**2018 Growing Season Report**

**NDSU Extension Service Main Station**

**Corn Hybrid Testing Program**

**Zone 1, Northern Counties**

**Grand Forks County:**

**Planting Date**: May 12

**Harvest Date:** October 24

**Soil Temp @ planting**: 63.7o

**Seeding Rate (final stand count)**: 34,000 (34,700)

**Prior crop**: Sugarbeets

**Herbicide treatments**: Laudis 3 fl oz./A + MSO 1.5 pt./A

**Soil units**: I119A—Bearden silty clay loam, 0 to 2 percent slopes

**Location**: 47°47'22.00"N, 97° 3'56.00"W

**Cooperator**: Chuck Nelson Farms

**# of Entries:** 43 RR hybrids, 4 conventional hybrids + 3 check varieties

**Trial average yield:** 175 bu

**Notes:** This trial got off to a poor start. With the prior crop being sugarbeets, there was a deficit of symbiotic mycorrhizae which help the corn extract phosphorus from the soil. This resulted in a few weeks of purple leaves in most, but not all, hybrids around the V3-4 stage. Known as fallow syndrome, normally this syndrome doesn’t result in much yield loss and the crop recovered within a few weeks. Being a conventional site, we use Laudis as our preferred herbicide, however we found that witchgrass, green foxtail, and wild oats were resistant to this herbicide at this site. These weeds ended up getting somewhat out of control in the trial. Many were hand weeded or tilled out using a garden rototiller, but yield still may have been impacted, somewhat. With a dry spell in July and August, the lack of subsoil moisture from the sugarbeets, and the weeds, the overall yields were likely impacted. A late August hailstorm didn’t help things along, either. Damage was minimal, but likely forced the corn into early maturity. Windy days near harvest also resulted in some lodging within the trial. Data was collected on only 2 reps during harvest.

**Nelson County:**

**Planting Date**: May 10

**Harvest Date:** October 23

**Soil Temp @ planting**: 50o

**Seeding Rate (final stand count)**: 34,000 (33,300)

**Prior crop**: pinto beans

**Soil units**: G144B—Barnes-Buse loams, 3 to 6 percent slopes

**Location**: 47°45'14.08"N, 97°55'36.10"W

**Cooperator**: Don Hillesland

**# of Entries:** 44 hybirds + 5 check varieties

**Trial average yield:** 230bu/ac

**Notes:** There were very few issues in this trial this year, and the yields appear to confirm that. There was one episode of wind damage/green snap, but it was very isolated and didn’t heavily affect too many plots, so no data on green snap were collected.

**Ramsey County:**

**Planting Date**: May 10

**Harvest Date:** October 22

**Soil Temp @ planting**: 46.5o

**Seeding Rate (final stand count)**: 34,000 (32,900)

**Prior crop**: pinto beans

**Soil units**: F143A—Barnes-Svea loams, 0 to 3 percent slopes

**Location**: 48°16'4.24"N, 98°38'36.45"W

**Cooperator**: Paul Becker

**# of Entries:** 44 hybirds + 5 check varieties

**Trial average yield:** 223 bu/ac

**Notes:** This trial also had a successful growing season. There were two minor set backs, however, but they did not appear to negatively affect the trial. The first was a hail event around the V10 stage which did some leaf damage, however the crop was growing out of the damage just fine when observed later in the season. The second was what appeared to be a trail running through half the trial and ending at one plot. It appears to be an animal trail, but the missing stalks appeared to never have germinated, or were stunted in growth. The plot were the trail ended was thrown out of the trial, due to a low population of stalks. The remainder of the plots had minimal damage and didn’t appear to be negatively affected in the final yields.

**Marshall County, MN**

**Planting Date**: May 12

**Harvest Date:** October 22

**Soil Temp @ planting**: 63.5o

**Seeding Rate (final stand count)**: 34,000 (33,600)

**Prior crop**: soybeans

**Herbicide treatments**: Roundup 32 fl oz

**Soil units**: I123A—Bearden-Colvin silty clay loams, 0 to 2 percent slopes

**Location**: 48°10'51"N, 97° 2'48"W

**Cooperator**: Chad Anvinson

**# of Entries:** 44 hybirds + 5 check varieties

**Trial average yield:** 223 bu/ac

**Notes:** This trial appeared to be doing quite well throughout the growing season. There was a couple of areas of Goss’ Wilt detected, but it didn’t appear to be widespread. However, after receiving a drone image from the cooperator late in the season, it appears that there were some issues that appeared, and they may have been weather related. Two areas of the trial, in particular, matured much sooner and showed significantly lower test weights, moisture, and yield. Drought during the grain filling stage is the likely cause, and possibly subsoil issues that we were not aware of, that cause the corn to experience high levels of drought stress.

