

## Non-Irrigated and Irrigated Grain Sorghum Performance at the Northeast Research Station – St. Joseph

### Location Summary

Yields ranged from 2334 to 7050 lb/acre in non-irrigated trial (Table 5) and 2835 to 7449 lb/acre in irrigated trial (Table 6). Yield averages were 5679 lb/acre in non-irrigated and 6278 lb/acre in irrigated trials. There was less than an inch of rain in June (see below). Maximum temperatures were relatively mild throughout the growing season. There were six furrow irrigations, beginning June 13 and terminating July 8. In both trials, some hybrids began turning purple soon after an aerial application of a pyrethroid for midge control. We suspect an organo-phosphate residue was left in the spray tank, which resulted in the plants purpling. Ratings of 0 to 5 were taken, with 0 indicating no purple symptoms and 5 indicating severe purple symptoms. Yields generally decreased as ratings increased and symptoms became more severe.

Soil Type.....	Sharkey clay
Row Spacing.....	40 inches
Seeding Rate.....	8 seed/ft
Fertilization.....	
Sidedress.....	120 lb N/a
Herbicides.....	
Pre: Atrazine @ 1 qt/a + 1% Crop Oil	
Lay-by: Atrazine @ 1 qt/a + Lorox @ 1	
qt/a + Dual @ 1 qt/a + Crop Oil @	
1 pt/a	
Insecticides.....	
Karate EC @ 3.6 oz/a (four applns.)	
Previous Crop.....	Soybean
Planting Date.....	May 2
Harvest Date.....	August 15

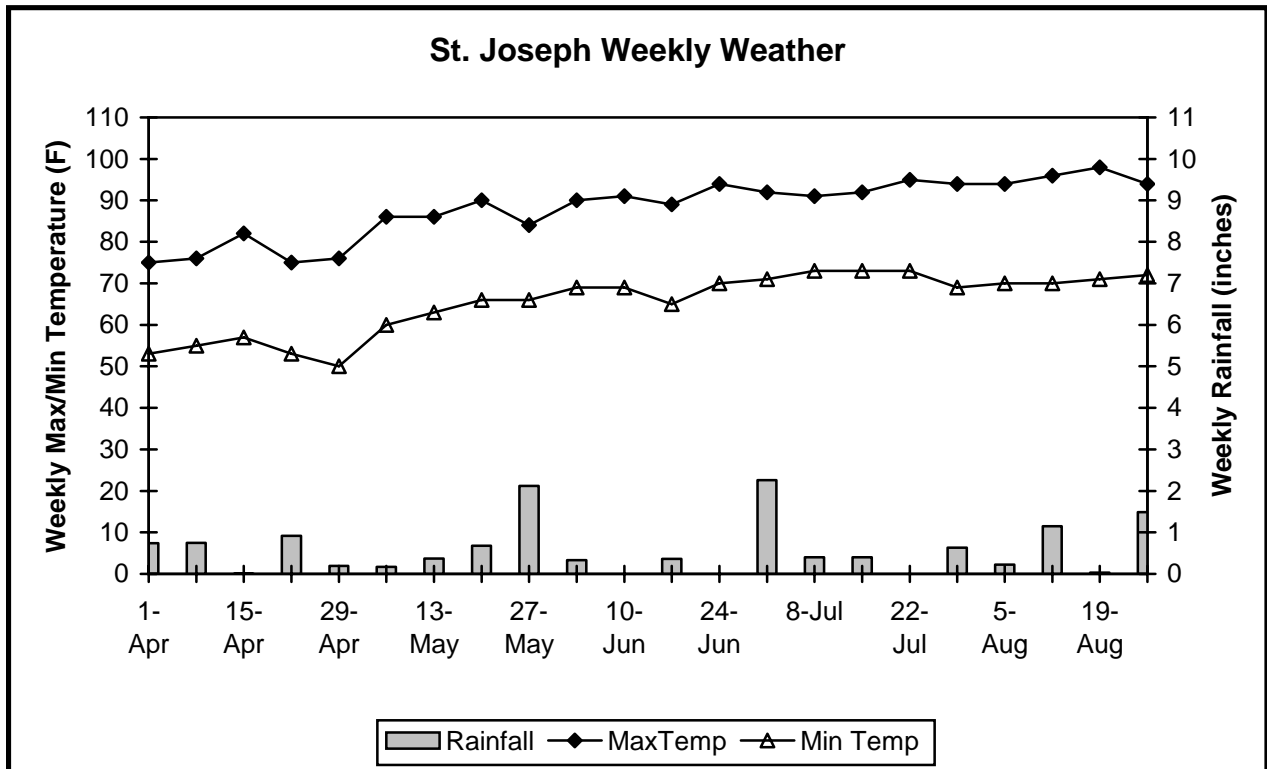


Table 5. Performance of non-irrigated grain sorghum hybrids at the Northeast Research Station at St. Joseph, 2005.

