

Performance of Grain Sorghum Hybrids in Louisiana, 2007

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Performance of grain sorghum hybrids is annually evaluated by Louisiana Agricultural Experiment Station (LAES) researchers. The purpose of these trials is to provide to Louisiana growers, seedsmen, county agents of the Louisiana Cooperative Extension Service (LCES) and other interested individuals and organizations with unbiased performance data for commercial grain sorghum hybrids submitted for evaluation by private agencies. Results from these trials are used by the LCES for recommending hybrids.

The cooperating LAES units in 2007 were: Dean Lee Research Station, Alexandria; Central Research Station, Baton Rouge; Red River Research Station, Bossier City; Rice Research Station, Crowley; Northeast Research Station, St. Joseph; and Northeast Research Station-Macon Ridge Branch, Winnsboro.

PROCEDURES

In 2007, 20 grain sorghum hybrids were entered in the LAES yield trials. Soil type, cultural practices, location summaries and weather graphs are listed prior to data tables for each location. In weather graphs, maximum and minimum temperatures are weekly averages and rainfall weekly totals. Trials were not irrigated, except at St. Joseph, where both irrigated and non-irrigated trials were conducted. Seed were treated with Concept and Gaucho and recommended LSU AgCenter cultural practices were followed at each location.

The experimental design at each location was a randomized complete block design with four replications. Traits measured and rating scales are listed in Table 1. Analysis of variance and least significant differences (LSD) were computed using SAS (Statistical Analysis System). We used the protected F-test, which means LSD's were calculated only if differences among hybrids existed at the 90% confidence level. If differences were significant, an LSD at the 10% probability level was calculated. If the LSD(0.10) for yield in

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a trial is 400 lb/acre, there is a 10% chance that two hybrids with a reported yield difference of 400 lb/acre are genetically equal and a 90% probability they have differences in genetic potential in that particular environment. LSD values are influenced by how well soil fertility, stand establishment, plot length, harvest efficiency and other variables are controlled and by number of replications for each hybrid or treatment. The letters NS are used in the text and tables to indicate lack of significance (**not significantly different**) at the 10% probability level. The coefficient of variation (CV) reflects the magnitude of experimental error (random variation not accounted for by hybrids and replications) in relation to the trial mean. A high CV means that relative differences among hybrids were not consistent among replications, which reduces the precision of a test.

Table 1. Traits and rating scales for LAES grain sorghum performance trials.

| Trait | Abbreviation | Description |
|--------------------|---------------------|--|
| Yield | Yield | Grain yield, lb/acre |
| Grain moisture | Grain mst | Grain moisture at harvest, % |
| Test weight | Test wt | Volume weight of grain, lb/bu |
| Heading date | Mid-head | Date of head emergence in 50% of plants, days after planting (DAP) |
| Plant height | Pl ht | Plant height from ground to top of head, inches (in) |
| Head exertion | Head exert | Distance between flag leaf and base of head, inches (in) |
| Head type | Head type | Head type is a measure of head architecture, with ratings of 1-5; 1-compact, 3-intermediate, and 5-open |
| Lodging | Lo | Lodging is an estimate of plants lodged that could not be harvested, % |
| Anthracnose Blight | Anth Score | Rating of anthracnose symptoms on foliage and stems; where a '0' indicates none and a '9' indicates severe symptoms. |
| Head Blight | Head Blight | Rating of Fusarium Head Blight symptoms; where '0' indicates no disease and a '9' indicates severe symptoms. |
| Midge damage | Midge | Average percent (%) of head damaged. |
| Bird damage | Bird | Average percent (%) of head damaged |
| Head mold | Mold | Average percent (%) of head affected with black mold |

RESULTS

Yield data and other agronomic data for each location are presented in Tables 2-8. A location summary, soil type, cultural practices and weather information are listed prior to data tables for each location. Yield summary across Louisiana for 2006 is presented in Table 9 and participating seed companies are listed in Table 10.

For additional information on grain sorghum trials, please contact Dr. Rick Mascagni, Northeast Research Station, P.O. Box 438, St. Joseph, LA 71366 (Ph: 318-766-3769; Fax: 318-766-4278; e-mail: hmascagni@agcenter.lsu.edu); or the coordinator at a specific location (Dr. Dustin Harrell, Rice Research Station, Crowley, Ph: 337-788-7531, Fax: 337-788-7553, e:mail: dharrell@agcenter.lsu.edu; Dr. Steve Moore, Dean Lee Research Station, Alexandria; Ph: 318-473-6524, Fax: 318-473-6535, e:mail: smoore@agcenter.lsu.edu; Mr. Jim Hayes, Red River Research Station, Bossier City; Ph: 318-741-7430, Fax 318-741-7433, e:mail: jhayes@agcenter.lsu.edu; Dr. Steve Harrison, Central Station, Baton Rouge; Ph:225-578-1308, Fax 225-578-1403, e:mail:sharrison@agcenter.lsu.edu)

Table 2. Yield performance of grain sorghum hybrids in the hybrid performance trial at Alexandria, 2007.

