0.4
Monsanto	DKS51-01	0.0	2.9	0.5
Monsanto	DKS53-67	0.0	3.1	0.6
Monsanto	DKS44-20	0.0	0.1	0.9
Monsanto	DKS54-00	0.0	0.0	0.3
Dyna-Gro	M77GB52	0.0	0.1	0.4
Sorghum Partners	NK7633	0.1	0.3	1.3
Sorghum Partners	NK6638	0.0	0.3	0.7
Advanta	AG3201	0.1	0.5	0.3
Golden Acres	3552	0.1	1.0	0.4
Golden Acres	5613	0.0	1.7	0.5
Gayland Ward	GW9417	0.2	2.2	0.5
Gayland Ward	GW9320	0.2	2.3	0.7
Richardson	06173	0.3	2.6	0.7
Richardson	8433	0.2	3.1	1.2
Triumph	TRX15401	0.7	0.5	1.0
Triumph	TR481	0.1	0.5	0.3
Triumph	TR4941	0.5	0.2	0.3
Triumph	TRX85131	0.7	0.6	0.6
Dyna-Gro	GX13661	0.1	0.8	0.5
Dyna-Gro	765B	0.1	0.2	0.6
Sorghum Partners	NK7829	0.1	0.6	0.6
Sorghum Partners	SP7868	0.5	0.7	1.6
Sorghum Partners	NK8416	0.3	0.9	1.0
Sorghum Partners	NK8817	0.2	1.6	0.9
Sorghum Partners	NK8828	0.4	2.1	1.8
Sorghum Partners	NK8831	0.4	3.0	2.4
Gayland Ward	GW9480	0.1	2.5	1.1
Average		0.2	1.2	0.7

Soil Series Emporia & Uchee
 Soil pH 6.57
 Previous Crop Peanut
 Row Width 36"
 Planting Date May 31
 Irrigation None
 Fertilizer Nitrogen 24-0-0-3 60 lbs/A (May 31); Nitrogen 20-0-0-6.7 60 lbs/A (June 25)
 Manganese Sulfate 3 lbs/A (July 16); Manganese 4% 1 qt/A + ENC 1 qt/A (Aug. 5)
 Herbicides Round-up Weather Max 1 qt/A (May 30); Intrro 1 qt/A+ Bicep 2 qt/A (May 31)
 Insecticides Asana 6 oz/A (July 19); Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
 Fungicides Headline 6 oz/A (July 19)
 Desiccation Round-up 1.5 qt/A (Sep. 13)
 Harvest Date October 1

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	3.6	8.1	3.5	6.5	2.0	2.8	26.5
Avg. Temp. (°F)	66	75	79	75	68	69	72
Min. Temp. (°F)	56	66	70	65	56	58	62
Max. Temp. (°F)	78	86	90	86	82	83	84

Table 8. Performance of Full Season, Early Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 26, 2013.

Company or Brand Name	Hybrid	Yield (BU/A)	Harvest Moisture (%)	Test Weight (LB/BU)	100% Headed (Date)	Plant Height
Advanta	AG2101	128.0	17.4	59.3	7/30	--
Pioneer	86P90	127.0	16.5	60.3	7/29	--
Pioneer	86G32	118.8	17.0	58.6	7/29	--
Dyna-Gro	M75GB39	118.7	16.9	61.0	7/29	--
Advanta	AG2115	118.0	17.0	59.0	7/29	--
Deka1b	DKS37-07	115.7	17.1	61.0	7/29	--
Advanta	AG2103	115.3	17.0	61.2	7/29	--
Golden Acres	5556	113.3	16.7	61.3	7/29	--
Deka1b	DKS38-88	111.7	16.8	61.9	7/31	--
Advanta	AG1401	108.3	16.0	59.0	7/29	--
Triumph	TR424	107.3	16.1	58.0	7/29	--
Triumph	TR463	107.3	17.3	58.8	7/31	--
Gayland Ward	XP9058	104.0	16.4	59.0	7/29	--
Triumph	TR438	103.0	16.0	59.5	7/29	--
Advanta	AG3101	98.7	17.3	60.8	7/31	--
Averages		113.3	16.8	59.9	7/29	--
HSD ¹		20.4				
CV%		5.9				

¹ Tukey's Honestly Significant Difference

Soil Series Emporia
 Soil pH 6.52
 Previous Crop Cotton
 Row Width 36"
 Planting Date May 31
 Irrigation None
 Fertilizer Nitrogen 24-0-0-3 60 lbs/A (May 31); Nitrogen 20-0-0-6.7 60 lbs/A (June 25)
 Manganese Sulfate 3 lbs/A (July 16); Manganese 4% 1 qt/A + ENC 1 qt/A (Aug. 5)
 Herbicides Round-up Weather Max 1 qt/A (May 30); Intro 1 qt/A+ Bicep 2 qt/A (May 31)
 Insecticides Asana 6 oz/A (July 19); Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
 Fungicides Headline 6 oz/A (July 19)
 Desiccation Round-up 1.5 qt/A (Sep. 13)
 Harvest Date October 1

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	3.6	8.1	3.5	6.5	2.0	2.8	26.5
Avg. Temp. (°F)	66	75	79	75	68	69	72
Min. Temp. (°F)	56	66	70	65	56	58	62
Max. Temp. (°F)	78	86	90	86	82	83	84

Table 9. Performance of Full Season, Medium Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 26, 2013.

Company or Brand Name	Hybrid	Yield (BU/A)	Harvest Moisture (%)	Test Weight (LB/BU)	100% Headed (Date)	Plant Height (in)
Pioneer	84P80	134.7	15.2	61.7	7/29	62.3
Dekalb	DKS44-20	125.7	15.5	61.4	7/29	56.3
Pioneer	83G17	125.0	16.3	59.5	8/2	61.0
Dekalb	DKS53-67	122.7	15.4	62.2	7/29	58.3
Dyna-Gro	M77GB52	119.0	15.3	60.1	7/30	58.0
Dekalb	DKS49-45	118.0	15.7	59.6	8/2	61.7
Dekalb	DKS54-00	118.0	15.9	60.6	8/1	63.3
Sorghum Partners	NK7633	116.7	14.8	60.2	8/1	54.0
Golden Acres	5613	115.0	15.5	59.9	8/3	62.3
Dekalb	DKS51-01	114.7	15.4	62.3	8/2	63.7
Gayland Ward	GW9320	114.3	15.7	60.9	7/29	61.3
Golden Acres	3552	114.0	15.8	60.3	7/29	58.0
Advanta	AG3201	113.0	15.7	59.6	7/29	60.0
Sorghum Partners	NK6638	111.3	15.0	60.9	7/30	56.0
Gayland Ward	GW9417	78.7	15.8	60.0	8/1	64.3
Averages		116.0	15.5	60.6	7/29	60.1
HSD ¹		25.3				
CV%		7.2				

¹ Tukey's Honestly Significant Difference

Soil Series	Emporia
Soil pH	6.57
Previous Crop	Cotton
Row Width	36"
Planting Date	May 31
Irrigation	None
Fertilizer	Nitrogen 24-0-0-3 60 lbs/A (May 31); Nitrogen 20-0-0-6.7 60 lbs/A (June 25) Manganese Sulfate 3 lbs/A (July 16); Manganese 4% 1 qt/A + ENC 1 qt/A (Aug. 5)
Herbicides	Round-up Weather Max 1 qt/A (May 30); Intro 1 qt/A+ Bicep 2 qt/A (May 31)
Insecticides	Asana 6 oz/A (July 19); Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
Fungicides	Headline 6 oz/A (July 19)
Desiccation	Round-up 1.5 qt/A (Sep. 18)
Harvest Date	October 8

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	3.6	8.1	3.5	6.5	2.0	2.8	26.5
Avg. Temp. (°F)	66	75	79	75	68	69	72
Min. Temp. (°F)	56	66	70	65	56	58	62
Max. Temp. (°F)	78	86	90	86	82	83	84

Table 10. Performance of Full Season, Late Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 26, 2013.

Company or Brand Name	Hybrid	Yield (BU/A)	Harvest Moisture (%)	Test Weight (LB/BU)	100% Headed (Date)	Plant Height (in)
Triumph	TR481	119.7	15.5	61.3	7/30	58.3
Triumph	TRX15401	116.7	15.4	60.8	7/29	57.7
Triumph	TR4941	114.0	15.2	59.1	7/30	55.0
Dyna-Gro	GX13661	109.7	15.1	59.5	7/31	59.0
Sorghum Partners	NK7829	108.7	15.4	60.6	7/29	55.3
Triumph	TRX85131	106.7	15.5	60.3	7/29	52.3
Dyna-Gro	765B	106.3	15.9	60.2	7/29	62.0
Sorghum Partners	SP7868	103.3	15.0	60.5	7/29	56.7
Richardson	06173	98.7	16.1	59.5	8/1	65.3
Richardson	8433	97.7	15.2	58.7	7/29	67.7
Gayland Ward	GW9480	94.7	15.6	59.5	7/29	58.3
Sorghum Partners	NK8828	94.0	14.6	60.1	7/29	52.0
Sorghum Partners	NK8416	90.0	15.5	60.4	7/29	69.0
Sorghum Partners	NK8831	89.3	14.8	59.7	7/29	45.3
Sorghum Partners	NK8817	84.7	15.6	60.8	7/29	70.3
Averages		102.3	15.4	60.1	7/29	58.9
HSD ¹		28.5				
CV%		9.2				

¹ Tukey's Honestly Significant Difference

Soil Series Emporia
 Soil pH 6.57
 Previous Crop Cotton
 Row Width 36"
 Planting Date May 31
 Irrigation None
 Fertilizer Nitrogen 24-0-0-3 60 lbs/A (May 31); Nitrogen 20-0-0-6.7 60 lbs/A (June 25)
 Manganese Sulfate 3 lbs/A (July 16); Manganese 4% 1 qt/A + ENC 1 qt/A (Aug. 5)
 Herbicides Round-up Weather Max 1 qt/A (May 30); Intro 1 qt/A+ Bicep 2 qt/A (May 31)
 Insecticides Asana 6 oz/A (July 19); Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
 Fungicides Headline 6 oz/A (July 19)
 Desiccation Round-up 1.5 qt/A (Sep. 18)
 Harvest Date October 8

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	3.6	8.1	3.5	6.5	2.0	2.8	26.5
Avg. Temp. (°F)	66	75	79	75	68	69	72
Min. Temp. (°F)	56	66	70	65	56	58	62
Max. Temp. (°F)	78	86	90	86	82	83	84

Table 11. Percentage of head mold and anthracnose for Full Season, Early Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 26, 2013.

Company or Brand Name	Variety	% Mold	% Anthracnose
Pioneer	86G32	14.1	0.7
Pioneer	86P90	9.6	1.2
Triumph	TR424	15.1	2.6
Triumph	TR438	13.6	1.4
Triumph	TR463	6.4	1.1
Monsanto	DKS37-07	7.7	0.1
Monsanto	DKS38-88	4.6	0.1
Golden Acres	5556	7.4	1.4
Dyna-Gro	M75GB39	7.8	1.7
Advanta	AG2101	9.1	0.5
Advanta	AG1401	14.4	0.0
Advanta	AG2103	7.3	1.4
Advanta	AG2115	6.5	0.3
Advanta	AG3101	3.2	0.8
Gayland Ward	XP9058	10.8	0.2
Average		9.2	0.9
LSD		2.7	0.7

Soil Series Emporia
 Soil pH 6.52
 Previous Crop Cotton
 Row Width 36"
 Planting Date May 31
 Irrigation None
 Fertilizer Nitrogen 24-0-0-3 60 lbs/A (May 31); Nitrogen 20-0-0-6.7 60 lbs/A (June 25)
 Manganese Sulfate 3 lbs/A (July 16); Manganese 4% 1 qt/A + ENC 1 qt/A (Aug. 5)
 Herbicides Round-up Weather Max 1 qt/A (May 30); Intrro 1 qt/A+ Bicep 2 qt/A (May 31)
 Insecticides Asana 6 oz/A (July 19); Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
 Fungicides Headline 6 oz/A (July 19)
 Desiccation Round-up 1.5 qt/A (Sep. 13)
 Harvest Date October 1

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	3.6	8.1	3.5	6.5	2.0	2.8	26.5
Avg. Temp. (°F)	66	75	79	75	68	69	72
Min. Temp. (°F)	56	66	70	65	56	58	62
Max. Temp. (°F)	78	86	90	86	82	83	84

Table 12. Percentage of head mold for Full Season, Medium Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 26, 2013.

Company or Brand Name	Variety	% Mold
Pioneer	83G17	11.7
Pioneer	84P80	11.7
Monsanto	DKS49-45	11.7
Monsanto	DKS51-01	12.3
Monsanto	DKS53-67	16.7
Monsanto	DKS44-20	14.3
Monsanto	DKS54-00	21.7
Dyna-Gro	M77GB52	15.0
Sorghum Partners	NK7633	26.7
Sorghum Partners	NK6638	12.7
Advanta	AG3201	16.7
Golden Acres	3552	15.0
Golden Acres	5613	16.7
Gayland Ward	GW9417	15.0
Gayland Ward	GW9320	7.7
Average		15.0
LSD		8.5

Soil Series	Emporia
Soil pH	6.52
Previous Crop	Cotton
Row Width	36"
Planting Date	May 31
Irrigation	None
Fertilizer	Nitrogen 24-0-0-3 60 lbs/A (May 31); Nitrogen 20-0-0-6.7 60 lbs/A (June 25) Manganese Sulfate 3 lbs/A (July 16); Manganese 4% 1 qt/A + ENC 1 qt/A (Aug. 5)
Herbicides	Round-up Weather Max 1 qt/A (May 30); Intrro 1 qt/A+ Bicep 2 qt/A (May 31)
Insecticides	Asana 6 oz/A (July 19); Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
Fungicides	Headline 6 oz/A (July 19)
Desiccation	Round-up 1.5 qt/A (Sep. 13)
Harvest Date	October 1

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	3.6	8.1	3.5	6.5	2.0	2.8	26.5
Avg. Temp. (°F)	66	75	79	75	68	69	72
Min. Temp. (°F)	56	66	70	65	56	58	62
Max. Temp. (°F)	78	86	90	86	82	83	84

Table 13. Percentage of head mold for Full Season, Late Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 26, 2013.

