

## Dryland Grain Sorghum Variety Trial Bushland, TX – 2010

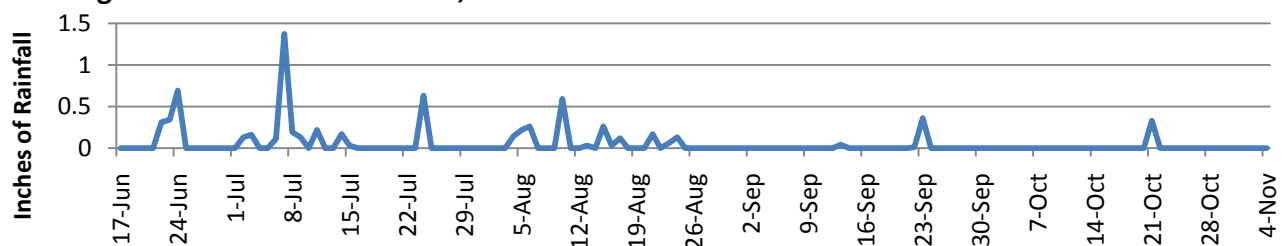
Brent Bean<sup>1</sup>, Jake Becker<sup>2</sup>, Jake Robinson<sup>2</sup>, Jurg Blumenthal<sup>3</sup>, and Dennis Pietsch<sup>4</sup>

LOCATION:	Texas AgriLife Research Station, Bushland, TX
SOIL TYPE:	Pullman clay loam
PREVIOUS CROP:	Fallow
ROW WIDTH:	30 inches
LAND PREPARATION:	Disked, planted flat
DATE PLANTED:	June 17, 2010 with cones mounted on a four row JD MaxEmerge planter
SEEDING RATE:	30,000 seed per acre
PLOT SIZE:	Two rows by 25 ft
FERTILIZER:	30lbs Nitrogen applied in spring
HERBICIDE:	One pound of atrazine applied three days after planting
INSECTICIDE:	None
RAINFALL:	7.23 inches
DATE HARVESTED:	Nov. 4, 2010 – Mechanical harvest (Massey Ferguson Plot Combine)
TEST DESIGN:	Randomized complete block
NUMBER ENTRIES:	24
NUMBER REPLICATIONS:	4
NUMBER ROWS/PLOT:	2
TEST MEAN:	2,620 lb/acre
TEST YIELD C.V.:	15.78%

### COMMENTS:

The test was planted on fallowed ground with good to excellent soil moisture. Growing season rainfall was near average at 7.23 inches, but only one rainfall event was greater than 0.6 inches, and this occurred on July 7<sup>th</sup> (Figure 1). The lack of mid and late season rainfall reduced yield and led to lodging of some hybrids (Figure 2). At harvest, grain moisture averaged 10%. No insect or significant disease infestations were observed in the trial. Yield ranged from 3,896 lb/acre to 2,212 lb/acre (Figure 3). Five hybrids yielded greater than 2,950 lb/acre. These were BH5224, BH5350, BH3822, 85G46, and 85G01 (Table 1). A three year summary of yields in Bushland is reported in Table 2. The same trial was conducted at Perryton, TX, Lubbock, TX and Clovis, NM.