| Brand/hybrid | Yield | | Grain mst % | Test wt lb/bu | Mid- head DAP | Plant ht in | Head type 1-5 | Head exert in |
|---------------------|--------------|-------------|-------------------|---------------------|---------------------|-------------------|---------------------|---------------------|
| | 2007 | 2-yr avg | | | | | | |
| | lb/acre | | | | | | | |
| Dyna-Gro DG751B | 5,401 | 6,333 | 14.3 | 59.0 | 73 | 77 | 1 | 2 |
| Dekalb DKS53-67 | 5,358 | - | 17.3 | 58.8 | 69 | 85 | 3 | 5 |
| Dekalb DKS37-07 | 5,166 | 6,262 | 14.7 | 57.6 | 68 | 76 | 5 | 4 |
| Dyna-Gro DG780B | 5,161 | 6,140 | 15.3 | 60.2 | 73 | 87 | 1 | 2 |
| Pioneer brand 84G62 | 5,147 | 6,671 | 14.1 | 59.2 | 70 | 76 | 4 | 3 |
| Dyna-Gro DG758B | 5,087 | - | 17.4 | 57.5 | 69 | 69 | 3 | 4 |
| NC+ 7R34 | 5,053 | - | 15.1 | 59.4 | 70 | 92 | 3 | 6 |
| Terral TV9421 | 5,024 | 6,127 | 14.5 | 57.8 | 70 | 82 | 3 | 3 |
| Terral TV96H81 | 5,006 | 6,137 | 14.3 | 59.7 | 73 | 77 | 1 | 1 |
| Dyna-Gro DG754B | 4,939 | - | 13.4 | 55.7 | 70 | 78 | 5 | 5 |
| Asgrow A571 | 4,861 | 6,064 | 14.2 | 55.3 | 70 | 85 | 4 | 8 |
| Terral TV1050 | 4,852 | 5,657 | 14.8 | 58.4 | 71 | 83 | 1 | 4 |
| Asgrow A603 | 4,786 | - | 13.4 | 57.9 | 70 | 88 | 5 | 7 |
| Terral TV93S72 | 4,741 | 5,808 | 13.4 | 57.3 | 70 | 76 | 3 | 6 |
| Terral TV96H91 | 4,657 | 5,945 | 14.0 | 57.7 | 69 | 80 | 5 | 7 |
| Dekalb DKS54-00 | 4,584 | 6,335 | 17.8 | 56.8 | 73 | 95 | 4 | 8 |
| NC+ 7R83 | 4,527 | 5,906 | 15.2 | 56.2 | 72 | 79 | 3 | 7 |
| NC+ 8R18 | 4,497 | - | 15.8 | 56.5 | 72 | 89 | 2 | 7 |
| NC+ 7B51 | 4,199 | 5,553 | 14.1 | 55.5 | 69 | 78 | 4 | 3 |
| Golden Acres GA3799 | 4,073 | - | 19.5 | 56.4 | 73 | 88 | 3 | 5 |
| Average | 4,856 | | 15.1 | 57.6 | 71 | 82 | 3 | 5 |
| CV, % | 8 | | 5 | 2 | 2 | 5 | 22 | 51 |
| LSD (0.10) | 451 | | 0.8 | 1.6 | 2 | 5 | 2 | 3 |

Grain Sorghum Performance at the Central Research Station - Baton Rouge

Location Summary

Grain yields were excellent, ranging from 5,647 lb/a for Golden Acres GA3799 to 7,024 lb/a for Dekalb DKS53-67 with a trial average of 6,368 lb/a (Table 3). Seventeen of the twenty hybrids tested had yields greater than 6,000 lb/a. There were thirteen hybrids with two-year averages. Rainfall was well distributed throughout May, June, and July (see below). Anthracnose ratings ranged from 0 for DynaGro DG758B to 8 for Pioneer brand 84G62. Although symptoms were severe, in some cases, there was little affect on grain yield.

Soil Type.....Commerce silt loam
 Row Spacing.....30 inches
 Seeding Rate.....5 seed/ft
 Fertilization.....70/12/12
 Herbicides.....Pre: Atrazine @ 1.5 qt/a
 Insecticides.....Karate-Z @ 2 oz/a (2 applns at heading)
 Previous Crop.....Winter oat cover crop
 Planting Date.....April 22
 Harvest Date.....August 6

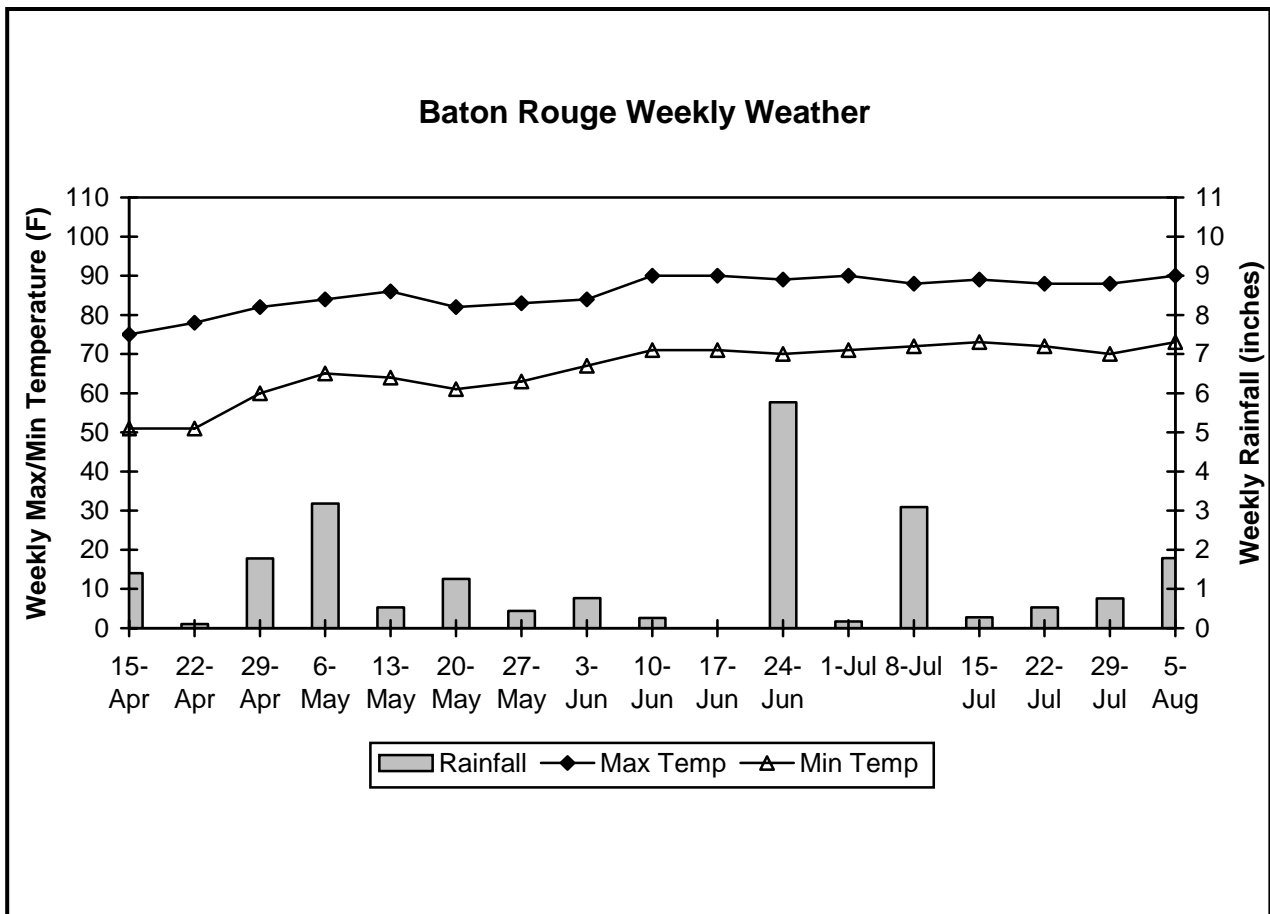


Table 3. Yield performance of grain sorghum hybrids in the hybrid performance trial at Baton Rouge, 2007.