Company or Brand Name	Variety	% Mold
Richardson	06173	11.7
Richardson	8433	31.7
Triumph	TRX15401	8.3
Triumph	TR481	7.7
Triumph	TR4941	16.7
Triumph	TRX85131	7.7
Dyna-Gro	GX13661	26.7
Dyna-Gro	765B	11.7
Sorghum Partners	NK7829	11.0
Sorghum Partners	SP7868	13.3
Sorghum Partners	NK8416	8.7
Sorghum Partners	NK8817	8.7
Sorghum Partners	NK8828	11.0
Sorghum Partners	NK8831	15.0
Gayland Ward	GW9480	9.0
Average		13.2
LSD		7.6

Soil Series Emporia
 Soil pH 6.52
 Previous Crop Cotton
 Row Width 36"
 Planting Date May 31
 Irrigation None
 Fertilizer Nitrogen 24-0-0-3 60 lbs/A (May 31); Nitrogen 20-0-0-6.7 60 lbs/A (June 25)
 Manganese Sulfate 3 lbs/A (July 16); Manganese 4% 1 qt/A + ENC 1 qt/A (Aug. 5)
 Herbicides Round-up Weather Max 1 qt/A (May 30); Intrro 1 qt/A+ Bicep 2 qt/A (May 31)
 Insecticides Asana 6 oz/A (July 19); Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
 Fungicides Headline 6 oz/A (July 19)
 Desiccation Round-up 1.5 qt/A (Sep. 13)
 Harvest Date October 1

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	3.6	8.1	3.5	6.5	2.0	2.8	26.5
Avg. Temp. (°F)	66	75	79	75	68	69	72
Min. Temp. (°F)	56	66	70	65	56	58	62
Max. Temp. (°F)	78	86	90	86	82	83	84

Table 14. Mycotoxins results for Full Season Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 26, 2013

Company or Brand Name	Variety	Fum (PPM)	Aflatoxin (PPB)	Vomitoxin (PPM)
Pioneer	86G32	0.0	0.2	0.3
Pioneer	86P90	0.0	0.2	0.3
Triumph	TR424	0.0	0.2	0.4
Triumph	TR438	0.0	0.3	0.4
Triumph	TR463	0.0	0.4	0.6
Golden Acres	5556	0.0	0.4	0.2
Advanta	AG2101	0.1	0.4	0.5
Monsanto	DKS37-07	0.0	0.5	0.4
Dyna-Gro	M75GB39	0.0	0.5	0.3
Monsanto	DKS38-88	0.0	0.6	0.2
Advanta	AG1401	0.0	0.6	0.5
Advanta	AG2103	0.0	0.8	0.3
Advanta	AG3101	0.0	0.8	0.4
Gayland Ward	XP9058	0.0	0.8	0.5
Advanta	AG2115	0.0	1.0	0.5
Advanta	AG3201	0.0	0.9	0.4
Dyna-Gro	M77GB52	0.0	0.4	0.5
Gayland Ward	GW9417	0.0	0.6	0.4
Gayland Ward	GW9320	0.1	0.9	0.6
Golden Acres	3552	0.0	0.6	0.4
Golden Acres	5613	0.0	0.7	0.5
Monsanto	DKS49-45	0.0	0.6	0.4
Monsanto	DKS53-67	0.0	0.8	0.3
Monsanto	DKS44-20	0.0	0.8	0.3
Monsanto	DKS51-01	0.0	0.9	0.5
Monsanto	DKS54-00	0.0	1.1	0.3
Pioneer	83G17	0.0	0.4	0.5
Pioneer	84P80	0.0	0.6	0.5
Sorghum Partners	NK7633	0.0	0.8	1.1
Sorghum Partners	NK6638	0.0	0.9	0.5
Dyna-Gro	GX13661	0.1	0.4	0.7
Dyna-Gro	765B	0.0	0.4	0.5
Gayland Ward	GW9480	0.0	0.3	0.6
Richardson	8433	0.0	1.0	0.3
Richardson	6173	0.0	1.2	0.4
Sorghum Partners	NK7829	0.1	0.3	0.7
Sorghum Partners	SP7868	0.0	0.4	0.9
Sorghum Partners	NK8416	0.0	0.5	0.7
Sorghum Partners	NK8817	0.0	0.6	0.5
Sorghum Partners	NK8831	0.0	0.9	0.7
Sorghum Partners	NK8828	0.0	1.4	0.8
Triumph	TRX85131	0.0	0.1	0.5
Triumph	TRX15401	0.0	0.2	0.4
Triumph	TR481	0.1	0.3	0.5
Triumph	TR4941	0.0	0.4	0.5
Average		0.0	0.6	0.5

Soil Series Emporia
 Soil pH 6.52
 Previous Crop Cotton
 Row Width 36"
 Planting Date May 31
 Irrigation None
 Fertilizer Nitrogen 24-0-0-3 60 lbs/A (May 31); Nitrogen 20-0-0-6.7 60 lbs/A (June 25)
 Manganese Sulfate 3 lbs/A (July 16); Manganese 4% 1 qt/A + ENC 1 qt/A (Aug. 5)
 Herbicides Round-up Weather Max 1 qt/A (May 30); Intro 1 qt/A+ Bicep 2 qt/A (May 31)
 Insecticides Asana 6 oz/A (July 19); Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
 Fungicides Headline 6 oz/A (July 19)
 Desiccation Round-up 1.5 qt/A (Sep. 13)
 Harvest Date October 1

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	3.6	8.1	3.5	6.5	2.0	2.8	26.5
Avg. Temp. (°F)	66	75	79	75	68	69	72
Min. Temp. (°F)	56	66	70	65	56	58	62
Max. Temp. (°F)	78	86	90	86	82	83	84

Table 15. Performance of Irrigated Full Season, Early Maturing Grain Sorghum Hybrids, Sussex County, VA, 2013.

Company or Brand Name	Hybrid	Yield (BU/A)	Harvest Moisture (%)	Test Weight (LB/BU)
Dekalb	DKS38-88	37.0	17.1	57.9
Pioneer	86P90	36.5	15.6	56.1
Gayland Ward	XP9058	36.0	17.7	58.3
Advanta	AG1401	35.5	16.1	58.5
Triumph	TR424	34.0	15.3	57.9
Dekalb	DKS37-07	34.0	17.2	58.2
Pioneer	86G32	33.0	15.6	57.6
Advanta	AG2115	32.0	17.4	55.2
Advanta	AG2101	30.0	16.8	56.4
Triumph	TR463	29.0	16.5	55.3
Dyna-Gro	M75GB39	28.5	16.9	52.5
Advanta	AG3101	28.0	17.2	58.6
Triumph	TR438	25.0	15.8	54.3
Advanta	AG2103	24.5	16.3	53.4
Golden Acres	5556	24.0	16.6	53.4
Averages		31.1	16.5	56.2
HSD ¹		23.1		
CV%		18.3		

¹Tukey's Honestly Significant Difference

Soil Series	Seabrook sand
Soil pH	6.2
Previous Crop	Sorghum
Row Width	36"
Planting Date	May 31
Irrigation	8/14/13 - 1.25" 8/21/13 - 1.25"
Fertilizer	Nitrogen 24-0-0-3 60 lbs/A (May 31); Nitrogen 20-0-0-0-6.7 60 lbs/A (June 25); Manganese Sulfate 3 lbs/A (July 16); Nitrogen 20-0-0-6.7 60 lbs/A (July 19); Manganese 4% 1 qt/A; ENC 1 qt/A (Aug. 5); ENC 1 qt/A (Aug. 14)
Herbicides	Round-up Weather Max 1 qt/A (May 30); Intrro 1 qt/A; Bicep 2 qt/A (May 31)
Insecticides	Asana 6 oz/A (July 18); Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
Fungicides	Headline 6 oz/A (July 18)
Desiccation	Round-up 1.5 qt/A (Sep. 11)
Harvest Date	September 27

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	2.2	8.4	7.0	5.5	0.7	3.7	27.4
Avg. Temp. (°F)	66	75	78	75	68	61	71
Min. Temp. (°F)	55	66	71	66	57	53	61
Max. Temp. (°F)	77	85	88	85	81	72	81

Table 16. Performance of Irrigated Full Season, Medium Maturing Grain Sorghum Hybrids, Sussex County, VA, 2013.

Company or Brand Name	Hybrid	Yield (BU/A)	Harvest Moisture (%)	Test Weight (LB/BU)
Pioneer	83G17	52.0	23.1	54.4
Pioneer	84P80	52.0	16.8	57.9
Dekalb	DKS51-01	48.5	19.7	57.6
Sorghum Partners	NK7633	48.5	18.9	55.8
Sorghum Partners	NK6638	48.0	19.2	60.9
Dekalb	DKS49-45	47.0	18.5	58.0
Dekalb	DKS53-67	43.0	19.1	59.3
Dyna-Gro	M77GB52	43.0	18.7	61.1
Golden Acres	3552	40.0	17.6	57.0
Dekalb	DKS54-00	39.0	21.0	57.4
Dekalb	DKS44-20	35.0	19.4	56.6
Advanta	AG3201	34.5	17.2	55.3
Golden Acres	5613	29.0	16.9	54.3
Gayland Ward	GW9320	28.0	17.2	58.5
Gayland Ward	GW9417	24.0	17.7	58.0
Averages		41.2	18.8	57.4
HSD ¹		32.9		
CV%		18.9		

¹Tukey's Honestly Significant Difference

Soil Series	Seabrook sand
Soil pH	6.2
Previous Crop	Sorghum
Row Width	36"
Planting Date	May 31
Irrigation	8/14/13 - 1.25" 8/21/13 - 1.25"
Fertilizer	Nitrogen 24-0-0-3 60 lbs/A (May 31); Nitrogen 20-0-0-0-6.7 60 lbs/A(June 25); Manganese Sulfate 3 lbs/A(July 16); Nitrogen 20-0-0-6.7 60 lbs/A(July 19); Manganese 4% 1 qt/A; ENC 1 qt/A(Aug. 5); ENC 1 qt/A(Aug. 14)
Herbicides	Round-up Weather Max 1 qt/A (May 30); Intro 1 qt/A; Bicep 2 qt/A (May 31)
Insecticides	Asana 6 oz/A (July 18); Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
Fungicides	Headline 6 oz/A (July 18)
Desiccation	Round-up 1.5 qt/A (Sep. 16)
Harvest Date	September 27

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	2.2	8.4	7.0	5.5	0.7	3.7	27.4
Avg. Temp. (°F)	66	75	78	75	68	61	71
Min. Temp. (°F)	55	66	71	66	57	53	61
Max. Temp. (°F)	77	85	88	85	81	72	81

Table 17. Performance of Irrigated Full Season, Late Maturing Grain Sorghum Hybrids, Sussex County, VA, 2013.

Company or Brand Name	Hybrid	Yield (BU/A)	Harvest Moisture (%)	Test Weight (LB/BU)
Sorghum Partners	NK8831	58.5	16.4	57.6
Sorghum Partners	SP7868	52.5	20.0	59.5
Sorghum Partners	NK8817	50.0	23.2	56.3
Dyna-Gro	765B	49.0	19.9	59.5
Sorghum Partners	NK7829	44.5	19.1	57.6
Richardson	06173	42.5	20.6	57.5
Sorghum Partners	NK8416	41.0	19.4	59.1
Triumph	TRX15401	38.5	23.1	53.3
Triumph	TR4941	38.5	17.6	54.5
Triumph	TR481	35.0	21.3	53.9
Dyna-Gro	GX13661	33.5	17.3	56.3
Richardson	8433	31.5	17.7	57.9
Sorghum Partners	NK8828	28.0	23.6	53.5
Triumph	TRX85131	21.5	17.1	52.1
Gayland Ward	GW9480	19.0	18.0	53.5
Averages		38.9	19.6	56.1
HSD ¹		40.0		
CV%		25.4		

¹ Tukey's Honestly Significant Difference

Soil Series Seabrook sand
 Soil pH 6.2
 Previous Crop Sorghum
 Row Width 36"
 Planting Date May 31
 Irrigation 8/14/13 - 1.25"
 8/21/13 - 1.25"
 Fertilizer Nitrogen 24-0-0-3 60 lbs/A (May 31); Nitrogen 20-0-0-0-6.7 60
 lbs/A(June 25); Manganese Sulfate 3 lbs/A(July 16); Nitrogen 20-0-0-
 6.7 60 lbs/A(July 19); Manganese 4% 1 qt/A; ENC 1 qt/A(Aug. 5); ENC
 1 qt/A(Aug. 14)
 Herbicides Round-up Weather Max 1 qt/A (May 30); Intrro 1 qt/A; Bicep 2
 qt/A(May 31)
 Insecticides Asana 6 oz/A (July 18); Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
 Fungicides Headline 6 oz/A (July 18)
 Desiccation Round-up 1.5 qt/A (Sep. 16)
 Harvest Date September 27

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	2.2	8.4	7.0	5.5	0.7	3.7	27.4
Avg. Temp. (°F)	66	75	78	75	68	61	71
Min. Temp. (°F)	55	66	71	66	57	53	61
Max. Temp. (°F)	77	85	88	85	81	72	81

Table 18. Performance of Non-Irrigated Full Season, Early Maturing Grain Sorghum Hybrids, Sussex County, VA, 2013.

Company or Brand Name	Hybrid	Yield (BU/A)	Harvest Moisture (%)	Test Weight (LB/BU)
Pioneer	86G32	56.7	15.9	56.4
Dekalb	DKS38-88	53.3	17.0	58.5
Advanta	AG1401	52.7	16.4	59.5
Advanta	AG2101	48.3	16.5	56.5
Advanta	AG2115	47.7	16.3	53.4
Gayland Ward	XP9058	47.0	16.2	58.0
Dekalb	DKS37-07	46.7	16.5	57.8
Triumph	TR424	46.0	15.4	58.7
Pioneer	86P90	39.7	15.9	56.9
Advanta	AG3101	39.3	16.8	59.5
Advanta	AG2103	35.0	15.8	57.1
Triumph	TR438	34.0	15.8	56.3
Dyna-Gro	M75GB39	31.7	16.0	55.5
Golden Acres	5556	30.7	15.2	55.2
Triumph	TR463	30.3	15.9	55.1
Averages		42.6	16.1	57.0
HSD ¹		31.0		
CV%		24.1		

¹Tukey's Honestly Significant Difference

Soil Series Seabrook sand
 Soil pH 6.2
 Previous Crop Sorghum
 Row Width 36"
 Planting Date May 31
 Irrigation None
 Fertilizer Nitrogen 24-0-0-3 60 lbs/A (May 31); Nitrogen 20-0-0-0-6.7 60 lbs/A(June 25); Manganese Sulfate 3 lbs/A(July 16); Nitrogen 20-0-0-0-6.7 60 lbs/A(July 19); Manganese 4% 1 qt/A; ENC 1 qt/A(Aug. 5); ENC 1 qt/A(Aug. 14)
 Herbicides Round-up Weather Max 1 qt/A (May 30); Intrro 1 qt/A; Bicep 2 qt/A(May 31)
 Insecticides Asana 6 oz/A (July 18); Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
 Fungicides Headline 6 oz/A (July 18)
 Desiccation Round-up 1.5 qt/A (Sep. 11)
 Harvest Date September 27

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	2.2	8.4	7.0	5.5	0.7	3.7	27.4
Avg. Temp. (°F)	66	75	78	75	68	61	71
Min. Temp. (°F)	55	66	71	66	57	53	61
Max. Temp. (°F)	77	85	88	85	81	72	81

Table 19. Performance of Non-Irrigated, Full Season, Medium Maturing Grain Sorghum Hybrids, Sussex County, VA, 2013.