**Figure 1. Rainfall in Bushland, TX - 2010**



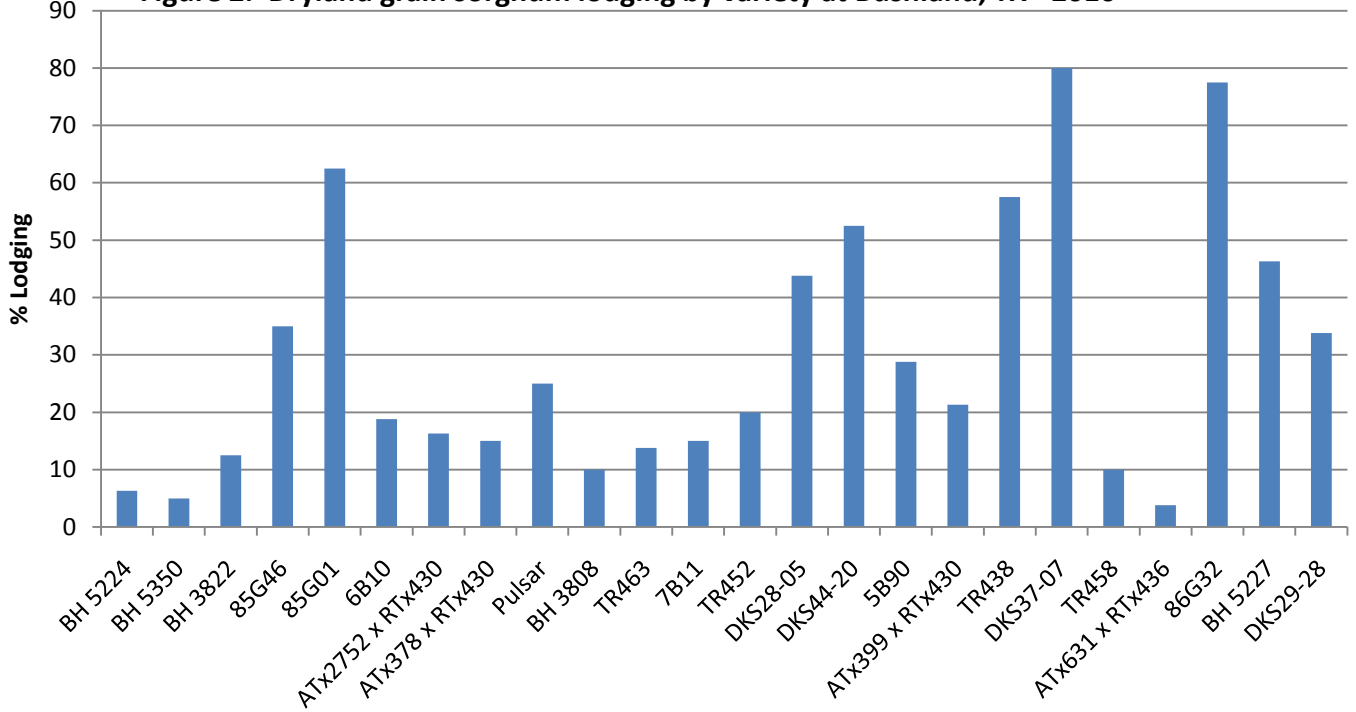
<sup>1</sup> Professor and Extension Agronomist, Amarillo, TX. [bbean@tamu.edu](mailto:bbean@tamu.edu). 806-677-5600.

<sup>2</sup> Texas AgriLife Research Assistant.

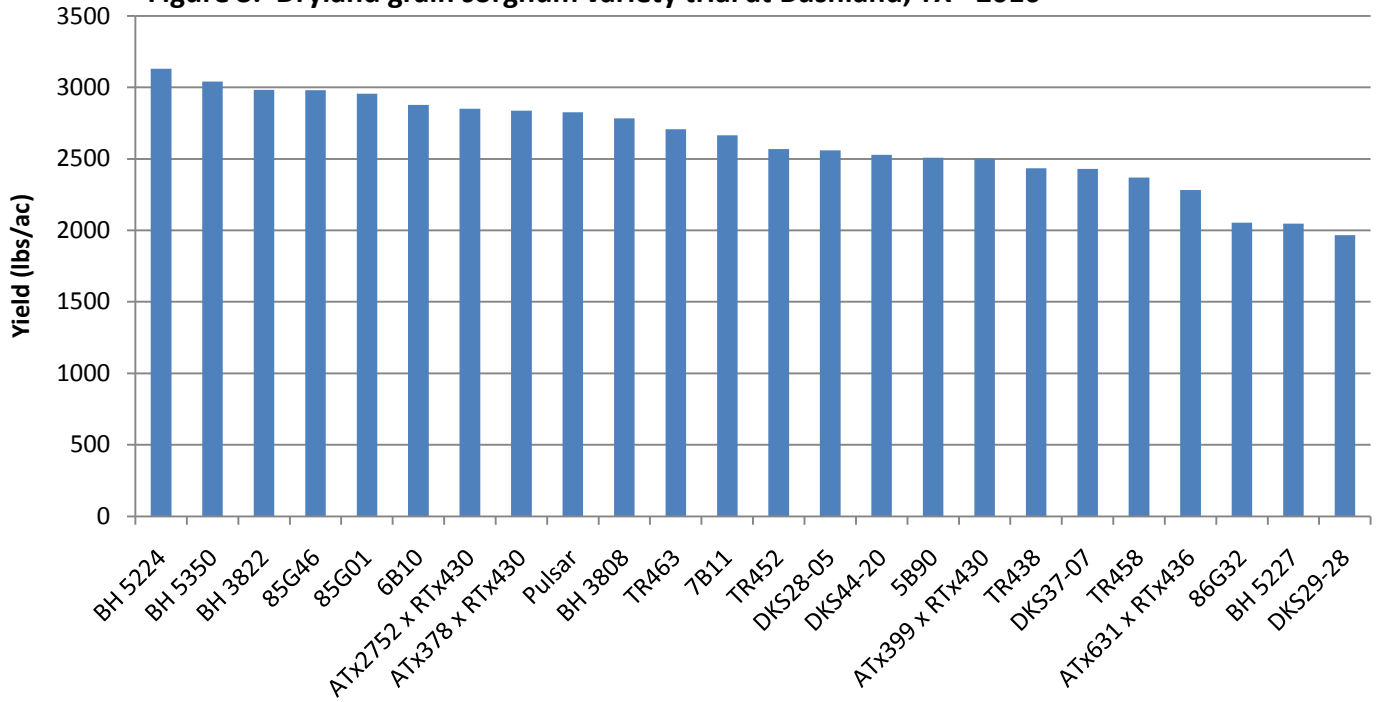
<sup>3</sup> Associate Professor and Extension Systems Agronomist, College Station, TX.