| Brand/hybrid | Yield | | Grain mst | Test wt | Mid- head | Plant ht | Head type | Head exert | Anth score |
|---------------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|---------------|---------------|
| | 2007 | 2-yr avg | | | | | | | |
| | lb/acre | | % | lb/bu | DAP | in | 1-5 | in | 0-9 |
| Dekalb DKS53-67 | 7,024 | - | 20.0 | 58.6 | 65 | 60 | 3 | 5 | 3 |
| Dekalb DKS54-00 | 6,954 | 4,946 | 20.9 | 55.7 | 64 | 60 | 2 | 8 | 3 |
| Dyna-Gro DG751B | 6,706 | 5,780 | 15.2 | 57.5 | 63 | 56 | 1 | 5 | 7 |
| Pioneer brand 84G62 | 6,663 | 5,624 | 19.2 | 57.9 | 67 | 57 | 1 | 3 | 8 |
| Terral TV96H81 | 6,605 | 5,936 | 15.9 | 57.8 | 63 | 58 | 3 | 6 | 7 |
| Dyna-Gro DG780B | 6,588 | 5,725 | 18.5 | 58.1 | 67 | 59 | 1 | 4 | 4 |
| Terral TV9421 | 6,585 | 5,781 | 15.6 | 55.9 | 58 | 55 | 5 | 7 | 4 |
| NC+ 7R34 | 6,562 | - | 16.6 | 57.9 | 62 | 58 | 3 | 6 | 3 |
| NC+ 8R18 | 6,392 | - | 19.9 | 56.0 | 65 | 63 | 2 | 7 | 3 |
| Dyna-Gro DG758B | 6,389 | - | 20.8 | 55.6 | 62 | 54 | 2 | 4 | 0 |
| Terral TV1050 | 6,376 | 5,577 | 16.9 | 57.4 | 63 | 58 | 2 | 4 | 4 |
| Dekalb DKS37-07 | 6,247 | 5,420 | 17.6 | 56.1 | 58 | 54 | 3 | 6 | 3 |
| Asgrow A571 | 6,232 | 5,348 | 17.0 | 54.2 | 63 | 58 | 1 | 8 | 3 |
| Terral TV96H91 | 6,206 | 5,579 | 17.3 | 57.7 | 63 | 60 | 3 | 12 | 3 |
| Asgrow A603 | 6,199 | - | 15.2 | 56.4 | 62 | 60 | 5 | 6 | 3 |
| Terral TV93S72 | 6,110 | 5,607 | 14.9 | 55.5 | 59 | 51 | 3 | 8 | 4 |
| NC+ 7R83 | 6,103 | 5,218 | 18.4 | 54.7 | 63 | 57 | 3 | 7 | 4 |
| NC+ 7B51 | 5,981 | 5,619 | 17.1 | 55.6 | 61 | 54 | 1 | 6 | 7 |
| Dyna-Gro DG754B | 5,785 | - | 15.6 | 55.3 | 60 | 53 | 3 | 8 | 5 |
| Golden Acres GA3799 | 5,647 | - | 26.1 | 53.5 | 67 | 59 | 1 | 9 | 5 |
| Average | 6,368 | | 17.9 | 56.4 | 63 | 57 | 2 | 6 | 4 |
| CV, % | 5 | | 8 | 1 | 3 | 2 | 17 | 32 | 21 |
| LSD (0.10) | 354 | | 1.6 | 0.8 | 3 | 2 | 1 | 3 | 1 |

Grain Sorghum Performance at the Red River Research Station – Bossier City

Location Summary

Grain yields ranged from 4,273 lb/a for Golden Acres GA3799 to 5,819 lb/a for NC+ 7B51 with a trial average of 5,103 lb/a (Table 4). There are no two-year yield averages because there has been no data collected for this site since 2003. Rainfall was relatively well distributed in May, June, and July (see below). Mid-head dates ranged from 48 to 54 days after planting (DAP). These low mid-head dates were probably due to the relatively late planting date.

| | |
|--------------------|---|
| Soil Type..... | Moreland silty clay loam |
| Row Spacing..... | 40 inches |
| Seeding Rate..... | 5 seed/ft |
| Fertilization..... | 32-0-0 @ 140 lb N/a (6/11) |
| Herbicides..... | Permit @ 1 oz/a (5/21); Gramoxone @ 1.5 pt/a (6/8) post directed |
| Previous Crop..... | Soybeans |
| Planting Date..... | May 8 |
| Harvest Date..... | August 24 |