Company or Brand Name	Hybrid	Yield (BU/A)	Harvest Moisture (%)	Test Weight (LB/BU)
Pioneer	83G17	53.0	21.0	56.7
Dekalb	DKS51-01	47.7	18.8	58.6
Dekalb	DKS54-00	47.3	17.0	60.1
Pioneer	84P80	45.3	16.4	58.4
Sorghum Partners	NK7633	45.3	17.5	55.4
Sorghum Partners	NK6638	42.0	19.0	60.5
Dekalb	DKS53-67	40.7	17.2	61.2
Golden Acres	3552	40.3	17.9	57.4
Dekalb	DKS44-20	37.3	16.4	58.6
Dyna-Gro	M77GB52	30.7	17.4	61.8
Gayland Ward	GW9417	30.3	16.7	58.9
Advanta	AG3201	28.3	17.1	56.7
Dekalb	DKS49-45	27.7	17.7	59.1
Gayland Ward	GW9320	22.0	16.3	60.4
Golden Acres	5613	18.7	17.8	55.3
Averages		37.2	17.6	58.6
HSD ¹		37.7		
CV%		33.5		

¹Tukey's Honestly Significant Difference

Soil Series Seabrook sand
 Soil pH 6.2
 Previous Crop Sorghum
 Row Width 36"
 Planting Date May 31
 Irrigation None
 Fertilizer Nitrogen 24-0-0-3 60 lbs/A (May 31); Nitrogen 20-0-0-0-6.7 60 lbs/A(June 25); Manganese Sulfate 3 lbs/A(July 16); Nitrogen 20-0-0-6.7 60 lbs/A(July 19); Manganese 4% 1 qt/A; ENC 1 qt/A(Aug. 5); ENC 1 qt/A(Aug. 14)
 Herbicides Round-up Weather Max 1 qt/A (May 30); Intrro 1 qt/A; Bicep 2 qt/A(May 31)
 Insecticides Asana 6 oz/A (July 18); Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
 Fungicides Headline 6 oz/A (July 18)
 Desiccation Round-up 1.5 qt/A (Sep. 16)
 Harvest Date September 27

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	2.2	8.4	7.0	5.5	0.7	3.7	27.4
Avg. Temp. (°F)	66	75	78	75	68	61	71
Min. Temp. (°F)	55	66	71	66	57	53	61
Max. Temp. (°F)	77	85	88	85	81	72	81

Table 20. Performance of Non-Irrigated, Full Season, Late Maturing Grain Sorghum Hybrids, Sussex County, VA, 2013.

Company or Brand Name	Hybrid	Yield (BU/A)	Harvest Moisture (%)	Test Weight (LB/BU)
Triumph	TRX15401	42.0	20.3	55.5
Sorghum Partners	NK8828	32.3	18.3	56.9
Sorghum Partners	SP7868	30.7	18.5	58.4
Dyna-Gro	765B	27.7	18.4	59.7
Sorghum Partners	NK8817	24.0	21.4	56.1
Sorghum Partners	NK7829	23.0	18.3	56.0
Triumph	TRX85131	22.3	16.8	54.3
Triumph	TR481	22.0	22.5	54.1
Sorghum Partners	NK8416	21.3	18.0	59.8
Dyna-Gro	GX13661	20.7	17.5	56.9
Triumph	TR4941	20.3	16.2	58.0
Sorghum Partners	NK8831	20.0	16.6	55.9
Richardson	06173	19.0	17.7	57.2
Richardson	8433	17.3	16.8	58.5
Gayland Ward	GW9480	14.0	17.3	55.9
Averages		23.8	18.3	56.8
HSD ¹		15.4		
CV%		21.3		

¹ Tukey's Honestly Significant Difference

Soil Series Seabrook sand
 Soil pH 6.2
 Previous Crop Sorghum
 Row Width 36"
 Planting Date May 31
 Irrigation None
 Fertilizer Nitrogen 24-0-0-3 60 lbs/A (May 31); Nitrogen 20-0-0-6.7 60 lbs/A(June 25); Manganese Sulfate 3 lbs/A(July 16); Nitrogen 20-0-0-6.7 60 lbs/A(July 19); Manganese 4% 1 qt/A; ENC 1 qt/A(Aug. 5); ENC 1 qt/A(Aug. 14)
 Herbicides Round-up Weather Max 1 qt/A (May 30); Intro 1 qt/A; Bicep 2 qt/A(May 31)
 Insecticides Asana 6 oz/A (July 18); Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
 Fungicides Headline 6 oz/A (July 18)
 Desiccation Round-up 1.5 qt/A (Sep. 16)
 Harvest Date September 27

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	2.2	8.4	7.0	5.5	0.7	3.7	27.4
Avg. Temp. (°F)	66	75	78	75	68	61	71
Min. Temp. (°F)	55	66	71	66	57	53	61
Max. Temp. (°F)	77	85	88	85	81	72	81

Table 21. Percentage of head mold for Full Season Early Maturing Grain Sorghum Hybrids, Sussex Co., VA, 2013.

Company or Brand Name	Variety	Irrigated	Non-Irrigated
Pioneer	86G32	28.4	13.3
Pioneer	86P90	35.5	14.3
Triumph	TR424	16.3	22.3
Triumph	TR438	29.5	20.3
Triumph	TR463	21.3	7.0
Monsanto	DKS37-07	14.0	13.7
Monsanto	DKS38-88	7.5	9.0
Golden Acres	5556	15.0	7.3
Dyna-Gro	M75GB39	11.9	10.7
Advanta	AG2101	17.8	9.0
Advanta	AG1401	15.2	7.0
Advanta	AG2103	11.5	8.7
Advanta	AG2115	7.0	9.7
Advanta	AG3101	8.0	7.3
Gayland Ward	XP9058	16.0	8.7
Average		17.0	11.2
LSD		9.6	10.7

Soil Series Seabrook sand
 Soil pH 6.2
 Previous Crop Sorghum
 Row Width 36"
 Planting Date May 31
 Irrigation 8/14/13 - 1.25"
 8/21/13 - 1.25"
 Fertilizer Nitrogen 24-0-0-3 60 lbs/A (May 31); Nitrogen 20-0-0-0-6.7 60
 lbs/A(June 25); Manganese Sulfate 3 lbs/A(July 16); Nitrogen 20-0-0-
 6.7 60 lbs/A(July 19); Manganese 4% 1 qt/A; ENC 1 qt/A(Aug. 5); ENC
 1 qt/A(Aug. 14)
 Herbicides Round-up Weather Max 1 qt/A (May 30); Intrro 1 qt/A; Bicep 2 qt/A
 (May 31)
 Insecticides Asana 6 oz/A (July 18); Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
 Fungicides Headline 6 oz/A (July 18)
 Desiccation Round-up 1.5 qt/A (Sep. 11)
 Harvest Date September 27

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	2.2	8.4	7.0	5.5	0.7	3.7	27.4
Avg. Temp. (°F)	66	75	78	75	68	61	71
Min. Temp. (°F)	55	66	71	66	57	53	61
Max. Temp. (°F)	77	85	88	85	81	72	81

Table 22. Percentage of head mold for Full Season Medium Maturing Grain Sorghum Hybrids, Sussex Co., VA, 2013.

Company or Brand Name	Variety	Irrigated	Non-Irrigated
Pioneer	83G17	5.5	5.7
Pioneer	84P80	15.5	14.0
Monsanto	DKS49-45	10.0	10.7
Monsanto	DKS51-01	6.0	5.0
Monsanto	DKS53-67	10.5	9.0
Monsanto	DKS44-20	5.0	20.0
Monsanto	DKS54-00	6.0	17.0
Dyna-Gro	M77GB52	5.0	7.3
Sorghum Partners	NK7633	17.0	14.0
Sorghum Partners	NK6638	10.0	7.0
Advanta	AG3201	24.5	18.0
Golden Acres	3552	12.5	13.3
Golden Acres	5613	25.0	17.3
Gayland Ward	GW9417	12.0	13.3
Gayland Ward	GW9320	5.5	16.3
Average		11.3	12.5
LSD		7.2	10.8

Soil Series Seabrook sand
 Soil pH 6.2
 Previous Crop Sorghum
 Row Width 36"
 Planting Date May 31
 Irrigation 8/14/13 - 1.25"
 8/21/13 - 1.25"
 Fertilizer Nitrogen 24-0-0-3 60 lbs/A (May 31); Nitrogen 20-0-0-0-6.7 60
 lbs/A(June 25); Manganese Sulfate 3 lbs/A(July 16); Nitrogen 20-0-0-
 6.7 60 lbs/A(July 19); Manganese 4% 1 qt/A; ENC 1 qt/A(Aug. 5); ENC
 1 qt/A(Aug. 14)
 Herbicides Round-up Weather Max 1 qt/A (May 30); Intrro 1 qt/A; Bicep 2 qt/A
 (May 31)
 Insecticides Asana 6 oz/A (July 18); Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
 Fungicides Headline 6 oz/A (July 18)
 Desiccation Round-up 1.5 qt/A (Sep. 11)
 Harvest Date September 27

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	2.2	8.4	7.0	5.5	0.7	3.7	27.4
Avg. Temp. (°F)	66	75	78	75	68	61	71
Min. Temp. (°F)	55	66	71	66	57	53	61
Max. Temp. (°F)	77	85	88	85	81	72	81

Table 23. Percentage of head mold for Full Season Late Maturing Grain Sorghum Hybrids, Sussex Co., VA, 2013.

Company or Brand Name	Variety	Irrigated	Non-Irrigated
Richardson	06173	8.0	11.0
Richardson	8433	27.0	16.7
Triumph	TRX15401	10.5	8.0
Triumph	TR481	9.0	5.7
Triumph	TR4941	19.0	15.3
Triumph	TRX85131	28.0	18.7
Dyna-Gro	GX13661	19.5	8.7
Dyna-Gro	765B	9.0	7.0
Sorghum Partners	NK7829	10.5	8.3
Sorghum Partners	SP7868	6.5	10.3
Sorghum Partners	NK8416	6.5	9.3
Sorghum Partners	NK8817	5.0	9.7
Sorghum Partners	NK8828	12.5	6.0
Sorghum Partners	NK8831	6.0	4.0
Gayland Ward	GW9480	18.0	11.3
Average		13.0	10.0
LSD		10.5	9.8

Soil Series Seabrook sand
 Soil pH 6.2
 Previous Crop Sorghum
 Row Width 36"
 Planting Date May 31
 Irrigation 8/14/13 - 1.25"
 8/21/13 - 1.25"
 Fertilizer Nitrogen 24-0-0-3 60 lbs/A (May 31); Nitrogen 20-0-0-0-6.7 60
 lbs/A(June 25); Manganese Sulfate 3 lbs/A(July 16); Nitrogen 20-0-0-
 6.7 60 lbs/A(July 19); Manganese 4% 1 qt/A; ENC 1 qt/A(Aug. 5); ENC
 1 qt/A(Aug. 14)
 Herbicides Round-up Weather Max 1 qt/A (May 30); Intrro 1 qt/A; Bicep 2 qt/A
 (May 31)
 Insecticides Asana 6 oz/A (July 18); Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
 Fungicides Headline 6 oz/A (July 18)
 Desiccation Round-up 1.5 qt/A (Sep. 11)
 Harvest Date September 27

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	2.2	8.4	7.0	5.5	0.7	3.7	27.4
Avg. Temp. (°F)	66	75	78	75	68	61	71
Min. Temp. (°F)	55	66	71	66	57	53	61
Max. Temp. (°F)	77	85	88	85	81	72	81

Table 24. Performance of Full Season Early Maturing Grain Sorghum Hybrids, Petersburg, VA, 2013.

Company or Brand Name	Hybrid	Yield (BU/A)	Moisture (%)
Dekalb	DKS38-88	154.5	19.3
Pioneer	86G32	133.8	15.0
Advanta	AG2115	126.8	17.8
Advanta	AG1401	116.3	16.2
Dekalb	DKS37-07	107.5	16.5
Pioneer	86P90	89.8	11.5
Gayland Ward	XP9058	80.8	14.5
Triumph	TR438	73.3	14.9
Advanta	AG3101	72.3	12.9
Golden Acres	5556	66.0	12.5
Advanta	AG2101	64.0	12.9
Triumph	TR424	60.8	13.7
Triumph	TR463	52.8	10.8
Advanta	AG2103	51.8	13.5
Dyna-Gro	M75GB39	46.3	12.3
Averages		86.4	14.3
HSD ¹		61.8	
CV%		28.1	

¹ Tukey's Honestly Significant Difference

Soil Series: Dunbar fine sandy loam
 Soil pH: 5.4
 Previous Crop: Corn (grain)
 Row Width: 30 in
 Planting: May 29, 2013
 Irrigation: None
 Fertilizer: 20:40:60 (320 lb/a pre-plant); 40 lb/a N top-dress at knee high
 Herbicides: Bicep II Magnum (2 qt/a)
 Insecticides: None
 Fungicides: None
 Desiccation: Roundup (1.5 qt/a)
 Harvest Date: September 29, 2013

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	3.5	9.3	4.6	6.1	0.4	5.2	29.2
Avg. Temp. (°F)	66	76	79	76	71	63	72
Min. Temp. (°F)	56	67	72	67	59	53	62
Max. Temp. (°F)	77	86	88	87	84	74	83

Table 25. Performance of Full Season Medium Maturing Grain Sorghum Hybrids, Petersburg, VA, 2013.