<sup>4</sup> Director of Crop Testing Program, College Station, TX

**Figure 2. Dryland grain sorghum lodging by variety at Bushland, TX - 2010**



**Figure 3. Dryland grain sorghum variety trial at Bushland, TX - 2010**



**Table 1. Dryland grain sorghum trial near Bushland, TX, 2010.**

Entry No.	Hybrid Name	Company	Flowering Date	Peduncle Lth (in)	% Lodged	Yield (lbs/ac)
1	BH 3822	B-H Genetics	28-Aug	0 c	12.5 ghi	2982 abc
2	BH 3808	B-H Genetics	28-Aug	0.3 bc	10 hi	2784 a-f
3	BH 5224	B-H Genetics	28-Aug	0 c	6.3 hi	3130 a
4	BH 5227	B-H Genetics	28-Aug	1 b	46.3 b-e	2048 gh
5	BH 5350	B-H Genetics	30-Aug	0 c	5 i	3041 ab
6	5B90	Channel Bio LLC	25-Aug	0.8 bc	28.8 e-h	2509 c-g
7	6B10	Channel Bio LLC	28-Aug	0 c	18.8 ghi	2877 a-e
8	7B11	Channel Bio LLC	30-Aug	0.3 bc	15 ghi	2665 a-f
9	DKS28-05	Monsanto Company	20-Aug	2.3 a	43.8 b-f	2559 b-g
10	DKS29-28	Monsanto Company	20-Aug	0.5 bc	33.8 d-g	1966 h
11	DKS44-20	Monsanto Company	28-Aug	0.5 bc	52.5 bcd	2530 b-g
12	DKS37-07	Monsanto Company	25-Aug	0 c	80 a	2431 e-h
13	Pulsar	Monsanto Company	28-Aug	1 b	25 e-i	2827 a-e
14	86G32	Pioneer Hi-Bred Int., Inc	25-Aug	0.3 bc	77.5 a	2053 gh
15	85G46	Pioneer Hi-Bred Int., Inc	28-Aug	0 c	35 c-g	2981 abc
16	85G01	Pioneer Hi-Bred Int., Inc	28-Aug	0 c	62.5 ab	2957 a-d
17	TR458	Triumph Seed Co., Inc	25-Aug	1 b	10 hi	2369 e-h
18	TR463	Triumph Seed Co., Inc	28-Aug	0 c	13.8 ghi	2706 a-f
19	TR438	Triumph Seed Co., Inc	25-Aug	0 c	57.5 abc	2434 d-h
20	TR452	Triumph Seed Co., Inc	28-Aug	0.8 bc	20 ghi	2569 b-g
21	ATx399 x RTx430	Texas AgriLife Research	3-Sep	0 c	21.3 f-i	2501 c-g
22	ATx378 x RTx430	Texas AgriLife Research	3-Sep	0 c	15 ghi	2838 a-e
23	ATx2752 x RTx430	Texas AgriLife Research	3-Sep	0 c	16.3 ghi	2851 a-e
24	ATx631 x RTx436	Texas AgriLife Research	3-Sep	0 c	3.8 i	2281 fgh
Mean				0.36	29.6	2620
LSD (P=.05)				0.82	22.65	523.4
CV				163.46	54.13	14.12

\*Means followed by the same letter in each column do not differ significantly at P=0.05.

**Table 2. 3-YR Summary of dryland commercial grain sorghum varieties at Bushland, TX.**

Variety	Company	2007		2009		2010		3-YR Avg.
		lb/ac	Rank	lb/ac	Rank	lb/ac	Rank	lb/ac
TR458	Triumph Seed	4,660	1	1,897	1	2,369	6	2,975
DKS37-07	Monsanto	4,153	2	825	5	2,431	5	2,470
Pulsar	Monsanto	3,950	3	592	6	2,827	2	2,456
TR463	Triumph Seed	2,884	7	1,649	2	2,706	3	2,413
85G46	Pioneer Hi-Bred	3,272	5	800	4	2,981	1	2,351
TR438	Triumph Seed	3,795	4	476	7	2,434	4	2,235
DKS29-28	Monsanto	2,936	6	1,173	3	1,966	7	2,025
<b>Mean</b>		<b>3,664</b>		<b>1,059</b>		<b>2,531</b>		<b>2,475</b>