

**EXP 9 BARNEY (THIS IS ONLY ONE LOCATION, CHECK FOR COMBINED DATA OF THE SAME HYBRIDS IN SOUTHERN ND)
SENT FOR WEB POSTING ON OCTOBER 8, 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.

It is very common for agronomists to discard test trials. Sometimes their reasons are higher *Coefficients of Variation* (CVs) or large *Least Significant Differences* (LSDs). **Be Careful!** In many cases, data that are proposed to be discarded or given the advice not to look at could be the most useful! North Dakota often has severe weather for these trials and can easily expose hybrid deficiencies. CVs do not follow a magical limit, they depend on experiment means and if, for instance, yields are low due to drought stress, then CVs will be higher but very accurate too. Moreover if, for instance, in 2012 you see certain hybrids with > 50% lodging and other with < 10% lodging across locations, both CVs and LSDs would be very large but very useful to your hybrid selection. Like this, there are many examples! Uniform data collected in challenging locations are very useful!

COMPANY	HYBRID NAME	Grain Yield bu/A	Grain Moisture %	Test Weight lb/bu	Stalk Lodging %	Root Lodging %	Dropped Ears %
Dahlman	Dahlman R47-35VT3P	238.7	14.6	61.0	0.00	39.63	0
CHECK 3 (NDSU HYBRID)	(EXPERIMENTAL LINE ND09-377)	226.1	13.3	58.3	2.56	20.07	0
Pioneer Hi-Bred	P9411HR	224.8	15.5	60.0	0.00	26.83	0
Hyland	8295	212.7	15.9	60.8	0.00	32.05	0
Peterson Farms	PFS 98L90	201.9	18.3	60.3	2.22	40.00	0
Proseed	990 3000GT	192.3	15.9	58.4	0.00	16.22	0
Seeds2000	9202 VT2P	190.5	19.3	58.6	0.00	11.63	0
Wensman	W 7268VT3	186.0	18.0	58.0	1.06	23.40	0
Peterson Farms	PFS 75T93	185.7	15.6	60.3	0.00	28.98	0
G2 Genetics	5X-9402™	182.9	14.1	59.0	0.00	4.17	0
Proseed	1288 3111GT	181.8	16.9	55.7	2.86	14.29	0
G2 Genetics	5X-795™	180.2	16.0	59.6	0.00	20.51	0
CHECK 4 (NDSU HYBRID)	(EXPERIMENTAL LINE ND09-367)	178.1	16.6	60.7	0.00	11.63	0
Seeds2000	9503 VT2P	174.6	16.4	59.2	2.63	18.42	0
Pioneer Hi-Bred	P9675AMX	171.6	16.0	60.2	0.00	50.00	0
Monsanto	DKC43-10	170.8	17.2	60.4	0.00	68.66	0
NuTech	5B-798™	170.4	16.1	59.2	1.56	23.81	0
Seeds2000	2903 GTCBLL	166.9	18.2	56.0	0.00	0.00	0
Monsanto	DKC48-12	165.8	16.1	58.0	1.16	53.26	0

Stine Seeds	9207 3000GT	165.5	17.1	60.0	0.00	20.31	0
NuTech	5B-9102	163.3	15.9	59.2	0.00	47.17	0
Proseed	1292 VT2P	162.7	16.5	57.7	0.00	29.76	0
Proseed	1193 VT3P	158.1	16.3	60.0	1.39	52.42	0
Monsanto	DKC46-20	157.2	15.6	59.2	0.00	0.00	0
Hyland	8300	153.6	17.0	60.0	1.39	47.03	0
Dahlman	Dahlman R48-32VT3P	152.0	16.0	59.6	0.00	62.22	0
G2 Genetics	5Z-198™	149.6	12.5	61.0	0.00	39.21	0
G2 Genetics	5X-895™	148.4	13.6	58.9	0.00	31.11	0
Wensman	W 7140VT3PRO	148.3	11.1		1.25	15.18	0
CHECK 2		147.2	17.6	60.3	0.00	22.73	0
Northstar Genetics	94-594	146.7	14.9	59.6	0.00	52.94	0
CHECK 5		140.0	14.3	59.1	0.00	50.54	0
NuTech	5N-001™	138.6	16.8	58.1	0.00	6.58	0
Proseed	1295 VT3P	130.5	16.5	59.6	0.00	6.25	0
Seeds2000	9504 VT3P	128.8	17.3	56.0	0.00	16.22	0
G2 Genetics	5H-399™	125.7	14.0	59.6	0.00	77.45	0
CHECK 1		119.6	12.6	58.1	12.50	42.86	0
Northstar Genetics	96-596	113.0	12.3	57.3	0.00	69.41	0
Peterson Farms	PFS 76R92	111.7	15.8	58.1	0.00	48.10	0
G2 Genetics	5X-193™	103.0	17.1	59.9	0.00	20.00	0
Integra	9455VT3Pro	101.9	15.7	57.7	0.00	18.60	0
Stine Seeds	9311 VT3 PRO	90.0	16.1	58.8	0.00	35.14	0
	EXPERIMENT MEAN	160.9	15.8	59.0	0.73	31.30	0
	LSD (0.05)	34.4	3.4	3.1	6.17	60.32	0
	CV	16.9	5.7	3.5	418.40	94.50	0
	EFFICIENCY RELATIVE TO						
	RCBD DESIGN		YES	YES	YES	YES	
EXP 9 OF THE NDSU CORN BREEDING PROGRAM (BARNEY)							
A LATTICE EXPERIMENTAL DESIGN SHOWED MORE EFFICIENCY THAN USING A RCBD FOR MOST TRAITS							
THE EFFICIENCY FOR ROOT LODGING WITH LATTICE WAS 122 % OVER RCBD							
Yields of some susceptible hybrids were affected by drought and lodging							

The NDSU corn breeding program planted 39 (in 2011) and 36 (in 2012) experiments across >20 state locations. Data across 2011 and 2012 showed that several NDSU corn products were not only very competitive in yield but also demonstrated stability across years with high levels of green snap and lodging resistance as well as cold/drought tolerance, and fast dry down. Six of these lines were provided to our exclusive partner in April 2012 and carry tropical genes adapted to North Dakota. NDSU is the sole provider of these products stable across year. We need to increase the genetic diversity of northern U.S. hybrids.

The North Dakota Corn Utilization Council and the Minnesota Corn Promotion Council support corn breeding and testing efforts.