**2017 Growing Season Report**

**NDSU Extension Service Main Station**

**Corn Hybrid Testing Program**

**Zone 1, Northern Counties**

**Grand Forks County:**

**Planting Date**: May 10

**Harvest Date:** October 24

**Soil Temp @ planting**: 54o

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

**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°47'37.21"N, 97° 3'55.63"W

**Cooperator**: Chuck Nelson Farms

**# of Entries:** 73 + 5 check varieties

**Trial average yield:** 205 bu/ac

**Notes:** Growing conditions were excellent in Grand Forks this year. The site received a surplus of moisture early and mid-season, and held on through a drier August & September. A plot tour was held in August with good attendance, with the Nelson Farms hosting a dinner afterwards.

**Nelson County:**

**Planting Date**: May 10

**Harvest Date:** October 25

**Soil Temp @ planting**: 50o

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

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

**Location**: 47°48'59.30"N, 97°57'40.84"W

**Cooperator**: Don Hillesland

**# of Entries:** 60 + 5 check varieties

**Trial average yield:** 134-143 bu/ac

**Notes:** The Nelson County site was beset with several factors against it, which resulted in it being removed from the analysis. There was some early season weed pressure that may have set some plots back, but what really hurt the trial was a lack of moisture and its location on a low hill top, and a very heavy common rust infection. Rainfall through the growing season only averaged about 60% of normal.

**Ramsey County:**

**Planting Date**: May 9

**Harvest Date:** October 25

**Soil Temp @ planting**: 58o

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

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

**Location**: 48°15'24.94"N, 98°39'33.70"W

**Cooperator**: Paul Becker

**# of Entries:** 60 + 5 check varieties

**Trial average yield:** 146 bu/ac

**Notes:** It has been difficult to ascertain exactly what happened in this county to cause very poor results. One is clearly a lack of moisture in the area, but based on yield data, yield heat maps, and aerial photos at different times of the season, it doesn’t explain everything. It will for the time being, remain a mystery.

**Marshall County, MN**

**Planting Date**: May 9

**Harvest Date:** October 24

**Soil Temp @ planting**: 60o

**Seeding Rate (final stand count)**: 34,000 (none taken)

**Herbicide treatments**: Roundup 32 fl oz and Laudis 3 fl oz (6/5/17)

**Fertilizer applications**: Fall applied: 103-52-12

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

**Location**: 48°11'19.03"N, 97° 2'28.13"W

**Cooperator**: Chad Anvinson & Jon Nelson

**# of Entries:** 60 + 5 check varieties

**Trial average yield:** 205 bu/ac

**Notes:** Marshall County performed exceptionally well this year. The cooperator and extension agent in the county did a great job of assisting us with scouting the trial, as it was quite a drive to bring equipment there. Weed pressure was tackled early and never a problem in the trial. The only issue was the wind during harvest week that caused some lodging throughout the trial.

**Zone 2, Central Counties**

**Cass County:**

**Planting Date**: May 3

**Harvest Date:** October 23

**Soil Temp @ planting**: 60o

**Seeding Rate (final stand count)**: 34,000 (32,400)

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

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

**Soil units**: 70%: I373A—Kindred-Bearden silty clay loams, 0 to 2 percent slopes

 30%: I492A—Bearden-Lindaas silty clay loams, 0 to 2 percent slopes

**Location**: 47° 0'6.23"N, 97° 6'47.78"W

**Cooperator**: NDSU Prosper Research Station

**Notes:** Our Prosper location performed well throughout the season with very few issues until near the end when our drone picked up an anomaly across the trial and a couple of plots infected with Goss’ Wilt. The main result of this anomaly was a difference in maturity from one portion of the trial to another, across all replications. We have not been able to discern what caused the differences across the trial, but it did affect the statistical significance of the results, thus they were not included in the combine analysis, but rather reported as a stand-alone trial.