Company or Brand Name	Hybrid	Yield (BU/A)	Moisture (%)
Monsanto	DKS51-01	190.8	16.3
Pioneer	83P17	180.3	18.1
Dekalb	DKS54-00	178.8	18.3
Dekalb	DKS53-67	162.8	17.6
Dekalb	DKS44-20	151.3	17.6
Dekalb	DKS49-45	147.5	16.7
Sorghum Partners	NK6638	145.3	17.0
Dyna-Gro	M77GB52	133.5	17.5
Sorghum Partners	NK7633	125.3	15.9
Pioneer	84P80	94.3	14.6
Golden Acres	3552	88.0	15.2
Golden Acres	5613	85.0	13.8
Gayland Ward	GW9417	81.5	13.7
Gayland Ward	GW9320	69.8	14.6
Advanta	AG3201	38.5	12.8
Averages		131.0	16.0
HSD ¹		51.7	
CV%		15.6	

¹ Tukey's Honestly Significant Difference

Soil Series: Dunbar fine sandy loam
 Soil pH: 5.4
 Previous Crop: Corn (grain)
 Row Width: 30 in
 Planting: May 29, 2013
 Irrigation: None
 Fertilizer: 20:40:60 (320 lb/a pre-plant); 40 lb/a N top-dress at knee high
 Herbicides: Bicep II Magnum (2 qt/a)
 Insecticides: None
 Fungicides: None
 Desiccation: Roundup (1.5 qt/a)
 Harvest Date: October 14, 2013

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	3.5	9.3	4.6	6.1	0.4	5.2	29.2
Avg. Temp. (°F)	66	76	79	76	71	63	72
Min. Temp. (°F)	56	67	72	67	59	53	62
Max. Temp. (°F)	77	86	88	87	84	74	83

Table 26. Performance of Full Season Late Maturing Grain Sorghum Hybrids, Petersburg, VA, 2013.

Company or Brand Name	Hybrid	Yield (BU/A)	Moisture (%)
Sorghum Partners	NK8416	115.5	17.6
Sorghum Partners	SP7868	108.5	18.9
Triumph	TRX15401	108.0	21.1
Sorghum Partners	NK8817	107.3	17.7
Sorghum Partners	NK8828	95.3	20.8
Sorghum Partners	NK7829	79.8	16.8
Richardson Seeds	6173	79.0	16.9
Sorghum Partners	NK8831	69.0	14.5
Dyna-Gro	765B	68.8	16.7
Dyna-Gro	GX13661	62.3	13.6
Triumph	TR481	58.3	18.5
Gayland Ward	GW9480	56.3	13.3
Triumph	TR4941	46.3	14.1
Triumph	TRX85131	30.5	15.2
Richardson Seeds	8433	28.8	12.2
Averages		81.1	16.5
HSD ¹		38.2	
CV%		18.8	

¹Tukey's Honestly Significant Difference

Soil Series: Dunbar fine sandy loam
 Soil pH: 5.4
 Previous Crop: Corn (grain)
 Row Width: 30"
 Planting: May 29, 2013
 Irrigation: None
 Fertilizer: 20:40:60 (320 lb/a pre-plant); 40 lb/a N top-dress at knee high
 Herbicides: Bicep II Magnum (2 qt/a)
 Insecticides: None
 Fungicides: None
 Desiccation: None
 Harvest Date: October 21, 2013

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	3.5	9.3	4.6	6.1	0.4	5.2	29.2
Avg. Temp. (°F)	66	76	79	76	71	63	72
Min. Temp. (°F)	56	67	72	67	59	53	62
Max. Temp. (°F)	77	86	88	87	84	74	83

Table 27. Performance of Double Crop Early Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 23, 2013.

Company or Brand Name	Hybrid	Yield (BU/A)	Harvest Moisture (%)	Test Weight (LB/BU)	100% Headed (Date)
Dyna-Gro	M75GB39	84.7	20.2	58.0	8/16
Advanta	AG2103	75.3	20.4	55.3	8/26
Sorghum Partners	SP3425	67.0	15.6	54.3	8/28
Advanta	AG2115	64.3	17.6	54.9	8/29
Dekalb	DKS37-07	61.7	16.9	57.1	8/16
Dekalb	DKS38-88	59.3	19.8	57.7	8/23
Advanta	AG1401	59.3	16.8	54.5	8/22
Sorghum Partners	K35-Y5	56.7	15.2	51.9	8/29
Sorghum Partners	KS310	54.3	16.3	53.9	9/3
Richardson	49473	44.3	16.2	52.8	8/27
Dekalb	Pulsar	44.0	18.5	58.3	8/28
Averages		61.0	17.6	55.3	
HSD ¹		20.3			
CV%		11.3			

¹ Tukey's Honestly Significant Difference

Soil Series Emporia & Uchee
 Soil pH 6.57
 Previous Crop Winter wheat
 Row Width 36"
 Planting Date June 21
 Irrigation None
 Fertilizer Nitrogen 24-0-0-3 60 lbs/A (June 21); Nitrogen 33-0-0-12S 60 lbs/A (July 19)
 Manganese Sulfate 3 lbs/A (July 16); Manganese 4% 1 qt/A + ENC 1 qt/A (Aug. 5)
 Herbicides Round-up Weather Max 1 qt/A (June 20); Intro 1 qt/A + Bicep 2 qt/A (June 21)
 Insecticides Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
 Fungicides Headline 6 oz/A (July 19)
 Desiccation None
 Harvest Date October 28

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	3.6	8.1	3.5	6.5	2.0	2.8	26.5
Avg. Temp. (°F)	66	75	79	75	68	69	72
Min. Temp. (°F)	56	66	70	65	56	58	62
Max. Temp. (°F)	78	86	90	86	82	83	84

Table 28. Performance of Double Crop Late Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, Field # 23, 2013.

Company or Brand Name	Hybrid	Yield (BU/A)	Harvest Moisture (%)	Test Weight (LB/BU)	100% Headed (Date)
Golden Acres	3552	80.7	20.8	55.0	8/27
Dyna-Gro	GX13661	70.7	20.6	54.8	9/3
Golden Acres	5556	65.3	19.4	57.6	8/29
Advanta	AG3201	60.0	18.4	57.4	8/27
Dekalb	DKS44-20	59.7	19.5	56.3	8/28
Golden Acres	5613	59.5	19.2	55.7	9/3
Advanta	AG3101	59.0	19.4	57.0	8/26
Advanta	AG2101	58.0	20.3	54.6	8/28
Richardson	92123	55.7	18.9	56.7	9/3
Dekalb	DKS49-45	55.0	20.7	55.0	8/27
Dyna-Gro	M77GB52	52.3	18.2	55.5	8/28
Averages		61.6	19.6	55.9	
HSD ¹		43.3			
CV%		22.6			

¹Tukey's Honestly Significant Difference

Soil Series Emporia & Uchee
 Soil pH 6.57
 Previous Crop Winter wheat
 Row Width 36"
 Planting Date June 21
 Irrigation None
 Fertilizer Nitrogen 24-0-0-3 60 lbs/A (June 21); Nitrogen 33-0-0-12S 60 lbs/A (July 19)
 Manganese Sulfate 3 lbs/A (July 16); Manganese 4% 1 qt/A + ENC 1 qt/A (Aug. 5)
 Herbicides Round-up Weather Max 1 qt/A (June 20); Intrro 1 qt/A + Bicep 2 qt/A (June 21)
 Insecticides Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
 Fungicides Headline 6 oz/A (July 19)
 Desiccation None
 Harvest Date October 28

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	3.6	8.1	3.5	6.5	2.0	2.8	26.5
Avg. Temp. (°F)	66	75	79	75	68	69	72
Min. Temp. (°F)	56	66	70	65	56	58	62
Max. Temp. (°F)	78	86	90	86	82	83	84

Table 29. Percentage of head mold and anthracnose for Double Crop Early Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, 2013.

Company or Brand Name	Variety	% Mold	% Anthracnose
Richardson	49473	60.0	1.0
Monsanto	DKS37-07	13.3	0.7
Monsanto	DKS38-88	12.3	0.4
Dyna-Gro	M75GB39	5.0	1.0
Sorghum Partners	KS310	33.3	0.1
Sorghum Partners	K35-Y5	50.0	0.1
Sorghum Partners	SP3425	36.7	0.7
Advanta	AG1401	28.3	0.1
Advanta	AG2103	4.3	0.7
Advanta	AG2115	14.0	0.7
Monsanto	Pulsar	18.3	0.4
Average		25.1	0.5
LSD		12.4	0.8

Soil Series Emporia & Uchee
 Soil pH 6.57
 Previous Crop Winter wheat
 Row Width 36"
 Planting Date June 21
 Irrigation None
 Fertilizer Nitrogen 24-0-0-3 60 lbs/A (June 21); Nitrogen 33-0-0-12S 60 lbs/A (July 19)
 Manganese Sulfate 3 lbs/A (July 16); Manganese 4% 1 qt/A + ENC 1 qt/A (Aug. 5)
 Herbicides Round-up Weather Max 1 qt/A (June 20); Intrro 1 qt/A + Bicep 2 qt/A (June 21)
 Insecticides Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
 Fungicides Headline 6 oz/A (July 19)
 Desiccation None
 Harvest Date October 28

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	3.6	8.1	3.5	6.5	2.0	2.8	26.5
Avg. Temp. (°F)	66	75	79	75	68	69	72
Min. Temp. (°F)	56	66	70	65	56	58	62
Max. Temp. (°F)	78	86	90	86	82	83	84

Table 30. Percentage of head mold and anthracnose for Double Crop Late Maturing Grain Sorghum Hybrids, TAREC (Suffolk), VA, 2013.

Company or Brand Name	Variety	% Mold	% Anthracnose
Richardson	92123	16.7	0.4
Monsanto	DKS49-45	15.0	1.0
Monsanto	DKS44-20	10.7	0.4
Dyna-Gro	M77GB52	15.0	1.0
Advanta	AG2101	8.0	1.4
Advanta	AG3101	10.0	0.1
Advanta	AG3201	16.7	1.0
Golden Acres	5556	5.7	0.1
Golden Acres	3552	6.7	0.4
Golden Acres	5613	14.3	0.4
Dyna-Gro	GX13661	9.7	2.0
Average		11.7	0.7
LSD		9.4	1.5

Soil Series Emporia & Uchee
 Soil pH 6.57
 Previous Crop Winter wheat
 Row Width 36"
 Planting Date June 21
 Irrigation None
 Fertilizer Nitrogen 24-0-0-3 60 lbs/A (June 21); Nitrogen 33-0-0-12S 60 lbs/A (July 19)
 Manganese Sulfate 3 lbs/A (July 16); Manganese 4% 1 qt/A + ENC 1 qt/A (Aug. 5)
 Herbicides Round-up Weather Max 1 qt/A (June 20); Intrro 1 qt/A + Bicep 2 qt/A (June 21)
 Insecticides Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
 Fungicides Headline 6 oz/A (July 19)
 Desiccation None
 Harvest Date October 28

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	3.6	8.1	3.5	6.5	2.0	2.8	26.5
Avg. Temp. (°F)	66	75	79	75	68	69	72
Min. Temp. (°F)	56	66	70	65	56	58	62
Max. Temp. (°F)	78	86	90	86	82	83	84

Table 31. Performance of Double Crop Early Maturing Grain Sorghum Hybrids, Isle of Wight County, VA, 2013.

Company or Brand Name	Hybrid	Yield (BU/A)	Harvest Moisture (%)	Test Weight (LB/BU)
Advanta	AG2103	109.3	20.4	52.5
Dyna-Gro	M75GB39	103.7	20.3	51.3
Dekalb	DKS38-88	95.0	21.5	47.4
Dekalb	DKS37-07	94.0	19.1	46.5
Dekalb	Pulsar	92.3	18.8	45.5
Sorghum Partners	K35-Y5	89.3	16.2	46.7
Advanta	AG2115	88.7	19.0	46.3
Advanta	AG1401	84.0	19.6	49.7
Sorghum Partners	SP3425	82.0	18.1	49.7
Richardson	49473	78.3	18.2	45.3
Sorghum Partners	KS310	58.3	16.4	50.0
Averages		88.6	18.9	48.3
HSD ¹		28.4		
CV%		10.9		

¹Tukey's Honestly Significant Difference

Soil Series Slage fine sandy loam
 Soil pH 6.4
 Previous Crop Spring hay
 Row Width 36"
 Planting Date June 20
 Irrigation None
 Fertilizer Nitrogen 24-0-0-3 60 lbs/A (June 20); Nitrogen 20-0-0-6.7 60 lbs/A (July 19)
 Manganese Sulfate 3 lbs/A (July 16); Manganese 4% 1 qt/A + ENC 1 qt/A (Aug. 9)
 Herbicides Round-up Weather Max 1 qt/A (June 19); Intrro 1 qt/A+ Bicep 2 qt/A (June 20)
 Insecticides Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
 Fungicides Headline 6 oz/A (July 19)
 Desiccation None
 Harvest Date October 17

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	1.3	5.0	3.4	8.0	2.3	3.2	23.3
Avg. Temp. (°F)	68	77	80	76	69	63	72
Min. Temp. (°F)	58	68	72	68	59	53	63
Max. Temp. (°F)	78	86	89	85	81	73	82

Table 32. Performance of Double Crop Late Maturing Grain Sorghum Hybrids, Isle of Wight County, VA, 2013.