Brand/hybrid	Yield		Gr mo %	Test wt lb/bu	Mid- head DAP	Plant ht in	Head exer in	Purpling <sup>1</sup>
	2005	2-Yr avg						
	-----lb/a-----							
Dekalb DKS54-00	7050	5535	16.9	58.5	59	53	6	0
Deklab DKS53-11	6981	5367	17.0	59.1	57	52	4	0
Monsanto MSC531	6933	-	15.7	59.1	58	50	6	0
Asgrow A567	6807	5577	17.0	59.6	57	54	5	0
Asgrow A571	6788	5618	15.0	58.5	57	54	7	0.5
Golden Acres 3827	6701	5593	14.2	60.2	55	53	6	0
Terral TVX96A317	6678	-	17.2	59.6	58	60	4	1.5
NC+ 7R83	6637	5685	15.3	58.1	57	52	5	0
Pioneer 84G62	6605	5561	14.0	60.1	57	49	3	0
Dyna-Gro DGX1759	6528	-	15.2	59.8	57	54	4	0.5
Golden Acres 444E	6528	5341	14.1	58.9	56	53	4	0
Dyna-Gro DGX1756	6353	-	14.1	58.5	56	49	6	0
Terral TV9421	6344	5592	14.7	58.2	56	51	7	0
Monsanto MTC15525	6291	-	17.4	59.4	59	49	6	0
Terral TV93S72	6251	5255	13.4	58.8	56	52	8	0.5
Terral TVX95B303	6213	5253	13.7	60.8	56	54	5	0
Golden Acres 3552	6181	-	15.1	59.3	55	52	6	0
Terral TV1050	6078	5292	14.8	59.1	58	52	3	0
Garst 5515	6042	5214	13.3	59.5	54	50	5	0
Dyna-Gro DGX1785	6034	-	15.7	59.2	58	51	5	0.5
Dyna-Gro DGX1755	6000	5157	15.3	59.1	56	49	5	0.5
Monsanto MSC332	5906	-	15.6	59.2	57	55	6	0
Dyna-Gro DGX1758	5730	-	15.6	59.7	55	54	6	0
Dyna-Gro DGX1743	5644	-	14.9	57.9	57	48	3	0
Terral TVX94A415	5601	-	13.7	59.3	57	54	5	1.5
Terral TVX94A427	5550	-	14.6	57.7	57	54	6	1.0
PSC Exp-401	5470	-	14.0	59.4	59	62	6	1.0
Dyna-Gro DG762B	5450	4550	13.3	59.1	54	53	6	0.5
Pioneer 83G66	5355	5145	15.3	58.4	57	52	4	2.0
Dyna-Gro DGX1742	5295	-	13.9	59.3	55	49	3	0.5
Garst 5401	5237	-	15.5	59.2	56	54	6	3.0
Terral TVX95B324	5214	-	14.1	59.3	57	49	5	0.5
PSC Exp-408	5157	-	15.0	58.5	59	58	7	0.5
Terral TV96H81	4927	4857	13.3	57.9	57	54	5	3.0
Terral TV97H17	4874	4566	14.9	59.1	60	56	4	2.0
Dyna-Gro DG751B	4625	4396	13.7	58.2	58	52	3	3.0
Dyna-Gro DGX1784	4553	-	13.6	57.9	61	53	4	3.0
Garst 5440	4362	4506	13.3	58.5	56	51	3	3.5
Terral TVX95B323	4190	-	16.2	58.6	59	51	3	3.5
Dyna-Gro DG780B	3940	4297	14.6	58.6	58	53	2	3.5
PSC GS105	3072	-	20.2	56.8	65	58	8	3.0

PSC GS104	2334	-	20.7	56.6	65	58	8	3.0
<b>Average</b>	<b>5679</b>		<b>15.1</b>	<b>58.8</b>	<b>57</b>	<b>53</b>	<b>5</b>	<b>1.0</b>
<b>CV, %</b>	<b>7.8</b>		<b>2.9</b>	<b>0.7</b>	<b>1.6</b>	<b>2.2</b>	<b>28.0</b>	<b>41.3</b>
<b>LSD (0.10)</b>	<b>519</b>		<b>0.5</b>	<b>0.7</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>0.5</b>

<sup>1</sup>Purple leaf symptoms appeared on some plots shortly after an aerial pyrethroid application for midge. Pesticide contamination is suspected. Ratings were taken 0-5, with 0 indicating no symptoms and 5 very severe symptoms.

Table 6. Performance of irrigated grain sorghum hybrids at the Northeast Research Station at St. Joseph, 2005.

