EXP 1 THOMPSON (THIS IS ONLY ONE LOCATION, CHECK FOR COMBINED DATA OF THE SAME HYBRIDS IN NORTHEAST ND)

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.

There was approximately a 20x average return on investment for the breeding program in 2011-2012. Actual genetic gains of northern improved NDSU hybrids were over $12 million in ND alone (more gains were achieved in western and northern ND and MN). In addition, the information generated in multi-location trials of the same industry hybrids across eastern ND regions only by the ND corn program was worth over $5 million for hybrid selection by farmers in 2011, based on the genetic differences found among hybrids.

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

COMPANY	HYBRID NAME	Grain Yield (bu/A)	Grain Moisture (%)	Test Weight (lb/bu)	Stalk Lodging (%)	Root Lodging (%)	Ear Drop (%)
Proseed	1083 GTCBLL	180.8	19.7	56.1	0.0	4.9	0.0
Peterson Farms	PFS 92G84	164.2	20.2	53.3	0.0	0.0	0.0
Stine Seeds	9140GTCBLL	163.0	20.3	55.7	0.0	0.0	0.0
Syngenta	N20Y-3000GT Brand	157.9	20.0	53.6	0.0	7.5	0.0
G2 Genetics	5H-587™	155.2	20.1	52.1	4.8	14.2	0.0
Seeds2000	2823 GTCBLL	146.1	20.2	51.6	0.0	27.4	0.0
NuTech	5N-183™	144.1	19.6	54.3	0.0	7.4	0.0
Hyland	8180	144.0	19.2	50.4	0.0	0.0	0.0
Pioneer Hi-Bred	P8581R	142.3	20.1	53.1	0.0	4.2	0.0
Peterson Farms	PFS 76J86	141.5	20.1	53.2	0.0	5.7	0.0
Seeds2000	2823 GT	141.1	20.2	51.8	0.0	13.1	0.0
Dyna-Gro	D26VP56	135.0	19.5	53.8	0.0	0.0	0.0
Gold Country	81-19R	133.6	19.1	57.0	0.0	2.9	0.0
Wensman	W 8089VT2RIB	133.0	19.8	52.6	0.0	20.3	0.0
Northstar Genetics	81-481	132.7	19.1	57.0	0.0	0.0	0.0
Northstar Genetics	80-280	131.8	19.1	53.8	0.0	5.4	0.0
Monsanto	DKC33-77	131.4	19.8	55.6	0.0	0.0	0.0

Syngenta	N17P-3000GT Brand	127.5	19.8	50.6	0.0	3.7	0.0
Northstar Genetics	82-102	124.4	19.8	56.1	0.0	17.4	0.0
Proseed	1185 VT2P	124.1	19.5	53.3	0.0	7.5	0.0
Proseed	1182 GTCBLL	122.5	19.2	54.0	0.0	12.3	0.0
NuTech	5B-782™	120.8	20.3	49.9	3.0	7.8	0.0
CHECK 3		120.4	22.3	48.8	0.0	26.5	0.0
Pioneer Hi-Bred	39V07	119.9	19.5	54.6	0.0	6.5	0.0
Syngenta	N12R-3000GT Brand	117.2	19.4	55.3	0.0	16.9	0.0
Dairyland	DS7085	116.9	19.9	53.5	1.4	15.8	0.0
Wensman	W 8085VT2RIB	115.5	19.6	53.7	1.4	5.7	0.0
Dyna-Gro	CX23VP35	115.3	19.5	52.3	1.6	0.0	0.0
Monsanto	DKC31-09	114.5	19.9	55.6	0.0	0.0	0.0
Pioneer Hi-Bred	P8210HR	113.3	19.0	54.8	0.0	1.4	0.0
G2 Genetics	5H-279™	112.4	19.9	55.0	1.3	20.7	0.0
G2 Genetics	3A-080™	110.7	19.3	53.0	0.0	0.0	0.0
CHECK 1		110.6	21.9	51.9	1.4	11.8	0.0
Peterson Farms	PFS 76F82	108.5	19.4	57.2	0.0	5.8	0.0
CHECK 2		106.2	20.1	51.1	1.5	4.4	0.0
G2 Genetics	5H-080™	99.6	19.5	51.7	2.8	20.6	0.0
Hyland	8295	96.0	19.4	50.2	0.0	12.5	0.0
Dyna-Gro	CX20VC73	95.1	19.3	55.8	0.0	0.0	0.0
Proseed	981 GTCBLL	93.4	19.5	54.6	1.5	18.8	0.0
Dairyland	DS9383SSX	90.1	19.4	50.8	1.3	0.0	0.0
Monsanto	DKC30-20	89.7	19.0	57.1	0.0	1.4	0.0
Dyna-Gro	D19RR91	81.8	18.9	56.5	0.0	0.0	0.0
	EXPERIMENT MEAN	124.4	19.7	53.6	0.5	7.9	0.0
	LSD (0.05)	33.0	0.7	2.2	3.2	18.6	0.0
	CV	13.3	1.8	2.0	290.3	122.2	0.0

EXP 2 OF THE NDSU CORN BREEDING PROGRAM (THOMPSON)

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

THE EFFICIENCY DUE TO CONDUCTING LATTICE EXPERMIENT DESIGNS WAS 115 % MORE THAN IF WE WERE TO CONDUCT RCBD