Company or Brand Name	Hybrid	Yield (BU/A)	Harvest Moisture (%)	Test Weight (LB/BU)
Golden Acres	3552	126.7	21.1	47.6
Dyna-Gro	GX13661	116.7	20.9	43.0
Advanta	AG3201	116.0	23.3	50.9
Dekalb	DKS49-45	109.7	20.7	42.2
Advanta	AG3101	109.0	18.7	48.9
Dyna-Gro	M77GB52	108.7	20.5	48.0
Advanta	AG2101	107.3	23.1	50.6
Golden Acres	5556	107.0	20.7	50.4
Golden Acres	5613	102.7	22.5	47.6
Richardson	92123	87.0	23.9	48.1
Dekalb	DKS44-20	86.0	20.8	49.4
Averages		107.0	21.5	47.9
HSD ¹		43.3		
CV%		13.7		

¹ Tukey's Honestly Significant Difference

Soil Series Slage fine sandy loam
 Soil pH 6.4
 Previous Crop Spring hay
 Row Width 36"
 Planting Date June 20
 Irrigation None
 Fertilizer Nitrogen 24-0-0-3 60 lbs/A (June 20); Nitrogen 20-0-0-6.7 60 lbs/A (July 19)
 Manganese Sulfate 3 lbs/A (July 16); Manganese 4% 1 qt/A + ENC 1 qt/A (Aug. 9)
 Herbicides Round-up Weather Max 1 qt/A (June 19); Intrro 1 qt/A+ Bicep 2 qt/A (June 20)
 Insecticides Baythroid 2 oz/A + Lannate 1 pt/A (Aug. 14)
 Fungicides Headline 6 oz/A (July 19)
 Desiccation None
 Harvest Date October 17

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	1.3	5.0	3.4	8.0	2.3	3.2	23.3
Avg. Temp. (°F)	68	77	80	76	69	63	72
Min. Temp. (°F)	58	68	72	68	59	53	63
Max. Temp. (°F)	78	86	89	85	81	73	82

North Carolina Grain Sorghum Performance Tests 2013

Trial conducted by: Leah Boerema
Variety Test coordinator: R. Heiniger, Ph.D.

INTRODUCTION

The 2013 North Carolina grain sorghum OVT tests contained 45 hybrids planted full season and 22 hybrids planted as double crop. Full season testing took place at three locations: Cherry Research Farm in Goldsboro, NC; Cunningham Research Station in Kinston, NC; and Upper Coastal Plain Research Station in Rocky Mount, NC. Double crop testing took place at two locations: Cunningham Research Station in Kinston, NC; and Upper Coastal Plain Research Station in Rocky Mount, NC.

MATERIALS AND METHODS

Hybrids were divided into three maturity groups for full season and two maturity groups for double crop. Therefore, the experimental design was a split plot with maturity group as the main split and the hybrids arranged in a randomized complete block design with four replications within each maturity group. Detailed information on planting, crop maintenance, harvest, and weather are presented within each location and maturity group.

RESULTS SUMMARY

Rocky Mount and Goldsboro full season locations received favorable rains and adequate growing conditions. As a result, yields averaged 100 bushels and 90 bushels, respectively. The Kinston location had significant sicklepod pressure that was difficult to control for both the full season and double crop tests. Hybrid performance was variable by location but some of the strongest performing hybrids across full season locations were TRX15401, Pioneer 84P80, Dyna-Gro M77GB52, and DeKalb 51-01. Two of the top yielding hybrids in the double crop tests were DynaGro M77GB52 and Richardson 92123.

GRAIN SORGHUM PERFORMANCE MEASUREMENTS

Yield: Yields are calculated from the weight of the threshed grain from each plot and are expressed as bushels per acre (BU/A) at 13.5% moisture.

Grain Moisture: Expressed as percent moisture of grain at harvest.

Plant Height: Average height in feet from the soil surface to the base of the grain head.

Anthracnose, Fusarium Head Blight, and Rough Leaf Spot: Disease ratings were made on a 1 to 10 scale with 10 having no sign of disease and 1 representing plants with leaves completely covered by disease lesions.

Table 33. Performance of Full Season Grain Sorghum Hybrids, Goldsboro, NC, 2013.

Company or Brand Name	Hybrid	Harvest Moisture (%)	Test Weight (LB/BU)	Yield (BU/A)
Pioneer	86G32	12.21	61.57	105.24
Monsanto	DKS44-20	13.04	60.86	103.77
Monsanto	DKS38-88	13.04	61.13	103.30
Monsanto	DKS53-67	12.84	61.21	103.17
Pioneer	84P80	12.86	61.11	102.68
Dyna-Gro	M77GB52	12.97	60.85	100.46
Golden Acres Genetics	5613	12.88	61.03	100.09
Monsanto	DKS51-01	13.00	61.01	99.85
Monsanto	DKS49-45	12.97	61.05	97.88
Advanta	AG2101	13.05	61.00	97.11
Sorghum Partners	NK8416	13.08	60.81	96.71
Triump Seed Company	TRX15401	13.01	60.84	95.77
Sorghum Partners	NK6638	12.83	61.08	94.95
Sorghum Partners	SP7868	13.73	60.07	92.69
Dyna-Gro	765B	13.07	60.78	91.78
Monsanto	DKS54-00	12.86	61.03	90.91
Sorghum Partners	NK7829	13.19	60.59	90.53
Sorghum Partners	NK8828	12.65	61.08	90.05
Sorghum Partners	NK7633	12.65	61.20	89.82
Richardson Seeds	6173	13.22	60.63	87.61
Pioneer	83G17	13.40	60.45	86.64
Advanta	AG2115	10.56	46.02	85.59
Advanta	AG1401	12.28	61.53	83.08
Triump Seed Company	TR438	12.55	61.19	82.78
Dyna-Gro	GX13661	12.98	60.84	81.14
Pioneer	86P90	11.35	61.92	81.07
Sorghum Partners	NK8817	13.39	60.42	80.73
Sorghum Partners	NK8831	12.49	61.34	80.70
Monsanto	DKS37-07	13.05	61.13	80.29
Dyna-Gro	M75GB39	11.88	61.81	79.91
Gayland Ward	GW9320	14.69	59.55	78.95
Gayland Ward	XP9058	13.14	60.89	77.86
Advanta	AG3201	13.04	60.89	76.58
Golden Acres Genetics	3552	12.71	61.32	76.50
Triump Seed Company	TR4941	13.76	59.96	75.93
Triump Seed Company	TR463	12.32	61.48	74.91
Advanta	AG3101	13.10	61.03	73.93
Gayland Ward	GW9417	12.99	61.02	73.03
Triump Seed Company	TR424	12.07	61.71	71.85
Richardson Seeds	8433	13.07	60.78	71.81
Golden Acres Genetics	5556	11.39	62.00	71.20
Triump Seed Company	TR481	12.99	60.74	70.55
Advanta	AG2103	12.68	61.34	68.54
Triump Seed Company	TRX85131	12.98	60.87	68.23
Gayland Ward	GW9480	12.94	61.01	66.71
Average		12.82	60.66	89.62
CV (%)		8.81	7.61	13.59
LSD		1.58	2.46	16.28

* Yields highlighted in red are not different from the highest yielding hybrid

Soil Series Pantego & Leaf loam
 Soil pH 5.9
 Previous Crop Soybeans
 Row Width 22"
 Planting May 24
 Irrigation None
 Fertilizer 0-0-50-18S 175 lbs/A (pre-plant)
 10-27-0 + Zinc 0.25% + Sulfur 2.6% 10gal/A (2x2 Band);
 30% UAN 120 lbs/A (at-plant)
 Herbicides Medal II ATZ 2qt/A (at-plant)
 Insecticides None
 Fungicides None
 Desiccation None
 Harvest Date October 24

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	2.7	10.7	7.3	4.4	4.6	2.9	32.6
Avg. Temp. (°F)	68	76	79	77	71	62	72
Min. Temp. (°F)	57	69	73	69	61	53	64
Max. Temp. (°F)	79	85	88	86	82	72	82

Table 34. Performance of Full Season Grain Sorghum Hybrids, Kinston, NC, 2013.

Company or Brand Name	Hybrid	Harvest Moisture (%)	Test Weight (LB/BU)	Yield (BU/A)
Triump Seed Company	TRX15401	13.8	59.9	94.1
Pioneer	84P80	12.2	60.5	87.4
Dyna-Gro	M77GB52	12.8	60.7	82.1
Pioneer	83G17	14.4	59.2	77.6
Sorghum Partners	NK6638	12.3	61.1	76.3
Sorghum Partners	SP7868	13.0	60.9	73.0
Monsanto	DKS53-67	12.4	60.6	72.8
Monsanto	DKS54-00	13.1	59.8	71.1
Monsanto	DKS49-45	11.9	61.0	69.9
Monsanto	DKS44-20	13.1	59.9	68.6
Sorghum Partners	NK8817	13.0	60.2	68.4
Advanta	AG2115	13.1	59.8	65.3
Sorghum Partners	NK7633	11.6	61.3	64.6
Monsanto	DKS51-01	12.7	60.6	64.5
Advanta	AG3201	12.2	60.5	62.3
Sorghum Partners	NK8828	13.1	59.8	62.3
Monsanto	DKS38-88	12.3	60.5	61.2
Sorghum Partners	NK8416	12.8	60.7	60.1
Richardson Seeds	6173	11.3	61.1	59.5
Advanta	AG1401	10.7	61.7	58.9
Golden Acres Genetics	5613	11.2	61.1	58.9
Gayland Ward	GW9417	12.4	59.5	58.7
Golden Acres Genetics	3552	11.4	60.8	58.6
Gayland Ward	GW9320	11.8	60.5	58.1
Monsanto	DKS37-07	11.3	61.0	57.9
Sorghum Partners	NK7829	8.4	62.9	57.9
Triump Seed Company	TR481	8.1	62.8	57.4
Advanta	AG3101	11.2	60.7	57.3
Dyna-Gro	765B	10.8	60.7	57.1
Advanta	AG2101	11.5	60.6	56.9
Gayland Ward	XP9058	12.0	60.2	56.8
Triump Seed Company	TR438	10.3	61.7	56.4
Triump Seed Company	TR463	11.3	61.0	56.2
Triump Seed Company	TR4941	9.0	45.5	56.2
Richardson Seeds	8433	11.8	60.1	56.2
Sorghum Partners	NK8831	8.1	46.0	56.0
Triump Seed Company	TR424	12.5	59.8	55.8
Dyna-Gro	GX13661	13.2	59.6	55.7
Gayland Ward	GW9480	2.0	16.2	55.4
Dyna-Gro	M75GB39	8.2	46.0	55.2
Triump Seed Company	TRX85131	7.9	46.5	54.7
Pioneer	86P90	12.3	59.8	54.7
Golden Acres Genetics	5556	7.5	46.2	54.5
Pioneer	86G32	10.7	60.4	54.5
Advanta	AG2103	10.2	61.1	53.1
Average		11.3	58.0	62.5
CV (%)		22.2	19.8	7.3
LSD		3.5	16.0	6.4

* Yields highlighted in red are not different from the highest yielding hybrid

Soil Series Stallings loamy sand
 Previous Crop Corn
 Row Width 22 inches
 Planting May 28
 Irrigation None
 Fertilizer 10-27-0 + Zinc 0.25% + Sulfur 2.6% 10gal/A (2x2 Band);

 Herbicides 30% UAN 120 lbs/A (at-plant)
 Insecticides Medal II ATZ 2qt/A (at-plant)
 Fungicides Karate 1.92 oz/A (Aug 8)
 Desiccation None
 Harvest Date October 25

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	3.8	10.0	5.5	5.4	2.1	0.0	26.7
Avg. Temp. (°F)	68	76	79	76	70	63	72
Min. Temp. (°F)	58	68	71	68	61	54	63
Max. Temp. (°F)	79	85	89	87	82	73	82

Table 35. Performance of Full Season Grain Sorghum Hybrids, Rocky Mount, NC, 2013.

Company or Brand Name	Hybrid	Harvest Moisture (%)	Test Weight (LB/BU)	Yield (BU/A)	Plant Height (ft)	Anthrax -nose	Fusarium Head Blight	Rough Leaf Spot
Triump Seed Company	TRX15401	14.8	58.7	127.2	3.8	7.3	7.5	8.0
Monsanto	DKS51-01	14.6	58.9	126.6	4.2	7.0	8.0	8.3
Gayland Ward	XP9058	12.8	60.3	120.6	3.5	6.3	7.0	7.5
Pioneer	83G17	14.5	59.0	120.1	3.9	7.5	8.3	8.6
Sorghum Partners	NK8416	14.7	58.8	119.8	4.4	6.5	8.0	7.8
Monsanto	DKS54-00	13.9	59.5	119.5	4.0	7.3	9.0	8.5
Monsanto	DKS38-88	14.5	59.2	118.3	4.3	5.8	7.8	8.0
Dyna-Gro	M77GB52	14.1	59.3	111.3	3.6	6.5	8.8	8.0
Pioneer	86G32	14.1	59.6	109.9	3.4	8.0	7.5	7.5
Sorghum Partners	NK6638	13.9	59.5	109.1	3.9	5.8	8.5	7.8
Pioneer	84P80	13.9	59.6	108.9	3.9	7.5	9.0	8.0
Richardson Seeds	6173	14.3	58.9	108.4	4.3	8.3	9.3	8.3
Advanta	AG2103	14.0	59.5	108.3	3.4	4.0	8.3	7.0
Advanta	AG1401	12.8	60.5	108.1	3.6	7.5	9.3	8.3
Gayland Ward	GW9417	14.3	59.1	107.2	4.1	6.3	9.0	8.5
Golden Acres Genetics	5613	13.1	59.9	106.6	3.8	5.8	7.5	7.0
Advanta	AG2115	13.2	60.1	105.4	3.3	8.0	8.7	8.7
Sorghum Partners	SP7868	14.8	58.7	105.2	3.6	5.8	8.0	6.5
Pioneer	86P90	13.5	59.7	104.2	3.6	5.8	7.3	6.8
Monsanto	DKS53-67	14.1	59.3	104.1	3.8	6.5	8.3	8.0
Triump Seed Company	TR463	14.2	59.2	103.9	3.6	6.5	8.0	7.8
Triump Seed Company	TR438	13.7	59.7	103.2	3.6	6.0	8.5	7.8
Dyna-Gro	765B	15.0	58.6	103.1	3.9	6.0	8.0	8.0
Advanta	AG3101	13.8	59.6	102.1	4.6	6.7	8.7	7.3
Monsanto	DKS49-45	14.0	59.4	101.8	4.0	6.8	9.0	7.3
Monsanto	DKS44-20	14.3	59.2	101.7	3.6	8.0	9.5	9.0
Sorghum Partners	NK8817	15.1	58.5	100.8	4.6	5.5	7.0	7.0
Monsanto	DKS37-07	14.6	59.1	99.8	3.9	5.5	7.0	8.0
Advanta	AG3201	14.6	58.7	99.6	3.8	5.5	7.8	7.0
Dyna-Gro	M75GB39	13.5	59.8	99.4	3.8	5.3	8.0	7.0
Golden Acres Genetics	5556	13.5	59.6	95.5	3.4	5.8	8.8	7.5
Sorghum Partners	NK8828	13.9	59.3	95.3	3.1	7.3	8.0	8.3
Sorghum Partners	NK7633	13.9	59.5	95.0	3.4	5.8	8.5	8.0
Golden Acres Genetics	3552	15.2	58.5	92.0	3.1	5.5	6.0	7.3
Gayland Ward	GW9480	14.2	58.7	89.3	3.4	4.0	8.0	7.3
Sorghum Partners	NK8831	13.9	59.4	89.2	2.9	5.0	8.0	7.3
Sorghum Partners	NK7829	14.4	59.0	88.7	3.4	7.0	9.8	8.3
Triump Seed Company	TR424	13.2	60.0	87.0	2.9	5.0	5.0	7.3
Dyna-Gro	GX13661	14.6	58.7	86.9	3.4	7.5	8.0	8.0
Richardson Seeds	8433	14.5	58.9	81.6	4.4	6.3	7.8	8.0
Advanta	AG2101	14.4	59.0	81.0	3.8	6.0	9.0	6.5
Gayland Ward	GW9320	14.6	58.7	78.1	3.9	6.0	7.7	6.7
Triump Seed Company	TR4941	14.2	59.0	72.1	3.3	4.5	7.0	7.3
Triump Seed Company	TRX85131	14.1	59.1	69.7	3.2	5.5	8.3	8.0
Triump Seed Company	TR481	14.3	58.9	62.6	3.4	5.0	7.3	8.0
Average		14.1	59.3	100.7	3.7	6.2	8.1	7.7
CV (%)		5.9	1.1	9.5	9.1	27.4	16.4	16.8
LSD		n/a	n/a	n/a				

* Yields highlighted in red are not different from the highest yielding hybrid

**Disease ratings were made on a 1 to 10 scale with 10 having no sign of disease and 1 representing plants with leaves completely covered by disease lesions.