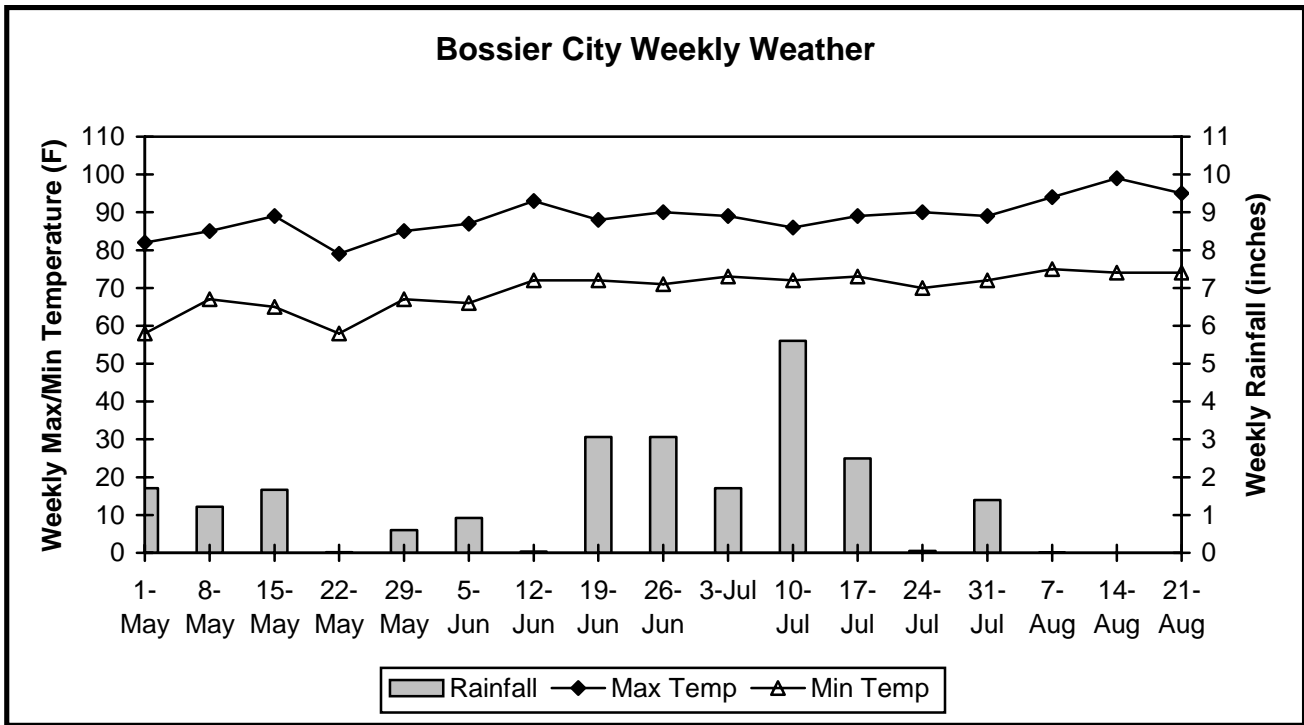


Table 4. Yield performance¹ of grain sorghum hybrids in the hybrid performance trial at Bossier City, 2007.

| Brand/hybrid | Yield | Grain mst | Test wt | Mid-head | Plant ht | Head type | Head exert | Bird |
|---------------------|--------------|-------------|-------------|-----------|-----------|-----------|------------|------------|
| | lb/acre | % | lb/bu | DAP | in | 1-5 | in | % |
| NC+ 7B51 | 5,819 | 14.4 | 59.0 | 51 | 45 | 2 | 7 | 5 |
| Pioneer brand 84G62 | 5,717 | 14.9 | 59.3 | 53 | 46 | 2 | 4 | 5 |
| Asgrow A571 | 5,468 | 14.2 | 58.5 | 53 | 44 | 2 | 7 | 0 |
| Dekalb DKS53-67 | 5,432 | 15.0 | 60.8 | 53 | 45 | 2 | 7 | 0 |
| Dyna-Gro DG780B | 5,285 | 14.1 | 60.6 | 52 | 47 | 1 | 4 | 0 |
| Terral TV93S72 | 5,275 | 14.4 | 58.9 | 51 | 44 | 2 | 6 | 0 |
| Dyna-Gro DG751B | 5,267 | 14.2 | 59.8 | 52 | 46 | 2 | 6 | 0 |
| Terral TV9421 | 5,257 | 14.5 | 57.5 | 51 | 45 | 3 | 7 | 5 |
| Terral TV96H91 | 5,149 | 14.5 | 60.7 | 53 | 46 | 2 | 8 | 0 |
| Dekalb DKS54-00 | 5,108 | 15.2 | 59.2 | 54 | 49 | 3 | 8 | 5 |
| NC+ 8R18 | 5,104 | 14.4 | 58.0 | 55 | 49 | 1 | 6 | 0 |
| Dyna-Gro DG758B | 5,061 | 13.9 | 59.7 | 51 | 43 | 2 | 6 | 0 |
| NC+ 7R83 | 5,051 | 14.4 | 56.5 | 54 | 43 | 2 | 5 | 0 |
| Asgrow A603 | 4,980 | 15.0 | 59.2 | 55 | 47 | 2 | 9 | 0 |
| NC+ 7R34 | 4,943 | 14.4 | 60.2 | 52 | 48 | 2 | 5 | 5 |
| Terral TV96H81 | 4,909 | 14.4 | 59.6 | 53 | 44 | 1 | 6 | 5 |
| Dyna-Gro DG754B | 4,706 | 14.4 | 59.2 | 53 | 44 | 2 | 10 | 5 |
| Terral TV1050 | 4,686 | 14.6 | 57.4 | 54 | 46 | 2 | 4 | 0 |
| Dekalb DKS37-07 | 4,380 | 14.5 | 58.9 | 48 | 44 | 2 | 6 | 5 |
| Golden Acres GA3799 | 4,273 | 17.9 | 56.6 | 56 | 46 | 3 | 5 | 20 |
| Average | 5,103 | 14.7 | 59.0 | 53 | 46 | 2 | 6 | 5 |
| CV, % | 9 | 2 | 2 | 3 | 5 | 22 | 41 | 392 |
| LSD (0.10) | 513 | 0.4 | 1.4 | 2 | 3 | 1 | 3 | 10 |

¹There is no two-year yield average because there has been no data collected since 2003.

Grain Sorghum Performance at the Rice Research Station- Crowley

Location Summary

Grain yields ranged from 3,639 lb/a for Dekalb DKS37-07 to 5,138 lb/a for Dekalb DKS5400 (Table 5). There seemed to be a good relationship for yield, bird damage, and mold. In general, as bird damage and mold increased, yields decreased. Test weights were low, ranging from 45.4 to 57.9 lb/bu with a trial average of only 53.8 lb/bu. On average, the lower test weights were associated with hybrids that had the highest incidence of mold.

| | |
|--------------------|--|
| Soil Type..... | Crowley silt loam |
| Row Spacing..... | 30 inches |
| Seeding Rate..... | 5 seed/ft |
| Fertilization..... | 8-24-24 @ 250 lb/a (5/10) 46-0-0 @ 90 lb/a (5/23) |
| Herbicides..... | Dual Magnum II @ 1.3 pt/a + Atrazine @ 3.5 pt/a (5/9) |
| Insecticides..... | Mustang Max @ 3 oz/a (5/18) Mustang Max @ 4 oz/a (7/23) |
| Previous Crop..... | fallow |
| Planting Date..... | April 20 |
| Harvest Date..... | August 8 |

