

**EXP 3 LAKOTA (THIS IS ONLY ONE LOCATION, CHECK FOR COMBINED DATA OF THE SAME HYBRIDS IN NORTHEAST ND)
SENT FOR WEB POSTING ON OCTOBER 17, 2012**

The NDSU corn breeding program planted 36 experiments across >20 state locations in 2012. Of those experiments 25 were for breeding purposes and 9, specifically, to aid North Dakota farmers select their hybrids for planting in 2013. These are the Eastern ND Hybrid Corn Performance Trials and evaluate commercial hybrids available in the market. Colfax, Milnor, and Barney were used for the South Eastern ND trials, Casselton, Prosper and Fargo for the Central East ND trials, and Larimore, Thompson, and Lakota for the northern ND trials.

Be careful when looking at CV, there is no magical high number to discard experiments. In fact, experiments with high CV could give you the best information under stress on poor hybrids. Know what it is. CV stands for coefficient of variation and it is represented by $CV = S \times 100 / X$. If S (Variation) = 2,000, then **we depend on X (experiment means)**. If one experiment has X1 (mean 1) = 200 bu/A, and a second experiment has X2 (mean 2) = 100 bu/A, then, CV1 = 10% and CV2 = 20%. With the same level of variation the experiment with larger CV (CV2) is a much better experiment under uniform stress conditions where weaknesses of hybrids are easily observed for selecting the best one.

Hybrids offered by industry for northern ND locations were 79RM or over

Company	Hybrid	Grain Yield (bu/A)	Grain Moisture (%)	Test Weight (lb/bu)	Stalk Lodging (%)	Root Lodging (%)	Dropped Ears (%)
Syngenta	N20Y-3000GT Brand	132.4	15.7	53.1	1.4	0.0	0.7
Syngenta	N17P-3000GT Brand	126.1	13.1	54.6	0.0	0.0	3.6
NuTech	5N-183™	119.9	16.9	53.7	0.0	0.0	0.0
Dairyland	DS7085	119.0	16.6	56.5	0.0	3.0	0.0
Pioneer Hi-Bred	P8581R	116.8	17.8	53.5	1.5	0.0	2.2
Stine Seeds	9140GTCBLL	116.5	16.3	54.0	1.7	6.7	7.0
Proseed	1182 GTCBLL	115.5	16.1	55.7	0.0	0.0	1.7
Peterson Farms	PFS 76J86	111.2	17.9	55.8	10.2	0.0	2.4
Proseed	981 GTCBLL	109.7	18.4	57.1	2.4	14.4	2.0
CHECK 1		106.5	18.9	54.8	5.8	1.9	0.4
Monsanto	DKC33-77	105.8	17.2	56.1	3.3	0.0	1.0
Dyna-Gro	D26VP56	100.1	18.2	54.4	16.7	2.8	1.5
NuTech	5B-782™	98.6	18.1	53.8	0.0	0.0	8.9
Hyland	8180	97.6	17.8	49.2	0.0	0.0	0.9
G2 Genetics	5H-587™	96.9	18.4	49.6	2.8	0.0	33.1
Seeds2000	2823 GTCBLL	95.7	15.6	54.1	4.0	0.0	3.3
Dairyland	DS9383SSX	95.1	16.7	53.3	0.0	0.0	0.0

Wensman	W 8085VT2RIB	94.0	18.4	52.4	10.2	1.8	1.1
CHECK 2		93.5	18.4	50.4	14.8	0.0	0.9
Dyna-Gro	CX23VP35	92.6	18.5	53.9	3.8	0.0	0.8
Proseed	1083 GTCBLL	91.7	16.6	54.4	0.0	0.0	1.9
G2 Genetics	3A-080™	91.6	14.5	52.0	3.0	0.0	0.9
Pioneer Hi-Bred	39V07	91.0	14.8	55.3	4.5	3.3	0.3
Peterson Farms	PFS 92G84	90.0	16.1	52.8	0.0	0.0	0.1
Seeds2000	2823 GT	89.3	18.0	53.8	8.0	6.9	2.5
Gold Country	81-19R	88.6	15.8	58.4	0.0	0.0	2.9
Monsanto	DKC30-20	88.0	13.9	55.9	3.8	0.0	6.1
Monsanto	DKC31-09	87.5	15.0	47.2	1.7	0.0	0.8
Wensman	W 8089VT2RIB	85.5	17.3	51.4	1.6	0.0	2.0
CHECK 3		84.5	19.7	52.1	12.4	16.6	0.4
Proseed	1185 VT2P	84.2	16.5	55.1	5.6	0.0	3.9
Hyland	8295	84.2	16.1	51.3	0.0	0.0	1.0
Northstar Genetics	80-280	83.6	16.8	52.5	5.4	0.0	2.2
G2 Genetics	5H-080™	82.5	14.7	52.9	0.0	0.0	0.0
Dyna-Gro	CX20VC73	79.4	16.5	55.7	3.4	0.0	5.4
Peterson Farms	PFS 76F82	77.0	16.0	53.4	0.0	0.0	0.1
Syngenta	N12R-3000GT Brand	76.9	16.7	57.8	0.0	7.8	0.0
Northstar Genetics	82-102	75.6	17.4	56.3	0.0	0.0	7.3
G2 Genetics	5H-279™	74.2	16.9	49.3	2.4	0.0	0.5
Pioneer Hi-Bred	P8210HR	73.6	16.8	52.9	6.2	3.0	0.9
Northstar Genetics	81-481	67.3	18.3	50.0	2.9	0.0	2.1
Dyna-Gro	D19RR91	56.2	16.4	48.1	3.3	0.0	3.7
	EXPERIMENT MEAN	94.0	16.8	53.4	3.4	1.6	2.6
	LSD (0.05)	32.1	3.0	7.4	8.8	7.8	10.7
	CV	17.9	8.9	6.8	130.9	236.4	203.1

EXP 3 OF THE NDSU CORN BREEDING PROGRAM (LAKOTA)

A LATTICE EXPERIMENTAL DESIGN SHOWED MORE EFFICIENCY THAN USING A RCBD FOR MOST TRAITS

THE EFFICIENCY DUE TO CONDUCTING LATTICE EXPERIMENT DESIGNS WAS 137 % MORE THAN IF WE WERE TO CONDUCT RCBD

Reduced yields were a consequence of drought conditions present in this particular location (milder than in Larimore)

As a consequence, we see some hybrids more stable than others when looking at the same hybrids in other northeastern locations