Soil Series Roanoke sandy loam
 Soil pH 6.1
 Previous Crop Cotton
 Row Width 22"
 Planting May 29
 Irrigation None
 Fertilizer 10-27-0 + Zinc 0.25% + Sulfur 2.6% 10gal/A (2x2 Band);

 30% UAN 120 lbs/A (at-plant)
 Herbicides Medal II ATZ 2qt/A (at-plant)
 Insecticides Karate Zeon 1.92 oz/A (Aug 10)
 Belt 4 oz/A (Aug 14)
 Belt 4 oz/A (Sept 9)

 Fungicides None
 Desiccation None
 Harvest Date October 21

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	2.9	10.0	4.9	4.5	4.8	3.3	30.4
Avg. Temp. (°F)	68	76	79	76	70	62	72
Min. Temp. (°F)	57	68	72	67	60	53	63
Max. Temp. (°F)	78	85	88	86	82	72	82

Table 36. Performance of Double Crop Grain Sorghum Hybrids, Kinston, NC, 2013.

Company or Brand Name	Hybrid	Harvest Moisture (%)	Test Weight (LB/BU)	Yield (BU/A)
Dyna-Gro	M77GB52	14.8	58.4	75.2
Richardson Seeds	92123	15.2	58.2	71.4
Sorghum Partners	KS310	14.0	59.1	68.4
Advanta	AG2115	14.9	58.4	65.3
Monsanto	DKS49-45	13.7	59.1	63.9
Advanta	AG1401	14.7	58.3	59.3
Golden Acres Genetics	5613	14.1	58.3	55.7
Monsanto	DKS37-07	14.6	58.1	55.1
Sorghum Partners	SP3425	15.0	57.9	53.3
Advanta	AG2101	13.0	59.0	50.1
Monsanto	DKS44-20	13.6	59.1	49.3
Advanta	AG3101	12.7	59.4	49.0
Advanta	AG2103	12.9	59.2	46.6
Advanta	AG3201	13.0	58.5	46.4
Golden Acres Genetics	5556	11.5	60.0	45.9
Sorghum Partners	K35-Y5	12.4	59.6	45.7
Dyna-Gro	M75GB39	13.8	57.9	43.7
Richardson Seeds	49473	12.6	61.4	43.3
Monsanto	DKS38-88	14.6	58.3	37.7
Golden Acres Genetics	3552	12.7	59.7	37.4
Dyna-Gro	GX13661	13.8	58.8	30.2
Average		13.7	58.9	52.0
CV (%)		8.5	1.6	10.3
LSD		1.6	1.4	7.5

* Yields highlighted in red are not different from the highest yielding hybrid

Soil Series Stallings loamy sand & Portsmouth fine sandy loam
 Previous Crop Wheat
 Row Width 22"
 Planting June 25
 Irrigation None
 Fertilizer 10-27-0 + Zinc 0.25% + Sulfur 2.6% 10gal/A (2x2 Band);

 Herbicides 30% UAN 120 lbs/A (at-plant)
 Medal II ATZ 2qt/A (at-plant)
 Insecticides Karate 1.92 oz/A (Aug 8)
 Fungicides None
 Desiccation None
 Harvest Date October 28

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	3.8	10.0	5.5	5.4	2.1	0.0	26.7
Avg. Temp. (°F)	68	76	79	76	70	63	72
Min. Temp. (°F)	58	68	71	68	61	54	63
Max. Temp. (°F)	79	85	89	87	82	73	82

Table 37. Performance of Double Crop Grain Sorghum Hybrids, Rocky Mount, NC, 2013.

Company or Brand Name	Hybrid	Harvest Moisture (%)	Test Weight (LB/BU)	Yield (BU/A)
Dyna-Gro	M77GB52	17.3	56.9	69.2
Advanta	AG3101	16.5	57.4	67.2
Dyna-Gro	GX13661	15.4	57.8	61.3
Advanta	AG2101	15.2	58.2	54.5
Monsanto	DKS44-20	16.8	57.0	54.1
Golden Acres Genetics	5613	16.2	56.9	53.2
Monsanto	DKS49-45	17.2	56.8	51.4
Advanta	AG3201	15.0	58.6	51.3
Monsanto	DKS38-88	14.9	58.5	50.6
Golden Acres Genetics	3552	16.8	57.0	50.5
Richardson Seeds	92123	16.5	57.4	50.5
Golden Acres Genetics	5556	14.6	59.0	46.8
Dyna-Gro	M75GB39	14.4	59.0	44.6
Advanta	AG1401	12.9	59.7	42.9
Advanta	AG2103	14.5	58.9	39.5
Monsanto	DKS37-07	14.6	58.2	34.1
Sorghum Partners	SP3425	12.0	59.4	29.7
Sorghum Partners	K35-Y5	12.1	60.3	27.4
Advanta	AG2115	14.8	57.8	26.9
Richardson Seeds	49473	12.4	44.7	23.7
Sorghum Partners	KS310	12.9	59.7	21.4
Average		14.9	57.6	45.3
CV (%)		10.0	11.3	12.0
LSD		2.1	1.2	7.7

* Yields highlighted in red are not different from the highest yielding hybrid

Soil Series Wickham & Roanoke loam
 Soil pH 5.9
 Previous Crop Wheat
 Row Width 22"
 Planting July 10
 Irrigation None
 Fertilizer 10-27-0 + Zinc 0.25% + Sulfur 2.6% 10gal/A (2x2 Band);

 Herbicides 30% UAN 120 lbs/A (at-plant)
 Medal II ATZ 2qt/A (at-plant)
 Insecticides Karate Zeon 1.92 oz/A (Aug 10)
 Belt 4 oz/A (Aug 14)
 Belt 4 oz/A (Sept 9)
 Fungicides None
 Desiccation None
 Harvest Date November 15

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	2.9	10.0	4.9	4.5	4.8	3.3	30.4
Avg. Temp. (°F)	68	76	79	76	70	62	72
Min. Temp. (°F)	57	68	72	67	60	53	63
Max. Temp. (°F)	78	85	88	86	82	72	82

South Carolina Grain Sorghum Performance Tests 2013

TRIAL CONDUCTED BY: C. Myers, J. McCall, A. Crouch, B. Stancil, D. Gunter, and H. Free

VARIETY TEST COORDINATOR: Christopher Ray, Ph.D.

INTRODUCTION

The 2013 grain sorghum OVT tests contained 45 hybrids planted as a full season crop and 22 as double crop. Full season tests were conducted at four locations, the Edisto Research and Education Center (Edisto REC) in Blackville, SC, an on-farm test near Newberry, SC, at the Simpson Experiment Station near Pendleton, SC and at the Pee Dee Research and Education Center, Near Florence, SC. The double crop sorghum trials were conducted at two locations, at the Edisto REC and at the Simpson Experiment Station.

MATERIALS AND METHODS

Based on the information provided by the participating companies, hybrids were divided in three maturity groups for the full season and two maturity groups for the double crop. Therefore, the experimental design was a split plot with maturity group as the main split and the hybrids arranged in a randomized complete block design with three replications within each maturity group. Detailed information on planting, crop maintenance, and harvest, are presented within each location and maturity group.

RESULTS SUMMARY

This year trial results were impacted by excessive rainfall during the majority of the growing season. This condition led to inability to properly time field operations such as fertilization and application of pesticides. Yields were lower than expected at the test locations in Newberry and Blackville, SC due to excessive leaching and inability to apply layby nitrogen respectively. Yields at the Pendleton, SC site were lower compared to last year overall but still respectable and representative of what growers can expect in a year with similar growing conditions.

GRAIN SORGHUM PERFORMANCE MEASUREMENTS

Yield: Yields are calculated from the weight of the threshed grain from each plot and are expressed as bushels per acre (BU/A) at 14% moisture.

Grain Moisture: Expressed as a percent moisture of grain at harvest.

Plant Height: Average height in inches from the soil surface to the top of the grain head.

Head Extension: Measurement between the flag leaf and the bottom of the head.

TABLE 38. FULL SEASON GRAIN SORGHUM HYBRID PERFORMANCE
 EARLY MATURING DRY LAND TRIAL - PIEDMONT:
 SIMPSON RESEARCH AND EDUCATION CENTER, PENDLETON, SC.
 2013 DATA

COMPANY OR BRAND NAME	HYBRID	YIELD (BU/A)	HARVEST MOISTURE (PCT)	TEST WEIGHT (LB/BU)	50% HEADED (DATE)	HEAD EXTENSION (IN)
Advanta	AG3101	109.6	13.9	58.6	7/22	10.3
Advanta	AG2115	100.7	13.5	54.5	7/22	9.3
Dekalb	DKS38-88	93.4	13.2	51.6	7/18	10.3
Advanta	AG1401	87.6	12.9	55.7	7/20	9.0
Dekalb	DKS37-07	84.5	13.3	54.1	7/19	8.5
Advanta	AG2101	83.5	13.0	51.6	7/22	6.3
Gayland Ward	XP9058	83.4	13.3	54.6	7/18	9.0
Pioneer	86G32	73.9	13.2	53.6	7/17	8.7
Triumph	TR438	72.7	12.6	51.5	7/17	7.7
Triumph	TR424	72.2	12.6	52.0	7/18	9.2
Pioneer	86P90	70.4	12.5	53.3	7/19	6.7
Golden Acres	5556	58.9	12.9	53.5	7/22	8.3
Advanta	AG2103	49.8	12.7	52.6	7/19	8.5
Dyna-Gro	M75GB39	49.0	12.8	53.1	7/22	9.3
Triumph	TR463	41.8	12.6	50.3	7/21	7.3
AVERAGES		75.4	13.0	53.4	7/20	8.6
L.S.D. (.10)		20.0				
C.V. (%)		19.1				
STD. ERR. OF ENTRY MEAN		8.3	DF=28			

Soil Series Cecil Sandy Loam
 Soil pH 6.8
 Previous Crop Soybean
 Row Width 30 INCHES
 Planting May 16
 Irrigation None
 Fertilizer Nitrogen 120 lbs. with Atrazine and 2, 4D (June 24)
 Herbicides Bicep II Magnum 1.6 qt/A (May 16)
 Insecticides Chlorpyrifos 4E at 1qt/ac (August 1)
 Fungicides None
 Desiccation None
 Harvest Date September 5

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	4.6	9.8	14.5	6.7	2.0	0.9	38.5
Avg. Temp. (°F)	67	76	77	75	72	62	71
Min. Temp. (°F)	57	67	70	69	63	52	63
Max. Temp. (°F)	77	86	86	84	82	73	81

TABLE 39. FULL SEASON GRAIN SORGHUM HYBRID PERFORMANCE
MEDIUM MATURING DRY LAND TRIAL - PIEDMONT:
SIMPSON RESEARCH AND EDUCATION CENTER, PENDLETON, SC.
2013 DATA

COMPANY OR BRAND NAME	HYBRID	YIELD (BU/A)	HARVEST MOISTURE (PCT)	TEST WEIGHT (LB/BU)	50% HEADED (DATE)	HEAD EXTENSION (IN)
Gayland Ward	GW9320	114.4	14.2	59.2	7/22	7.2
Dekalb	DKS54-00	109.5	13.8	57.1	7/21	11.2
Dekalb	DKS44-20	108.3	13.7	55.1	7/22	7.3
Pioneer	84P80	107.9	13.3	56.4	7/20	7.0
Dekalb	DKS53-67	105.0	13.7	59.4	7/21	7.8
Dyna-Gro	M77GB52	101.8	13.6	58.2	7/20	9.3
Dekalb	DKS51-01	101.4	14.0	57.1	7/20	9.3
Sorghum Partners	NK6638	100.7	13.6	58.4	7/20	9.7
Pioneer	83G17	99.7	14.0	57.0	7/23	6.8
Dekalb	DKS49-45	96.9	13.5	55.6	7/22	8.2
Gayland Ward	GW9417	93.2	14.1	58.2	7/21	6.3
Golden Acres	3552	82.1	12.7	52.9	7/21	8.2
Sorghum Partners	NK7633	81.2	14.0	52.4	7/22	9.0
Advanta	AG3201	72.3	13.1	54.8	7/21	7.7
Golden Acres	5613	68.2	13.9	54.5	7/19	10.0
AVERAGES		96.2	13.7	56.4	7/21	8.3
L.S.D. (.10)		16.7				
C.V. (%)		12.5				
STD. ERR. OF ENTRY MEAN		6.9	DF=28			