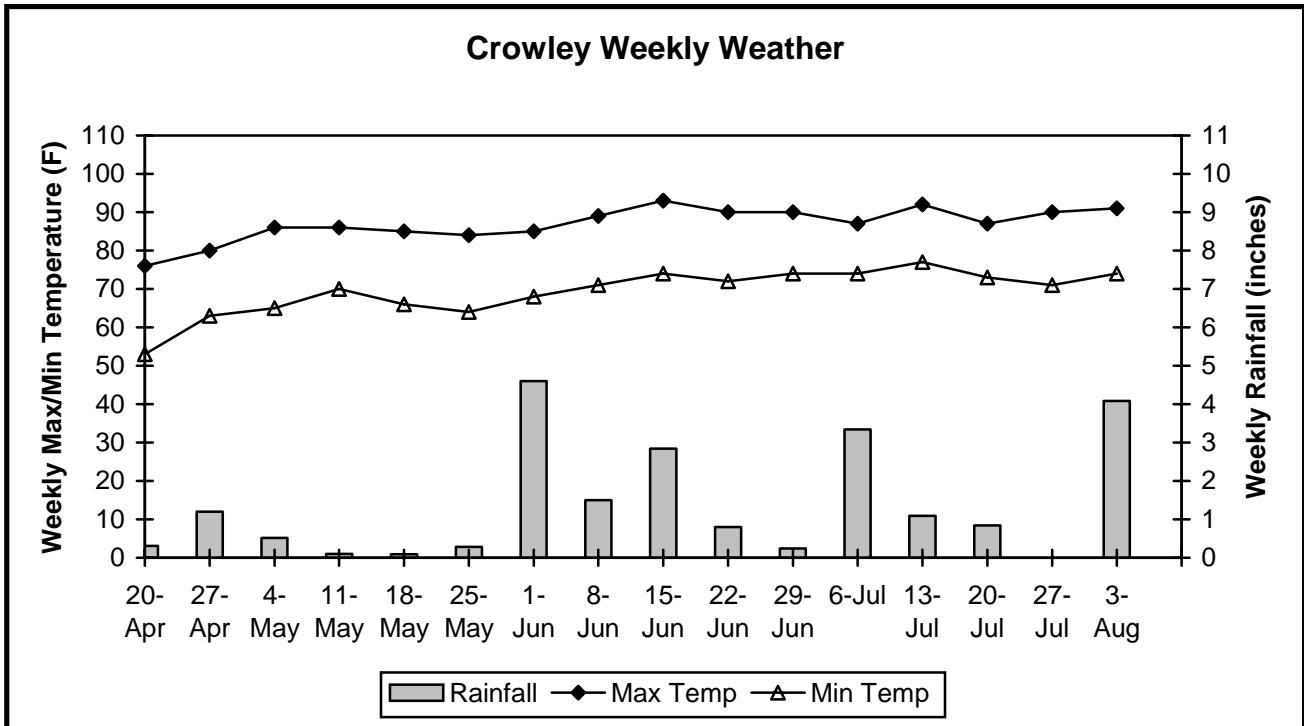


Table 5. Yield performance of grain sorghum hybrids in the hybrid performance trial at Crowley, 2007.

| Brand/hybrid | Yield | | Grain mst | Test wt | Mid- head | Plant ht | Head type | Head exert | Bird | Anth score | Mold |
|---------------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|---------------|-----------|---------------|-----------|
| | 2007 | 2-yr avg | | | | | | | | | |
| | lb/acre | % | | | | | | | | | |
| Dekalb DKS54-00 | 5,138 | 4,668 | 18.3 | 45.4 | 66 | 59 | 3 | 10 | 5 | 1 | 5 |
| Pioneer brand 84G62 | 5,059 | 4,811 | 17.1 | 57.6 | 61 | 57 | 3 | 8 | 10 | 3 | 10 |
| Dekalb DKS53-67 | 5,021 | - | 17.3 | 57.3 | 71 | 54 | 3 | 9 | 10 | 2 | 10 |
| Dyna-Gro DG758B | 4,970 | - | 17.1 | 56.4 | 60 | 55 | 3 | 10 | 10 | 2 | 10 |
| Dyna-Gro DG751B | 4,758 | 4,051 | 17.3 | 57.3 | 62 | 59 | 2 | 6 | 10 | 4 | 10 |
| NC+ 8R18 | 4,742 | - | 17.0 | 55.6 | 63 | 62 | 2 | 10 | 10 | 2 | 10 |
| Terral TV96H81 | 4,658 | 4,300 | 16.0 | 57.6 | 60 | 59 | 2 | 8 | 10 | 5 | 10 |
| Terral TV96H91 | 4,540 | 4,288 | 17.3 | 56.4 | 65 | 56 | 2 | 9 | 10 | 2 | 10 |
| Dyna-Gro DG780B | 4,476 | 4,062 | 17.8 | 57.9 | 65 | 59 | 1 | 6 | 10 | 2 | 10 |
| Asgrow A571 | 4,354 | 3,984 | 15.9 | 46.2 | 59 | 55 | 3 | 10 | 20 | 3 | 20 |
| NC+ 7R83 | 4,303 | 3,935 | 16.1 | 55.0 | 60 | 56 | 2 | 9 | 10 | 3 | 10 |
| Asgrow A603 | 4,145 | - | 16.2 | 47.3 | 64 | 55 | 3 | 12 | 15 | 3 | 15 |
| Golden Acres GA3799 | 4,112 | - | 21.8 | 53.1 | 69 | 55 | 3 | 6 | 5 | 2 | 5 |
| Terral TV9421 | 4,112 | 3,741 | 16.1 | 55.6 | 57 | 55 | 4 | 12 | 25 | 3 | 25 |
| Dyna-Gro DG754B | 4,069 | - | 15.9 | 52.7 | 60 | 56 | 3 | 12 | 20 | 5 | 20 |
| Terral TV93S72 | 4,042 | 3,659 | 15.7 | 56.3 | 58 | 56 | 3 | 11 | 20 | 5 | 20 |
| NC+ 7B51 | 4,030 | 4,138 | 16.5 | 53.0 | 57 | 55 | 3 | 1 | 25 | 4 | 25 |
| Terral TV1050 | 3,863 | 3,592 | 16.2 | 48.4 | 60 | 58 | 2 | 8 | 10 | 2 | 10 |
| NC+ 7R34 | 3,776 | - | 16.4 | 57.5 | 61 | 58 | 3 | 13 | 10 | 2 | 10 |
| Dekalb DKS37-07 | 3,639 | 3,720 | 17.0 | 50.0 | 59 | 51 | 3 | 11 | 20 | 2 | 20 |
| Average | 4,390 | | 16.9 | 53.8 | 62 | 56 | 3 | 9 | 10 | 3 | 10 |
| CV, % | 8 | | 5 | 12 | 7 | 3 | 16 | 51 | 39 | 36 | 39 |
| LSD (0.10) | 417 | | 1.0 | 10.9 | 5 | 2 | 1 | NS | 5 | 1 | 5 |

Table 6. Yield performance of grain sorghum hybrids in the non-irrigated hybrid performance trial at St. Joseph, 2007.