**Traill County:**

**Planting Date**: May 4

**Harvest Date:** October 25

**Soil Temp @ planting**: 57o

**Seeding Rate (final stand count)**: 34,000 (31,500)

**Herbicide treatments**: Armezon Pro & Round up 6/8

**Soil units**: I209A—Swenoda fine sandy loam, 0 to 3 percent slopes

**Location**: 47°24'11.31"N, 97°23'25.65"W

**Cooperator**: Kevin Elliott

**Notes:** This trial was our highest yielding trial in the Central zone despite a few setbacks during the season. The first was some high winds that damaged a few plots in very narrow bands. These plots were excluded from the results. The second was the discovery of Goss’ Wilt in the trial using our drone. The disease significantly affected three plots, but dozens of plots, if not the whole trial, appeared to be infected later in the season. The infection was late enough, however, not to impact yields at all. Climate conditions were near normal throughout the season, including rainfall and growing degree days.

**Steele County:**

**Planting Date**: May 3
**Harvest Date:** October 30 & 31

**Soil Temp @ planting**: 56o

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

**Soil units**: 66%: G211A—Fram-Wyard loams, 0 to 3 percent slopes

 33%: G229A—Heimdal-Emrick loams, 0 to 3 percent slopes

**Location**: 47°26'33.62"N, 97°38'36.29"W

**Cooperator**: Brandon Roller

**Notes:** Steele County performed very well this season. Like Traill County, growing conditions were near normal the entire season. The open nature of the plot within a soybean field caused some minor lodging during the harvest season, but the damage was limited. One plot was discovered to have a mid-season Goss’ Wilt infection, and it did spread to the neighboring plots with no appreciable damage to those plots. Again, having a drone was indispensable in discovering these infected plots. It would appear that mid to late August would be the best time to scout fields for Goss’ Wilt, as this is when the early and mid-season infections begin to cause the tops of corn plants to die off. A plot tour hosted by the Steele Co. Extension Service was conducted in early September and attendance was good at approximately 30 individuals.

**Zone 3, Southern Counties:**

**Ransom County:**

**Planting Date**: May 8

**Harvest Date**: October 26

**Soil Temp @ planting**: 63o

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

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

**Soil units**: 85%: G143B—Barnes-Svea loams, 0 to 6 percent slopes

 15%: G112A—Hamerly-Tonka-Parnell complex, 0 to 3 percent slopes

**Location**: 46°26'26.92"N, 97°48'12.25"W

**Cooperator**: Kyle Heuther

**Notes:** Despite lower than normal precipitation and a shortage of growing degree day’s this year, our southern zone sites, including Ransom County, performed very well this year. At harvest time there were issues with lodging due to the high winds that week and many plots were affected, but damage was generally minimal, with less than 10% damage to most plots. A plot tour was held in early September and Heuther Farms and the Ransom Crop Improvement Assoc. hosted a generous supper afterwards with about 30 individuals in attendance.

**Richland County:**

**Planting Date**: May 5

**Harvest Date:** October 26

**Soil Temp @ planting**: 66o

**Seeding Rate (final stand count)**: 34,000 (34,100)

**Soil units**: I202A—Gardena silt loam, 0 to 2 percent slopes

 I386A—Perella silty clay loam, stratified substratum, 0 to 1 percent slopes

**Location**: 46°13'30.12"N, 97°14'9.41"W

**Cooperator**: Dan Thompson

**Notes:** Richland County has always been a very well managed site. It is planted into a strip-tilled field, so there is no gaps between our trial and the cooperators field. Visually, throughout the season and during harvest there were no issues, and the trial yielded fairly well. However, there were a few poorly yielding plots in the last replication that caused us to exclude the entire rep. from the final results. The reasons for these bad plots is unknown.

**Sargent County:**

**Planting Date**: May 5

**Harvest Date:** October 28

**Soil Temp @ planting**: 66o

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

**Herbicide treatments**: Atrazine: .66 pts, Armezon Pro, 18 oz, Round up: 32 oz

**Soil units**: G193B—Forman-Aastad loams, 3 to 6 percent slopes

**Location**: 46°13'29.85"N, 97°42'14.10"W

**Cooperator**: Casey Decker

**Notes:** Despite some early season weed pressure that also appeared to be soil related, this trial turned out extremely well in terms of yield across all replications. The crop improvement association held a plot tour in early September, which was well attended, and was followed with a social time at the Gwinner golf course.