Soil Series Cecil Sandy Loam
Soil pH 6.8
Previous Crop Soybean
Row Width 30 INCHES
Planting May 16
Irrigation None
Fertilizer Nitrogen 120 lbs. with Atrazine and 2, 4D (June 24)
Herbicides Bicep II Magnum 1.6 qt/A (May 16)
Insecticides Chlorpyrifos 4E at 1qt/ac (August 1)
Fungicides None
Desiccation None
Harvest Date September 5

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	4.6	9.8	14.5	6.7	2.0	0.9	38.5
Avg. Temp. (°F)	67	76	77	75	72	62	71
Min. Temp. (°F)	57	67	70	69	63	52	63
Max. Temp. (°F)	77	86	86	84	82	73	81

TABLE 40. FULL SEASON GRAIN SORGHUM HYBRID PERFORMANCE
 LATER MATURING DRY LAND TRIAL - PIEDMONT:
 SIMPSON RESEARCH AND EDUCATION CENTER, PENDLETON, SC.
 2013 DATA

COMPANY OR BRAND NAME	HYBRID	YIELD (BU/A)	HARVEST MOISTURE (PCT)	TEST WEIGHT (LB/BU)	50% HEADED (DATE)	HEAD EXTENSION (IN)
Dyna-Gro	765B	111.8	14.5	58.3	7/22	7.5
Sorghum Partners	NK8416	109.2	14.0	59.9	7/21	9.3
Sorghum Partners	SP7868	102.3	14.5	59.2	7/22	9.7
Sorghum Partners	NK8817	96.6	13.8	59.4	7/22	13.0
Triumph	TRX15401	95.3	14.9	58.8	7/24	8.3
Richardson	8433	90.8	13.4	54.5	7/22	7.3
Richardson	6173	83.4	13.3	55.7	7/24	9.3
Sorghum Partners	NK8828	74.5	13.2	56.9	7/25	8.5
Triumph	TR4941	71.9	13.2	53.9	7/21	7.5
Sorghum Partners	NK7829	69.0	13.1	57.2	7/23	9.8
Dyna-Gro	GX13661	64.5	12.9	53.6	7/23	9.0
Sorghum Partners	NK8831	58.1	12.8	53.6	7/24	7.7
Triumph	TRX85131	57.8	12.4	49.6	7/22	8.3
Triumph	TR481	46.9	12.8	54.2	7/23	9.7
Gayland Ward	GW9480	24.2	12.4	51.4	7/22	7.7
AVERAGES		77.1	13.4	55.8	7/23	8.8
L.S.D. (.10)		15.0				
C.V. (%)		14.0				
STD. ERR. OF ENTRY MEAN		6.2	DF=28			

Soil Series Cecil Sandy Loam
 Soil pH 6.8
 Previous Crop Soybean
 Row Width 30 INCHES
 Planting May 16
 Irrigation None
 Fertilizer Nitrogen 120 lbs. with Atrazine and 2, 4D (June 24)
 Herbicides Bicep II Magnum 1.6 qt/A (May 16)
 Insecticides Chlorpyrifos 4E at 1qt/ac (August 1)
 Fungicides None
 Desiccation None
 Harvest Date September 5

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	4.6	9.8	14.5	6.7	2.0	0.9	38.5
Avg. Temp. (°F)	67	76	77	75	72	62	71
Min. Temp. (°F)	57	67	70	69	63	52	63
Max. Temp. (°F)	77	86	86	84	82	73	81

TABLE 41. FULL SEASON GRAIN SORGHUM HYBRID PERFORMANCE
 EARLY MATURING DRY LAND TRIAL - PIEDMONT:
 BUSH RIVER JERSEYS, NEWBERRY, SC.
 2013 DATA

COMPANY OR BRAND NAME	HYBRID	YIELD (BU/A)	HARVEST MOISTURE (PCT)	TEST WEIGHT (LB/BU)	50% HEADED (DATE)	HEAD EXTENSION (IN)
Advanta	AG2115	60.6	13.7	58.3	-/ -	13.0
Triumph	TR424	59.0	13.4	54.9	-/ -	9.5
Golden Acres	5556	57.6	14.0	59.0	-/ -	10.5
Dyna-Gro	M75GB39	56.4	13.6	60.5	-/ -	10.0
Advanta	AG2103	55.9	14.0	60.3	-/ -	11.5
Deka1b	DKS38-88	48.8	14.6	59.3	-/ -	11.0
Deka1b	DKS37-07	48.1	13.8	59.1	-/ -	11.0
Pioneer	86G32	47.5	13.8	57.1	-/ -	9.5
Advanta	AG3101	46.7	14.6	59.7	-/ -	12.5
Advanta	AG2101	44.1	13.9	57.1	-/ -	10.5
Advanta	AG1401	43.0	13.8	58.8	-/ -	12.0
Triumph	TR438	40.3	13.4	57.4	-/ -	9.5
Pioneer	86P90	39.7	13.4	58.4	-/ -	6.0
Gayland Ward	XP9058	38.1	13.6	58.4	-/ -	11.5
Triumph	TR463	36.6	13.3	56.8	-/ -	8.0
AVERAGES		48.2	13.8	58.3	-/ -	10.4
L.S.D. (.10)		NS				
C.V. (%)		36.9				
STD. ERR. OF ENTRY MEAN		12.6	DF=14			

Soil Series HaB-Haven silt loam, Toa silty clay loam
 Soil pH 6.1
 Previous Crop Barley
 Row Width 30 INCHES
 Planting May 28
 Irrigation NONE
 Fertilizer N, 60lb/ac June
 Herbicides Bicep II Magnum 1.6 qts/ac May 28, Atrazine 1 qt/ac June
 Insecticides N/A
 Fungicides N/A
 Desiccation N/A
 Harvest Date September 12

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	1.4	1.8	2.0	4.7	1.3	0.6	11.8
Avg. Temp. (°F)	68	77	78	75	72	63	72
Min. Temp. (°F)	58	69	71	69	63	54	64
Max. Temp. (°F)	78	86	86	84	83	74	82

TABLE 42. FULL SEASON GRAIN SORGHUM HYBRID PERFORMANCE
MEDIUM MATURING DRY LAND TRIAL - PIEDMONT:
BUSH RIVER JERSEYS, NEWBERRY, SC.
2013 DATA

COMPANY OR BRAND NAME	HYBRID	YIELD (BU/A)	HARVEST MOISTURE (PCT)	TEST WEIGHT (LB/BU)	50% HEADED (DATE)	HEAD EXTENSION (IN)
Pioneer	84P80	78.9	13.8	60.2	-/ -	8.5
Sorghum Partners	NK6638	77.0	14.0	59.8	-/ -	9.5
Golden Acres	5613	76.7	13.8	59.1	-/ -	11.0
Dekalb	DKS53-67	73.8	14.1	60.0	-/ -	9.0
Dekalb	DKS51-01	73.0	13.6	59.5	-/ -	9.5
Dekalb	DKS49-45	70.9	14.3	59.3	-/ -	10.5
Dyna-Gro	M77GB52	68.1	13.8	58.9	-/ -	11.0
Advanta	AG3201	66.2	13.7	58.4	-/ -	10.0
Dekalb	DKS54-00	62.6	13.8	58.0	-/ -	10.0
Pioneer	83G17	61.6	14.5	57.9	-/ -	10.5
Dekalb	DKS44-20	55.9	14.4	59.4	-/ -	9.5
Gayland Ward	GW9417	54.2	15.0	58.6	-/ -	7.0
Golden Acres	3552	49.1	14.2	58.2	-/ -	9.5
Sorghum Partners	NK7633	46.9	14.3	58.3	-/ -	11.5
Gayland Ward	GW9320	46.5	14.7	60.2	-/ -	8.5
AVERAGES		64.1	14.1	59.0	-/ -	9.7
L.S.D. (.10)		11.7				
C.V. (%)		10.4				
STD. ERR. OF ENTRY MEAN		4.7	DF=14			

Soil Series HaB-Haven silt loam, Toa silty clay loam
Soil pH 6.1
Previous Crop Barley
Row Width 30 INCHES
Planting May 28
Irrigation None
Fertilizer N, 60 lb/ac June
Herbicides Bicep II Magnum 1.6 qt/ac May 28, Atrazine 1 qt/ac June
Insecticides N/A
Fungicides N/A
Desiccation N/A
Harvest Date September 12

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	1.4	1.8	2.0	4.7	1.3	0.6	11.8
Avg. Temp. (°F)	68	77	78	75	72	63	72
Min. Temp. (°F)	58	69	71	69	63	54	64
Max. Temp. (°F)	78	86	86	84	83	74	82

TABLE 43. FULL SEASON GRAIN SORGHUM HYBRID PERFORMANCE
 LATER MATURING DRY LAND TRIAL - PIEDMONT:
 BUSH RIVER JERSEYS, NEWBERRY, SC.
 2013 DATA

COMPANY OR BRAND NAME	HYBRID	YIELD (BU/A)	HARVEST MOISTURE (PCT)	TEST WEIGHT (LB/BU)	50% HEADED (DATE)	HEAD EXTENSION (IN)
Sorghum Partners	NK8817	71.0	14.0	60.4	-/ -	14.5
Triumph	TRX15401	70.1	13.6	60.0	-/ -	8.0
Dyna-Gro	765B	68.6	14.0	60.5	-/ -	10.5
Triumph	TR4941	67.6	13.4	58.0	-/ -	8.0
Triumph	TR481	65.3	13.9	59.1	-/ -	12.5
Sorghum Partners	SP7868	64.4	14.0	60.3	-/ -	13.0
Sorghum Partners	NK7829	64.0	13.7	59.1	-/ -	10.0
Richardson	6173	63.6	13.8	58.9	-/ -	11.5
Dyna-Gro	GX13661	62.0	13.6	56.6	-/ -	9.5
Richardson	8433	59.9	14.2	58.0	-/ -	8.5
Sorghum Partners	NK8416	51.0	13.7	60.4	-/ -	10.5
Sorghum Partners	NK8831	48.0	13.5	59.6	-/ -	7.5
Gayland Ward	GW9480	46.7	13.3	59.0	-/ -	9.0
Sorghum Partners	NK8828	44.3	13.8	57.9	-/ -	10.5
Triumph	TRX85131	40.7	13.1	57.2	-/ -	11.5
AVERAGES		59.1	13.7	59.0	-/ -	10.3
L.S.D. (.10)		17.5				
C.V. (%)		16.8				
STD. ERR. OF ENTRY MEAN		7.0	DF=14			

Soil Series HaB-Haven silt loam, Toa silty clay loam
 Soil pH 6.1
 Previous Crop Barley
 Row Width 30 INCHES
 Planting May 28
 Irrigation NONE
 Fertilizer N, 60 lb/ac June
 Herbicides Bicep II Magnum 1.6 qt/ac May 28, Atrazine 1 qt/ac June
 Insecticides N/A
 Fungicides N/A
 Desiccation N/A
 Harvest Date September 12

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	1.4	1.8	2.0	4.7	1.3	0.6	11.8
Avg. Temp. (°F)	68	77	78	75	72	63	72
Min. Temp. (°F)	58	69	71	69	63	54	64
Max. Temp. (°F)	78	86	86	84	83	74	82

TABLE 44. FULL SEASON GRAIN SORGHUM HYBRID PERFORMANCE
 EARLY MATURING DRY LAND TRIAL - COASTAL PLAIN:
 EDISTO RESEARCH AND EDUCATION CENTER, BLACKVILLE, SC.
 2013 DATA

COMPANY OR BRAND NAME	HYBRID	YIELD (BU/A)	HARVEST MOISTURE (PCT)	TEST WEIGHT (LB/BU)	50% HEADED (DATE)	HEAD EXTENSION (IN)
Advanta	AG2101	43.2	17.8	56.5	-/ -	-
Dyna-Gro	M75GB39	41.5	17.1	57.0	-/ -	-
Advanta	AG3101	35.7	18.4	57.6	-/ -	-
Triumph	TR463	35.0	17.7	56.3	-/ -	-
Dekalb	DKS37-07	34.8	17.1	55.9	-/ -	-
Advanta	AG2115	31.3	17.8	55.0	-/ -	-
Triumph	TR438	31.0	17.1	56.3	-/ -	-
Pioneer	86G32	30.9	17.5	55.0	-/ -	-
Golden Acres	5556	30.8	19.3	55.9	-/ -	-
Pioneer	86P90	29.4	16.8	55.5	-/ -	-
Advanta	AG2103	28.0	18.8	55.9	-/ -	-
Dekalb	DKS38-88	27.7	21.3	54.4	-/ -	-
Advanta	AG1401	26.9	16.9	54.6	-/ -	-
Triumph	TR424	23.6	15.7	52.5	-/ -	-
Gayland Ward	XP9058	18.2	18.9	55.0	-/ -	-
AVERAGES		31.2	17.9	55.6	-/ -	-
L.S.D. (.10)		9.3				
C.V. (%)		21.4				
STD. ERR. OF ENTRY MEAN		3.8	DF=28			

Soil Series Faceville loamy sand
 Soil pH 6.1
 Previous Crop Soybeans
 Row Width 38 in
 Planting May 30
 Irrigation None
 Fertilizer 33 lbs N, starter
 Herbicides Bicep II Magnum 1.8 pts/A (May 30);
 Insecticides Karate Z 1.5 pts/A (mid-bloom)
 Fungicides Headline 12 oz/A (mid-bloom)
 Desiccation None
 Harvest Date September 25

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	2.5	6.9	9.1	4.8	1.5	0.2	24.9
Avg. Temp. (°F)	69	78	79	77	74	65	74
Min. Temp. (°F)	58	69	71	69	63	54	64
Max. Temp. (°F)	81	87	86	85	84	77	83

TABLE 45. FULL SEASON GRAIN SORGHUM HYBRID PERFORMANCE
MEDIUM MATURING DRY LAND TRIAL – COASTAL PLAIN:
EDISTO RESEARCH AND EDUCATION CENTER, BLACKVILLE, SC.
2013 DATA