| Brand/hybrid | Yield | | Grain mst | Test wt | Mid- head | Plant ht | Head type | Head exert | Bird | Anth score |
|---------------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|---------------|-----------|---------------|
| | 2007 | 2-yr avg | | | | | | | | |
| | lb/acre | | % | lb/bu | DAP | in | 1-5 | in | % | 0-9 |
| Dekalb DKS54-00 | 8,070 | 7,402 | 16.7 | 57.9 | 55 | 56 | 3.5 | 10 | 5 | 1 |
| NC+ 8R18 | 8,059 | - | 16.7 | 57.9 | 57 | 59 | 2.5 | 7 | 0 | 1 |
| Golden Acres GA3799 | 7,476 | - | 23.6 | 56.3 | 57 | 55 | 4.5 | 4 | 0 | 1 |
| Dekalb DKS53-67 | 7,318 | - | 15.4 | 59.6 | 54 | 52 | 3.5 | 6 | 10 | 1 |
| Asgrow A571 | 7,122 | 6,704 | 15.1 | 57.1 | 56 | 51 | 3.5 | 6 | 5 | 1 |
| Pioneer brand 84G62 | 7,100 | 7,026 | 15.6 | 60.4 | 55 | 52 | 4.0 | 4 | 10 | 2 |
| Dyna-Gro DG780B | 6,491 | 6,435 | 15.8 | 59.3 | 57 | 54 | 2.5 | 4 | 0 | 3 |
| Asgrow A603 | 6,378 | - | 16.2 | 59.7 | 54 | 54 | 3.5 | 8 | 10 | 1 |
| NC+ 7R83 | 6,316 | 6,290 | 16.9 | 57.3 | 56 | 53 | 3.5 | 6 | 5 | 1 |
| Terral TV1050 | 6,175 | 6,102 | 15.6 | 58.1 | 54 | 53 | 3.0 | 6 | 10 | 1 |
| Terral TV93S72 | 6,028 | 5,880 | 14.1 | 55.1 | 51 | 49 | 3.5 | 7 | 25 | 1 |
| Terral TV96H81 | 6,015 | 6,346 | 15.8 | 59.2 | 54 | 53 | 2.0 | 4 | 15 | 3 |
| Terral TV96H91 | 6,011 | 5,870 | 16.3 | 59.1 | 55 | 49 | 3.5 | 7 | 10 | 1 |
| Dyna-Gro DG758B | 5,990 | - | 15.5 | 57.3 | 56 | 45 | 4.0 | 5 | 5 | 0 |
| Dyna-Gro DG751B | 5,954 | 6,008 | 13.8 | 58.8 | 54 | 55 | 2.5 | 5 | 15 | 2 |
| NC+ 7R34 | 5,388 | - | 14.3 | 59.5 | 53 | 56 | 3.0 | 8 | 20 | 3 |
| Terral TV9421 | 5,223 | 5,686 | 14.4 | 57.2 | 50 | 50 | 4.0 | 6 | 30 | 2 |
| NC+ 7B51 | 5,017 | 5,663 | 15.2 | 57.3 | 52 | 49 | 4.0 | 6 | 15 | 1 |
| Dyna-Gro DG754B | 4,189 | - | 15.2 | 57.9 | 52 | 48 | 3.5 | 6 | 25 | 1 |
| Dekalb DK37-07 | 3,178 | 4,739 | 14.7 | 58.5 | 49 | 44 | 4.5 | 8 | 40 | 1 |
| Average | 6,200 | | 15.8 | 58.2 | 54 | 52 | 3.5 | 6 | 10 | 1 |
| CV, % | 16 | | 7 | 1 | 2 | 4 | 11 | 27 | 57 | 42 |
| LSD (0.10) | 1,167 | | 1.3 | 1.2 | 2 | 4 | 0.5 | 3 | 10 | 1 |

Table 7. Yield performance of grain sorghum hybrids in the irrigated hybrid performance trial at St. Joseph, 2007.

| Brand/hybrid | Yield | | Grain mst | Test wt | Mid- head | Plant ht | Head type | Head exert | Bird | Anth score |
|---------------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|---------------|-----------|---------------|
| | 2007 | 2-yr avg | | | | | | | | |
| | lb/acre | | % | lb/bu | DAP | in | 1-5 | in | % | 0-9 |
| Dekalb DKS54-00 | 8,587 | 7,958 | 17.8 | 58.2 | 56 | 61 | 3.5 | 11 | 0 | 1 |
| Pioneer brand 84G62 | 7,689 | 6,986 | 17.0 | 60.3 | 54 | 55 | 4.0 | 6 | 5 | 2 |
| Dekalb DKS53-67 | 7,666 | - | 17.8 | 60.4 | 54 | 55 | 3.5 | 6 | 5 | 2 |
| Golden Acres GA3799 | 7,659 | - | 24.3 | 54.2 | 57 | 56 | 4.0 | 10 | 0 | 1 |
| Asgrow A571 | 7,426 | 6,999 | 16.9 | 56.0 | 56 | 59 | 3.5 | 11 | 0 | 1 |
| NC+ 8R18 | 7,399 | - | 18.0 | 57.5 | 56 | 60 | 3.0 | 8 | 0 | 1 |
| Dyna-Gro DG780B | 7,043 | 6,795 | 16.6 | 59.3 | 58 | 57 | 2.5 | 5 | 0 | 3 |
| NC+ 7R83 | 7,024 | 6,829 | 17.1 | 56.4 | 56 | 57 | 3.0 | 10 | 0 | 1 |
| Terral TV96H91 | 6,714 | 6,601 | 17.9 | 59.2 | 55 | 58 | 3.5 | 9 | 5 | 1 |
| Terral TV1050 | 6,687 | 6,437 | 15.8 | 58.0 | 54 | 55 | 3.0 | 10 | 5 | 1 |
| Asgrow A603 | 6,609 | - | 17.0 | 58.6 | 55 | 58 | 3.5 | 12 | 0 | 1 |
| Dyna-Gro DG751B | 6,281 | 6,619 | 15.1 | 59.5 | 54 | 55 | 2.5 | 6 | 10 | 3 |
| Dyna-Gro DG758B | 6,242 | - | 17.3 | 57.5 | 54 | 52 | 4.0 | 6 | 0 | 0 |
| Terral TV96H81 | 6,223 | 6,376 | 16.2 | 58.3 | 53 | 57 | 2.0 | 5 | 10 | 3 |
| NC+ 7R34 | 6,103 | - | 17.0 | 59.8 | 52 | 59 | 3.5 | 8 | 10 | 2 |
| Dyna-Gro DG754B | 5,732 | - | 15.7 | 56.2 | 51 | 54 | 4.0 | 9 | 10 | 1 |
| Terral TV9421 | 5,291 | 6,066 | 15.5 | 57.5 | 50 | 50 | 4.5 | 11 | 20 | 2 |
| NC+ 7B51 | 5,214 | 5,852 | 15.5 | 57.6 | 52 | 51 | 3.5 | 9 | 15 | 2 |
| Terral TV93S72 | 5,213 | 5,897 | 15.7 | 57.0 | 50 | 55 | 4.5 | 9 | 20 | 2 |
| Dekalb DKS37-07 | 4,625 | 5,411 | 18.2 | 58.1 | 49 | 53 | 5.0 | 7 | 10 | 1 |
| Average | 6,571 | | 17.1 | 58.0 | 54 | 55 | 3.5 | 8 | 5 | 2 |
| CV, % | 9 | | 3 | 1 | 2 | 4 | 10 | 28 | 85 | 39 |
| LSD (0.10) | 681 | | 0.7 | 0.8 | 2 | 4 | 0.5 | NS | 5 | 1 |

