

2007 DRY LAND RESEARCH PLOT

Case No.	Variety	Plants per Acre	K/10gr	Oil Exp.	Ball% in oil	Tenderness	Hull	Ear Size	Kernel shape	Harvest Moisture	Yield at 14%	Broken Stalks	Stalk Rot %
1	11649	20000	66	45.5	0	3.9	3.7	3.0	2.6	17.5	4464	6%	45%
2	11830	20000	59.5	37.0	58B	2.5	2.5	3.0	1.6	18.0	4147	10%	25%
3	8156	20000	69.5	46.0	0	3.8	3.6	3.1	2.1	18.9	N/A	7%	35%
4	15820	20000	65	46.8	0	4.6	4.2	3.2	2.3	18.0	4987	5%	5%
5	1160	20000	66.5	48.0	0	4.2	3.5	3.0	2.6	18.8	4558	39%	70%
6	11850	20000	55	48.5	0	4.0	3.7	3.4	1.4	18.2	4805	2%	0%
7	54830	20000	42	33.5	75B	2.5	2.5	3.1	1.1	17.1	4591	6%	15%

Research Plot Controls

The plot was hand planted on May 25th on silt loam soil in 38 inch rows, on the edge of a soybean field. Seven hybrids were planted. Each hybrid had four, twenty foot long rows. The previous crop was field corn at 180bu/acre yield. A pre plant application of 10 lbs. of N and 10 lbs. of S in the sulfate form were applied. A starter fertilizer of 70lbs of 8-20-0-8S was banded at planting. Herbicide was Dual II at one half corn rate in a 10 inch band at planting. The plot was cultivated twice in June. The plot was side dressed with liquid Nitrogen at a rate of 40 lbs. an acre in late June. No late season weed pressure was noted. No significant insect damage was noted. The plot was not irrigated. No fungicide was used.

Research Plot Variables

The plot experienced above average moisture during May and the first half of June. This was followed by very dry conditions through pollination until the second week of August. The plot experienced two heavy rain events in August. One of these events contained hail and heavy winds. The plot experienced 25% defoliation. July and August were more humid and had warmer nights than normal for this region.

Environmental Conditions

Months	2007 Temp	Average	2007 Precip	Average
May/ high	74.2	72	6.1"	3.62
May/ low	51.8	48		
June/ high	81.2	82	3.3"	3.74"
June/ low	59	58		
July/ high	87.8	86	1"	3.44"
July/ low	65.3	63		
Aug/ high	90.3	86	4.2"	3.02"
Aug/ low	68	63		

Results

All hybrids were able to maintain good quality under these conditions. Kernel size was increased between three and five kernels per ten grams for all hybrids. 15820 and 11850 yielded the best and were also less susceptible to stalk problems.

Conclusions

Having adequate moisture early on helped the hybrids get established and handle the drier period more positively, resulting in favorable yields for the plot under the conditions. The hot and humid days and nights of July and August brought on the attack of more stalk pathogens and fungus. The plot was not treated with a fungicide and 15820, 11850, and 54830 were less susceptible to these attacks. Comparing the 2006 dry land plot to the 2007 dry land plot three points are noted.

1. All hybrids were able to maintain good quality under the stressful conditions of the last two years.
2. Both plots experienced an increase in kernels per 10 grams for all hybrids. The 2006 plot experienced a larger increase in kernel size per 10 grams due to a lot less rainfall resulting in more stress.
3. The last ten years 11649 has proven to respond very well to drought conditions with above average yields. The dry land plots have shown that several hybrids (15820, 11850, 1160) are able to yield as much or more than 11649.

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