COMPANY OR BRAND NAME	HYBRID	YIELD (BU/A)	HARVEST MOISTURE (PCT)	TEST WEIGHT (LB/BU)	50% HEADED (DATE)	HEAD EXTENSION (IN)
Pioneer	83G17	43.6	20.0	56.3	-/ -	-
Advanta	AG3201	42.5	16.6	56.3	-/ -	-
Dekalb	DKS51-01	41.5	20.6	56.3	-/ -	-
Dekalb	DKS49-45	41.4	17.5	56.3	-/ -	-
Sorghum Partners	NK6638	39.1	17.2	58.0	-/ -	-
Golden Acres	3552	39.0	17.4	56.3	-/ -	-
Dyna-Gro	M77GB52	38.6	17.4	58.0	-/ -	-
Dekalb	DKS44-20	36.3	18.7	56.3	-/ -	-
Dekalb	DKS53-67	36.0	18.1	57.6	-/ -	-
Dekalb	DKS54-00	34.9	18.2	56.3	-/ -	-
Sorghum Partners	NK7633	34.6	17.0	55.9	-/ -	-
Gayland Ward	GW9320	33.8	17.1	58.5	-/ -	-
Pioneer	84P80	31.4	17.2	56.3	-/ -	-
Gayland Ward	GW9417	29.8	17.8	58.2	-/ -	-
Golden Acres	5613	29.6	16.3	56.7	-/ -	-
AVERAGES		36.8	17.8	56.9	-/ -	-
L.S.D. (.10)		NS				
C.V. (%)		17.3				
STD. ERR. OF ENTRY MEAN		3.7	DF=28			

Soil Series Vaucluse loamy sand
Soil pH 6.1
Previous Crop Soybeans
Row Width 38 in
Planting May 30
Irrigation None
Fertilizer 33 lbs N, starter
Herbicides Bicep II Magnum 1.8 pts/A (May 30)
Insecticides Karate Z 1.5 pts/A (mid-bloom)
Fungicides Headline 12 oz/A (mid-bloom)
Desiccation None
Harvest Date September 25

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	2.5	6.9	9.1	4.8	1.5	0.2	24.9
Avg. Temp. (°F)	69	78	79	77	74	65	74
Min. Temp. (°F)	58	69	71	69	63	54	64
Max. Temp. (°F)	81	87	86	85	84	77	83

TABLE 46. FULL SEASON GRAIN SORGHUM HYBRID PERFORMANCE
 LATER MATURING DRY LAND TRIAL – COASTAL PLAIN:
 EDISTO RESEARCH AND EDUCATION CENTER, BLACKVILLE, SC.
 2013 DATA

COMPANY OR BRAND NAME	HYBRID	YIELD (BU/A)	HARVEST MOISTURE (PCT)	TEST WEIGHT (LB/BU)	50% HEADED (DATE)	HEAD EXTENSION (IN)
Triumph	TRX15401	59.4	20.2	57.6	-/ -	-
Richardson	6173	54.9	16.9	55.9	-/ -	-
Sorghum Partners	SP7868	49.8	17.0	58.9	-/ -	-
Sorghum Partners	NK7829	45.1	19.4	57.6	-/ -	-
Triumph	TR481	43.7	17.1	58.0	-/ -	-
Richardson	8433	42.2	15.8	55.0	-/ -	-
Dyna-Gro	GX13661	42.1	16.0	54.6	-/ -	-
Triumph	TR4941	42.1	16.3	55.7	-/ -	-
Sorghum Partners	NK8831	41.2	16.2	56.3	-/ -	-
Dyna-Gro	765B	40.1	17.7	58.5	-/ -	-
Sorghum Partners	NK8416	37.8	16.8	58.0	-/ -	-
Sorghum Partners	NK8817	36.6	19.5	57.6	-/ -	-
Sorghum Partners	NK8828	28.6	19.5	55.9	-/ -	-
Gayland Ward	GW9480	25.3	17.1	56.7	-/ -	-
Triumph	TRX85131	19.8	15.7	56.3	-/ -	-
AVERAGES		40.6	17.4	56.8	-/ -	-
L.S.D. (.10)		5.8				
C.V. (%)		10.4				
STD. ERR. OF ENTRY MEAN		2.4	DF=28			

Soil Series Vaucluse loamy sand
 Soil pH 6.1
 Previous Crop Soybeans
 Row Width 38 in
 Planting May 30
 Irrigation None
 Fertilizer 33 lbs N, starter
 Herbicides Bicep II Magnum 1.8 pts/A (May 30);
 Insecticides Karate Z 1.5 pts/A (mid-bloom)
 Fungicides Headline 12 oz/A (mid-bloom)
 Desiccation None
 Harvest Date September 25

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	2.5	6.9	9.1	4.8	1.5	0.2	24.9
Avg. Temp. (°F)	69	78	79	77	74	65	74
Min. Temp. (°F)	58	69	71	69	63	54	64
Max. Temp. (°F)	81	87	86	85	84	77	83

TABLE 47. GRAIN SORGHUM HYBRID PERFORMANCE - DRY LAND TRIAL
 LATE PLANTED AFTER SMALL GRAINS - EARLY MATURING HYBRIDS
 PIEDMONT: SIMPSON RESEARCH AND EDUCATION CENTER, PENDLETON, SC.
 2013 DATA

COMPANY OR BRAND NAME	HYBRID	YIELD (BU/A)	HARVEST MOISTURE (PCT)	TEST WEIGHT (LB/BU)	50% HEADED (DATE)	HEAD EXTENSION (IN)	HEAD LODGING (*)
Advanta	AG1401	108.4	14.3	53.2	8/31	9.7	1.0
Advanta	AG2115	107.8	15.5	55.2	8/31	8.0	0.0
Dekalb	DKS38-88	67.2	14.7	51.3	9/ 1	9.0	0.3
Sorghum Partners	KS310	60.1	13.3	48.8	8/27	7.7	2.7
Sorghum Partners	SP3425	50.1	12.8	36.9	8/29	6.0	1.3
Sorghum Partners	K35-Y5	32.2	12.4	44.4	8/30	6.0	3.0
Dekalb	DKS37-07	28.2	12.7	47.3	8/31	6.3	1.0
Richardson	49473	20.6	12.5	50.7	8/28	9.0	5.0
Dyna-Gro	M75GB39	17.5	11.9	42.6	9/ 5	7.0	2.3
Advanta	AG2103	14.8	11.6	43.0	9/ 2	8.7	4.0
AVERAGES		50.7	13.2	47.3	10/31	7.7	2.1
L.S.D. (.10)		19.7					
C.V. (%)		27.5					
STD. ERR. OF ENTRY MEAN		8.0		DF=18			

(*) LODGING RATING 0=ALL HEADS STANDING 9=ALL HEADS DOWN

Soil Series Cecil Sandy Loam
 Soil pH 6.2
 Previous Crop Small Grain
 Row Width 30 INCHES
 Planting June 25
 Irrigation None
 Fertilizer Nitrogen 120 lbs/A; Atrazine and 2,4D (July 24)
 Herbicides Bicep II Magnum 1.6 qt/A + Round-up (at planting)
 Insecticides None
 Fungicides None
 Desiccation None
 Harvest Date OCT 31

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	4.6	9.8	14.5	6.7	2.0	0.9	38.5
Avg. Temp. (°F)	67	76	77	75	72	62	71
Min. Temp. (°F)	57	67	70	69	63	52	63
Max. Temp. (°F)	77	86	86	84	82	73	81

TABLE 48. GRAIN SORGHUM HYBRID PERFORMANCE - DRY LAND TRIAL
 LATE PLANTED AFTER SMALL GRAINS - LATE MATURING HYBRIDS
 PIEDMONT: SIMPSON RESEARCH AND EDUCATION CENTER, PENDLETON, SC.
 2013 DATA

COMPANY OR BRAND NAME	HYBRID	YIELD (BU/A)	HARVEST MOISTURE (PCT)	TEST WEIGHT (LB/BU)	50% HEADED (DATE)	HEAD EXTENSION (IN)	HEAD LODGING (*)
Dyna-Gro	M77GB52	95.6	17.0	53.3	9/ 3	8.7	0.0
Richardson	92123	75.3	16.9	54.3	9/ 1	9.0	0.0
Dekalb	DKS49-45	49.9	14.7	44.4	9/ 2	9.0	0.0
Advanta	AG3101	48.1	14.4	54.7	8/30	11.3	3.0
Dekalb	DKS44-20	45.6	14.4	45.7	9/ 3	6.7	0.0
Advanta	AG3201	42.7	13.8	48.4	9/ 1	7.0	1.3
Golden Acres	3552	40.2	13.1	45.1	9/ 1	7.7	0.3
Golden Acres	5613	37.5	13.4	48.3	9/ 1	11.0	4.0
Dyna-Gro	GX13661	36.0	13.4	43.3	9/ 5	8.0	0.0
Advanta	AG2101	29.8	13.0	45.7	9/ 1	7.7	2.3
Golden Acres	5556	19.1	11.9	42.5	9/ 5	9.0	1.7
AVERAGES		47.3	14.2	47.8	9/ 2	8.6	1.2
L.S.D. (.10)		11.7					
C.V. (%)		17.6					
STD. ERR. OF ENTRY MEAN		4.8	DF=20				

(*) LODGING RATING 0=ALL HEADS STANDING 9=ALL HEADS DOWN

Soil Series Cecil Sandy Loam
 Soil pH 6.2
 Previous Crop Small Grain
 Row Width 30 INCHES
 Planting June 25
 Irrigation None
 Fertilizer Nitrogen 120 lbs/A; Atrazine and 2,4D (July 24)
 Herbicides Bicep II Magnum 1.6 qt/A + Round-up (at planting)
 Insecticides None
 Fungicides None
 Desiccation None
 Harvest Date OCT 31

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	4.6	9.8	14.5	6.7	2.0	0.9	38.5
Avg. Temp. (°F)	67	76	77	75	72	62	71
Min. Temp. (°F)	57	67	70	69	63	52	63
Max. Temp. (°F)	77	86	86	84	82	73	81

TABLE 49. GRAIN SORGHUM HYBRID PERFORMANCE - DRY LAND TRIAL
 LATE PLANTED AFTER SMALL GRAINS - EARLY MATURING HYBRIDS
 EDISTO RESEARCH AND EDUCATION CENTER, BLACKVILLE, SC.
 2013 DATA

COMPANY OR BRAND NAME	HYBRID	YIELD (BU/A)	HARVEST MOISTURE (PCT)	TEST WEIGHT (LB/BU)	50% HEADED (DATE)	HEAD EXTENSION (IN)
Dyna-Gro	M75GB39	88.8	16.9	61.2	-/ -	-
Advanta	AG2103	79.3	16.3	61.2	-/ -	-
Sorghum Partners	K35-Y5	77.4	15.8	57.8	-/ -	-
Advanta	AG2115	76.7	17.1	60.4	-/ -	-
Dekalb	DKS38-88	76.3	16.8	62.1	-/ -	-
Sorghum Partners	KS310	64.1	15.0	58.5	-/ -	-
Sorghum Partners	SP3425	56.3	15.7	60.4	-/ -	-
Dekalb	DKS37-07	54.1	16.1	61.2	-/ -	-
Advanta	AG1401	47.9	15.3	60.4	-/ -	-
AVERAGES		69.0	16.1	60.3	-/ -	-
L.S.D. (.10)		14.9				
C.V. (%)		15.1				
STD. ERR. OF ENTRY MEAN		6.0	DF=16			

Soil Series Vaucluse loamy sand
 Soil pH 5.9
 Previous Crop Soybean/Oats
 Row Width 38 in
 Planting July 2
 Irrigation None
 Fertilizer 33 lbs N, starter + 50 lbs at layby
 Herbicides Bicep II Magnum 1.8 pts/A (at planting); Aatrex 1 lb/A and Huskie
 15 oz/A (Aug.6)
 Insecticides Karate Z 1.5 pts/A (mid-bloom); Lannate 1.5 pts/A (mid-bloom)
 Fungicides Headline 12 oz/A (mid-bloom)
 Desiccation Defol 5 lbs/ac
 Harvest Date November 11

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	2.5	6.9	9.1	4.8	1.5	0.2	24.9
Avg. Temp. (°F)	69	78	79	77	74	65	74
Min. Temp. (°F)	58	69	71	69	63	54	64
Max. Temp. (°F)	81	87	86	85	84	77	83

Table 50. GRAIN SORGHUM HYBRID PERFORMANCE - DRY LAND TRIAL
 LATE PLANTED AFTER SMALL GRAINS - LATE MATURING HYBRIDS
 EDISTO RESEARCH AND EDUCATION CENTER, BLACKVILLE, SC.
 2013 DATA

COMPANY OR BRAND NAME	HYBRID	YIELD (BU/A)	HARVEST MOISTURE (PCT)	TEST WEIGHT (LB/BU)	50% HEADED (DATE)	HEAD EXTENSION (IN)
Dekalb	DKS49-45	106.5	16.9	60.4	-/ -	-
Dyna-Gro	GX13661	104.5	16.2	59.5	-/ -	-
Dekalb	DKS44-20	92.6	16.4	61.2	-/ -	-
Golden Acres	5613	81.6	16.1	60.4	-/ -	-
Advanta	AG2101	77.6	16.6	58.9	-/ -	-
Dyna-Gro	M77GB52	77.4	16.0	59.3	-/ -	-
Golden Acres	5556	73.0	16.3	62.1	-/ -	-
Advanta	AG3201	69.3	16.2	59.7	-/ -	-
Golden Acres	3552	64.0	16.3	59.5	-/ -	-
Richardson	92123	63.4	16.2	60.4	-/ -	-
Advanta	AG3101	56.6	16.8	60.4	-/ -	-
AVERAGES		78.8	16.4	60.2	-/ -	-
L.S.D. (.10)		8.0				
C.V. (%)		7.2				
STD. ERR. OF ENTRY MEAN		3.3	DF=20			

Soil Series Vaucluse loamy sand
 Soil pH 5.9
 Previous Crop Soybean/Oats
 Row Width 38 in
 Planting July 2
 Irrigation None
 Fertilizer 33 lbs N, starter + 50 lbs at layby
 Herbicides Bicep II Magnum 1.8 pts/A (at planting); Aatrex 1 lb/A and Huskie
 15 oz/A (Aug.6)
 Insecticides Karate Z 1.5 pts/A (mid-bloom); Lannate 1.5 pts/A (mid-bloom)
 Fungicides Headline 12 oz/A (mid-bloom)
 Desiccation Defol 5 lbs/ac
 Harvest Date November 11

Weather Information

	May	June	July	August	September	October	Total
Precipitation (in.)	2.5	6.9	9.1	4.8	1.5	0.2	24.9
Avg. Temp. (°F)	69	78	79	77	74	65	74
Min. Temp. (°F)	58	69	71	69	63	54	64
Max. Temp. (°F)	81	87	86	85	84	77	83