Grain Sorghum Performance at the Macon Ridge Branch of the Northeast Research Station – Winnsboro

Location Summary

Grain yields ranged from 4,267 lb/a for Golden Acres GA3799 to 6,392 lb/a for Pioneer brand 84G62 with a trial average of 6,392 lb/a (Table 8). There were thirteen hybrids with two-year yield averages. Rainfall was well distributed in May, latter part of June, and July (see below). Test weights were excellent, ranging from 54.7 lb/bu for DynaGro DG758B to 60.5 lb/bu for DynaGro DG780B with a trial average of 58.2 lb/bu.

Soil Type.....Gigger silt loam
 Row Spacing.....40 inches
 Seeding Rate.....6-7 seed/ft
 Fertilization.....
 Preplant;4-21-48 (3/15)
 Sidedress:30-0-0-2 @ 100 lb N/a (5/22)
 Herbicides.....
 Burndown: Gramoxone @ 1 qt/a (April 25);
 Preemerge (5/1): Atrazine @ 3 pt/a + Dual @ 1 pt/a + Gramoxone @ 1 qt/a;
 Insecticides.....
 Preemerge (5/1): Tombstone @ 2 oz/a
 Two applns. of Warrior @ 2oz/a (6/27, 7/2); Two applns. Tombstone @ 2 oz/a (7/25, 8/9)
 Previous Crop.....Cotton
 Planting Date.....May 1
 Harvest Date.....August 24

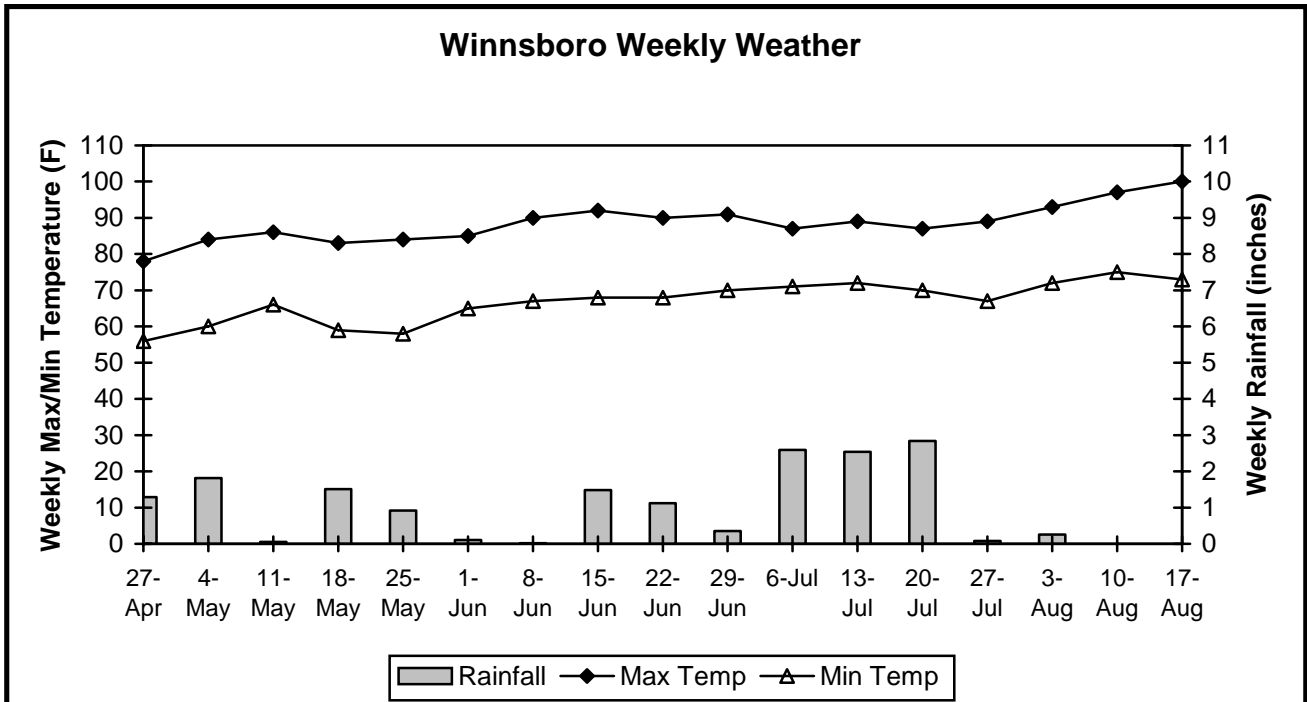


Table 8. Yield performance of grain sorghum hybrids in the hybrid performance trial at Winnsboro, 2007.