**Zone 2, Central Counties**

**Cass County:**

**Planting Date**: May 4th

**Harvest Date:** October 24th

**Soil Temp @ planting**: 56o

**Seeding Rate:** 34,000

**Prior crop**: soybeans

**Herbicide treatments**: Laudis 3 fl oz/A + MSO 1.5 pt./A

**Fertilizer applications**: 200# N as urea

**Soil units**: Kindred-Bearden silty clay loams, 0 to 2 percent slopes

**Location**: 47° 0'16.36"N, 97° 7'17.17"W

**Cooperator**: NDSU Prosper Research Station

**Trial average yield:** 247 bu/ac

**Notes**: There were no major issues with this trial and yields turned out quite well

**Traill County:**

**Planting Date**: May 14th

**Harvest Date:** October 22

**Soil Temp @ planting**: 57o

**Seeding Rate (final stand count)**: 34,000 (33,200)

**Prior crop**: soybeans

**Herbicide treatments**: RoundUp

**Soil units**: Gardena silt loam, 0 to 2 percent slopes

**Location**: 47°19'49.38"N, 97° 5'21.00"W

**Cooperator**: Sarah Lovas

**Trial average yield:** 252 bu/ac

**Notes:** This trial also had no issues associated with it.

**Steele County:**

**Planting Date**: May 12
**Harvest Date:** October 23

**Soil Temp @ planting**: 56o

**Seeding Rate (final stand count)**: 34,000 (33,900)

**Prior crop**: conventional corn

**Soil units**: Fram-Wyard loams, 0 to 3 percent slopes

**Location**: 47°26'24.89"N, 97°39'6.75"W

**Cooperator**: Brandon Roller & Dave Mehus

**Trial average yield:** 210 bu/ac

**Notes:** This site suffered from two issues this season: dry weather and Goss’ wilt. While areas only a few miles from the sites appeared to have sufficient rain, this location was left dry during the grain fill stage. In addition, Goss’ Wilt appeared widespread throughout the trial. Disease rating were taken by the Plant Pathology department and some hybrids suffered worse than others, but overall yields were likely negatively affected by what went on at this trial.

**Zone 3, Southern Counties:**

**Ransom County:**

**Planting Date**: May 8

**Harvest Date**: October 20th

**Soil Temp @ planting**: 57.7

**Seeding Rate (final stand count)**: 34,000 (33,900)

**Prior crop**: soybeans

**Herbicide treatments**: Laudis 3 fl oz + MSO 1.5 pt./A

**Soil units**: Barnes-Svea loams, 0 to 3 percent slopes

**Location**: 46°26'26.33"N, 97°48'3.30"W

**Cooperator**: Kyle Heuther

**Trial average yield:** 262 bu/ac

**Notes:** Our southern conventional site was hit with a strong windstorm in July, resulting in widespread green snap within the trial. Notes were taken and the results analyzed and presented in the final tables. It appeared earlier maturing hybrids were slightly more susceptible than the later ones, but most were affected to some extent: some more so than others. There was also some Goss’ wilt at the margins of the trial, but didn’t appear to spread anywhere within the trial.

**Richland County:**

**Planting Date**: May 7th

**Harvest Date:** October 20

**Soil Temp @ planting**: 61o

**Seeding Rate (final stand count)**: 34,000 (32,200)

**Prior crop**: soybeans

**Soil units**: Gardena silt loam, 0 to 2 percent slopes

**Location**: 46°13'30.71"N, 97°13'39.60"W

**Cooperator**: Dan & Matt Thompson

**Trial average yield:** 266 bu/ac

**Notes:** No major issues were detected at this site, however there was possibly a few spots within the trial that were infected with Goss’ wilt based on aerial scouting. The infestations didn’t appear widespread and appeared to have little effect on final yields.

**Sargent County:**

**Planting Date**: May 7th

**Harvest Date:** October 30

**Soil Temp @ planting**: 57.5o

**Seeding Rate (final stand count)**: 34,000 (33,600)

**Prior crop**: soybeans

**Herbicide treatments**:

**Soil units**: Hamerly-Tonka complex, 0 to 3 percent slopes 70%

 Aastad-Forman loams, 0 to 3 percent slopes 30%

**Location**: 46°12'42.13"N, 97°39'16.97"W

**Cooperator**: Casey Decker

**Trial average yield:** 254 bu/ac

**Notes:** No major issues at this site this season. There was some scattered Goss’ wilt within the trial, but the infections were late in the season and didn’t appear to affect the yield much. No notes were taken on the extent of the disease.