

2009 THOMPSON EXPERIMENT CONDUCTED BY NDSU CORN BREEDING PROGRAM

		Grain	Grain	Grain	Plant	Plant	Root	Stalk	Test
Company	Hybrid	Yield	Yield	Moisture	Density	Density	Ldg	Ldg	Weight
		t/ha	bu/A	%	pl/A	pl/ac	%	%	lb/bu
Dairyland	ST-7985	11.1	177.1	20.2	75500	30554	4.1	1.8	51.8
NuTech	1B-183 CB/LL	10.4	164.9	20.0	75500	30554	0.0	4.9	50.9
NuTech	3T-083 VT3	9.9	156.7	19.5	74805	30273	0.0	-1.6	51.1
Proseed	786 CB/LL/GT	9.8	155.4	19.8	72271	29248	0.0	-4.0	51.5
NuTech	1N-887 CB/LL/RW	9.7	154.0	19.8	72041	29155	1.5	8.8	48.8
Wensman	W 7085VT3	9.6	152.9	19.4	75111	30397	0.0	7.3	49.5
Monsanto	DKC 36-34 VT3	9.6	152.2	18.9	74652	30211	0.0	2.6	50.2
Hyland Seeds	Hyland HL CVR34	9.4	150.1	19.2	72041	29155	1.7	7.2	48.9
Dairyland	ST-6286	9.2	145.9	19.1	72347	29278	3.9	4.7	49.6
Pioneer	Pioneer Brand 39N99	9.1	145.4	20.4	71889	29093	0.0	3.0	52.0
NuTech	1B-186 CB/LL	9.1	145.0	20.1	77271	31271	0.0	8.1	51.1
Gold Country	89-09 VT3	9.1	144.9	19.1	71965	29124	0.0	2.4	47.8
Kruger	K-6385 VT3	8.9	142.3	18.3	71965	29124	0.0	0.7	51.4
Pioneer	Pioneer Brand 39V07	8.9	141.9	18.8	72041	29155	0.0	2.6	49.0
NuTech	3T-484 VT3	8.7	138.9	19.3	72271	29248	10.0	0.8	49.0
G2 Genetics	5H-884 RR/HX	8.7	138.8	19.3	71812	29062	0.0	5.8	47.2
Wensman	W 7083VT3	8.7	137.6	19.1	74729	30242	0.0	2.5	49.2
Jung Seed	7236VT3	8.6	137.4	18.5	72118	29186	0.0	-2.0	52.5
Wensman	W 7089VT3	8.6	137.2	19.0	71583	28969	0.0	2.2	47.0
Proseed	787 VT3	8.6	137.1	19.0	71736	29031	0.0	1.7	49.6
Proseed	781 RRBT	8.6	137.0	19.7	71507	28938	1.7	10.5	50.4
Gold Country	84-03 VT3	8.2	130.0	18.5	73958	29930	0.0	6.7	51.3
Pioneer	Pioneer Brand 39D97	8.1	128.7	19.0	72347	29278	2.9	3.5	50.0
Proseed	884 VT3	8.1	128.7	19.3	71583	28969	0.0	0.5	49.9
NuTech	3A-383+ RR	8.0	127.1	18.7	72347	29278	0.0	2.9	46.3
Hyland Seeds	Hyland HL B24R	8.0	127.0	19.9	71507	28938	0.0	19.8	49.8
Jung Seed	7288VT3	8.0	126.7	19.5	71659	29000	0.0	20.8	50.6
Jung Seed	7209VT3	7.9	125.3	18.6	72271	29248	0.0	5.4	49.8

2009 NDSU CORN BREEDING EXPERIMENT 2

NORTHERN ND REGION

NuTech	3A-484 RR	7.8	124.8	18.7	72118	29186	0.0	10.4	47.4
Seeds 2000	2843 RR	7.8	124.7	19.1	71354	28877	0.0	3.1	49.5
Jung Seed	3296RR	7.8	124.6	19.1	73423	29714	0.0	6.8	50.0
Kruger	K-2381 RR/YGCB	7.8	124.4	19.3	72271	29248	0.0	4.3	50.5
Monsanto	DKC 33-54 RR2	7.8	123.6	18.0	72194	29217	0.0	7.9	49.5
Peterson Farm Seeds	56J86	7.6	120.9	19.1	71889	29093	0.0	4.8	47.1
Peterson Farm Seeds	37L84	7.4	118.4	19.8	72423	29309	0.0	22.1	48.1
Peterson Farm Seeds	54M83	7.4	118.1	18.7	73729	29838	0.0	1.8	49.0
NuTech	3C-882 RR/YGCB	7.4	118.1	19.2	71736	29031	4.7	8.3	49.5
Seeds 2000	8201 VT3	7.4	116.9	18.8	71889	29093	0.0	0.6	48.9
Kruger	K-6388 VT3	7.3	116.3	19.1	72194	29217	1.4	33.0	48.6
Kruger	K-1286 RR	7.2	114.5	19.0	73805	29868	0.0	3.4	47.9
Proseed	581 VT3	7.2	114.3	19.0	71430	28907	0.0	23.5	47.4
Monsanto	DKC 30-23 RR2	7.1	112.2	18.5	71659	29000	0.0	3.2	51.4
Gold Country	87-01 VT3	7.0	111.9	19.2	71812	29062	0.0	21.5	50.1
Kruger	K-6378 VT3	7.0	110.7	19.1	71507	28938	0.0	3.1	50.4
Hyland Seeds	Hyland 08403BR	6.3	100.4	19.8	72194	29217	3.0	22.8	47.7
	MEAN	8.4	133.6	19.2	72632	29394	0.8	6.9	49.5
	CV	10.9	10.9	3.4	8	8	327.3	120.2	3.8
	LSD (0.05)	1.8	28.6	0.6	5498	3003	4.9	18.8	3.4
	LATTICE EFFICIENCY (%)	122.9	122.9	116.0	102	102	104.9	107.4	110.4

Negative Values are Zero (Means were adjusted corresponding to the Lattice Incomplete Block Experimental Design.

The Lattice experimental design was much more powerful than the Randomized Complete Block Design (RCBD) as shown by trait efficiencies.

For instance, the statistical analysis on grain yield was 22.9% more efficient than RCBD (if the experiment was conducted as RCBD)