| Brand/hybrid | Yield | | Grain mst % | Test wt lb/bu | Mid- head DAP | Plant ht in | Head type 1-5 | Head exert in |
|---------------------|--------------|-------------|-------------------|---------------------|---------------------|-------------------|---------------------|---------------------|
| | 2007 | 2-yr avg | | | | | | |
| | lb/acre | | | | | | | |
| Pioneer brand 84G62 | 6,392 | 5,370 | 13.6 | 58.9 | 61 | 50 | 4.0 | 2 |
| Dekalb DKS53-67 | 6,272 | - | 13.8 | 59.5 | 62 | 52 | 3.5 | 6 |
| Terral TV1050 | 6,063 | 4,964 | 13.8 | 58.8 | 62 | 53 | 2.5 | 4 |
| NC+ 7B51 | 5,866 | 4,979 | 13.7 | 58.7 | 60 | 53 | 3.5 | 5 |
| Terral TV96H91 | 5,757 | 5,300 | 14.6 | 59.0 | 60 | 55 | 5.0 | 8 |
| Dekalb DKS37-07 | 5,729 | 5,079 | 13.3 | 59.1 | 58 | 52 | 4.0 | 5 |
| Terral TV9421 | 5,708 | 4,714 | 13.5 | 57.9 | 60 | 53 | 4.0 | 5 |
| Asgrow A603 | 5,657 | - | 13.5 | 58.5 | 62 | 49 | 3.5 | 6 |
| NC+ 8R18 | 5,626 | - | 13.9 | 59.7 | 64 | 61 | 3.0 | 7 |
| Terral TV93S72 | 5,616 | 4,800 | 13.3 | 57.7 | 59 | 49 | 4.0 | 4 |
| Dyna-Gro DG754B | 5,603 | - | 13.4 | 55.3 | 60 | 48 | 4.0 | 7 |
| NC+ 7R83 | 5,530 | 4,902 | 13.4 | 58.3 | 64 | 48 | 3.5 | 5 |
| Asgrow A571 | 5,529 | 4,925 | 13.7 | 56.5 | 62 | 55 | 4.0 | 10 |
| Terral TV96H81 | 5,488 | 4,738 | 13.8 | 58.8 | 62 | 52 | 3.0 | 8 |
| Dyna-Gro DG751B | 5,315 | 4,476 | 13.0 | 60.0 | 63 | 55 | 4.0 | 3 |
| Dyna-Gro DG758B | 5,306 | - | 14.0 | 54.7 | 62 | 52 | 3.5 | 4 |
| Dekalb DKS54-00 | 5,216 | 4,752 | 14.1 | 57.9 | 64 | 56 | 3.5 | 7 |
| NC+ 7R34 | 5,078 | - | 13.5 | 59.3 | 63 | 58 | 3.5 | 6 |
| Dyna-Gro DG780B | 4,954 | 4,438 | 13.2 | 60.5 | 66 | 54 | 1.5 | 4 |
| Golden Acres GA3799 | 4,267 | - | 15.0 | 55.3 | 68 | 53 | 3.5 | 10 |
| Average | 5,603 | | 13.7 | 58.2 | 62 | 53 | 3.5 | 6 |
| CV, % | 10 | | 2 | 2 | 2 | 8 | 13 | 51 |
| LSD (0.10) | 687 | | 4.4 | 1.9 | 2 | 7 | 1.0 | 5 |

Table 9. Summary of yield performance of grain sorghum hybrids (location average yields in descending order) at six locations entered in the 2007 LAES hybrid performance trials.

| Brand/hybrid | Alex | BR | BC | CR | St. Joseph | | | Avg |
|------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------|
| | | | | | Non- irr | Irr | WN | |
| Dekalb DKS53-67 | 5,358 | 7,024 | 5,432 | 5,021 | 7,318 | 7,666 | 6,272 | 6,299 |
| Pioneer brand 84G62 | 5,147 | 6,663 | 5,717 | 5,059 | 7,100 | 7,689 | 6,392 | 6,252 |
| Dekalb DKS54-00 | 4,584 | 6,954 | 5,108 | 5,138 | 8,070 | 8,587 | 5,216 | 6,237 |
| NC+ 8R18 | 4,497 | 6,392 | 5,104 | 4,742 | 8,059 | 7,399 | 5,626 | 5,974 |
| Asgrow A571 | 4,861 | 6,232 | 5,468 | 4,354 | 7,122 | 7,426 | 5,529 | 5,856 |
| DynaGro DG780B | 5,161 | 6,588 | 5,285 | 4,476 | 6,491 | 7,043 | 4,954 | 5,714 |
| DynaGro DG751B | 5,401 | 6,706 | 5,267 | 4,758 | 5,954 | 6,281 | 5,315 | 5,669 |
| DynaGro DG758B | 5,087 | 6,389 | 5,061 | 4,970 | 5,990 | 6,242 | 5,306 | 5,578 |
| Terral TV96H91 | 4,657 | 6,206 | 5,149 | 4,540 | 6,011 | 6,714 | 5,757 | 5,576 |
| NC+ 7R83 | 4,527 | 6,103 | 5,051 | 4,303 | 6,316 | 7,024 | 5,530 | 5,551 |
| Asgrow A603 | 4,786 | 6,199 | 4,980 | 4,145 | 6,378 | 6,609 | 5,657 | 5,536 |
| Terral TV1050 | 4,852 | 6,376 | 4,686 | 3,863 | 6,175 | 6,687 | 6,063 | 5,529 |
| Golden Acres Genetics GA3799 | 4,073 | 5,647 | 4,273 | 4,112 | 7,476 | 7,659 | 4,267 | 5,358 |
| Terral TV9421 | 5,024 | 6,585 | 5,257 | 4,112 | 5,223 | 5,291 | 5,708 | 5,314 |
| Terral TV93S72 | 4,741 | 6,110 | 5,275 | 4,042 | 6,028 | 5,213 | 5,616 | 5,289 |
| NC+ 7R34 | 5,053 | 6,562 | 4,943 | 3,776 | 5,388 | 6,103 | 5,078 | 5,272 |
| NC+ 7B51 | 4,199 | 5,981 | 5,819 | 4,030 | 5,017 | 5,214 | 5,866 | 5,161 |
| DynaGro DG754B | 4,939 | 5,785 | 4,706 | 4,069 | 4,189 | 5,732 | 5,603 | 5,003 |
| Dekalb DKS37-07 | 5,166 | 6,247 | 4,380 | 3,639 | 3,178 | 4,625 | 5,729 | 4,709 |
| Terral TV96H81 | 5,006 | 6,605 | 4,909 | 4,658 | 6,015 | 6,223 | 5,488 | 5,558 |
| Average | 4,856 | 6,368 | 5,094 | 4,390 | 6,175 | 6,571 | 5,549 | |

Table 10. List of participating seed companies and hybrids tested in the LAES 2006 grain sorghum hybrid performance trials.

| Company/Institution | Brand/hybrid |
|---|--|
| Golden Acres Genetics P.O. Box 579 Buchanan Dam, TX 78609 | Golden Acres: 3799 |
| Monsanto Company 982 U.S. Hwy. 77 Bishop, TX 78343 | Asgrow: A571, A603 Dekalb: DKS37-07, DKS53-67, DKS54-00 |
| NC+ Hybrids 10207 East Hillcrest Drive Mount Hope, KS 67108 | 7B51, 7R34, 7R83, 8R18 |
| Pioneer Hi-Bred International 7501 Memorial Pkwy SW, Suite 205 Huntsville, AL 35802 | Pioneer brand: 84G62 |
| Terral Seed, Inc. 604 Blount St. Lake Providence, LA 71254 | Terral: TV1050, TV93S72, TV9421, TV96H81, TV96H91 |
| UAP Distribution, Inc. 7251 West 4 th Street Greely, CO 80634 | DynaGrow: DG751B, DG754B, DG758B, DG780B |