Brand/hybrid	Yield		Gr mo %	Test wt lb/bu	Mid- head DAP	Plant ht in	Head exer in	Head type	Purpling <sup>1</sup>
	2005	2-Yr avg							
	-----lb/a-----								
Dekalb DKS54-00	7449	5054	16.3	58.4	58	58	7	3.5	0
Monsanto MSC531	7362	-	15.9	57.7	58	57	8	3.5	0
Dekalb DKS53-11	7200	4933	16.8	59.0	58	57	5	3.0	0
Asgrow A571	7198	5685	14.7	57.8	56	57	9	3.0	0.5
Terral TVX95B303	7144	5622	14.6	59.8	56	58	7	3.5	0
Golden Acres 3827	7136	5562	14.4	59.4	56	60	8	3.5	0
Terral TVX96A317	7127	-	17.4	58.6	59	64	6	3.0	1.5
Asgrow A567	7070	5593	16.9	58.9	57	55	5	3.5	0.5
Monsanto MSC332	7017	-	16.5	58.1	57	59	7	2.5	0
Terral TV1050	6992	5618	14.7	58.2	58	56	3	3.0	0.5
Golden Acres 444E	6948	5457	14.3	57.9	55	56	8	3.5	0
Pioneer 84G62	6943	5536	15.5	59.6	57	54	3	3.5	0
Monsanto MTC15525	6884	-	16.9	59.9	59	55	8	2.5	0
NC+ 7R83	6816	5568	15.0	57.3	57	58	6	2.5	0.5
Terral TVX94A427	6784	-	14.5	56.9	56	58	7	2.0	1.5
Dyna-Gro DGX1759	6724	-	17.1	58.5	57	58	5	4.0	0
PSC Exp-408	6633	-	15.6	56.9	57	65	8	3.0	1.0
Terral TV9421	6616	5223	13.9	57.9	56	55	5	3.5	0
Terral TV93S72	6574	5221	14.3	58.0	56	53	9	3.5	0.5
Dyna-Gro DGX1755	6535	5212	15.6	58.4	57	55	7	3.5	0.5
Dyna-Gro DG762B	6511	5028	13.6	58.5	54	57	5	3.0	0.5
Dyna-Gro DGX1756	6446	-	15.7	56.6	56	54	7	4.0	0
Golden Acres 3552	6439	-	15.6	57.7	55	55	5	3.5	0
Dyna-Gro DGX1785	6398	-	15.8	59.1	58	54	5	2.5	0
Terral TVX94A415	6326	-	14.4	58.1	57	61	6	2.0	1.0
Terral TVX95B324	6230	-	14.0	59.0	57	54	5	3.0	1.0
Garst 5401	6182	-	15.5	59.2	57	60	9	3.0	2.5
Terral TV97H17	6119	4602	16.0	59.2	59	67	8	2.5	1.5
Garst 5515	6108	5122	14.0	57.6	55	53	5	3.5	0.5
Dyna-Gro DGX1743	6092	-	14.9	56.9	58	51	3	3.0	0
Dyna-Gro DGX1758	6086	-	16.0	58.1	56	58	7	3.5	0

Pioneer 83G66	6071	-	16.8	57.2	57	57	5	3.5	1.5
PSC Exp-401	5948	-	16.0	57.9	61	66	6	3.5	1.0
Terral TV96H81	5798	4971	13.7	57.2	56	56	3	2.0	2.5
Dyna-Gro DGX1742	5683	-	14.1	57.6	55	56	7	3.0	0
Dyna-Gro DG751B	5579	4887	14.9	57.9	58	58	3	1.5	2.5
Dyna-Gro DGX1784	5241	-	14.8	58.0	60	56	5	3.0	2.0
Terral TVX95B323	5203	-	17.7	57.8	59	55	4	2.0	2.5
Garst 5440	5163	4761	13.8	58.1	56	56	6	3.0	2.5
Dyna-Gro DG780B	4735	5091	15.9	58.3	59	61	4	1.0	2.5
PSC GS105	3356	-	17.4	56.6	64	64	8	3.5	2.5
PSC GS104	2835	-	17.1	56.2	66	59	7	4.0	3.0
<b>Average</b>	<b>6278</b>		<b>15.4</b>	<b>58.1</b>	<b>57</b>	<b>57</b>	<b>6</b>	<b>3.0</b>	<b>1.0</b>
<b>CV, %</b>	<b>6.0</b>		<b>5.1</b>	<b>0.7</b>	<b>1.7</b>	<b>3.7</b>	<b>26.9</b>	<b>11.0</b>	<b>38.5</b>
<b>LSD (0.10)</b>	<b>444</b>		<b>0.9</b>	<b>0.7</b>	<b>1</b>	<b>4</b>	<b>3</b>	<b>0.5</b>	<b>0.5</b>

<sup>1</sup>Purple leaf symptoms appeared on some plots shortly after an aerial pyrethroid application for midge. Pesticide contamination is suspected. Ratings were taken 0-5, with 0 indicating no symptoms and 5 very severe symptoms.