Oklahoma Cooperative Extension Service CR-2163
1214
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Oklahoma Corn Performance Trials, 2014

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Trial Objectives and Procedures

Each year the Oklahoma Cooperative Extension Service conducts corn performance trials in Oklahoma. These trials provide producers, extension educators, industry representatives, and researchers with information on corn hybrids marketed in Oklahoma. Company participation was voluntary, so some hybrids marketed in Oklahoma were not included in the test. Company or brand name, entry designation, plant characteristics, maturity information, and trial locations were provided by the companies and were not validated by OSU; therefore, we strongly recommend consulting company representatives for more detailed information regarding these traits and disease resistance ratings (Table 1).

Irrigated test plots were established at the Oklahoma Panhandle Research and Extension Center (OPREC) near Goodwell and the Joe Webb farm near Guymon. Three rainfed trials were planted in north central Oklahoma near Burlington, Enid, and Ponca City. Fertility levels, herbicide use, and soil series (when available) are listed with data. Individual plots were two 25-foot rows seeded at a target population also listed with the data. Plots were trimmed to 20 feet prior to being harvested to determine grain yield. A separate ensilage trial was planted with 10 feet of one row harvested to determine yield. Experimental design for all locations was a randomized complete block with four replications. Grain yield is reported consistent with U.S. No. 1 grade corn (56 lbs/bu and adjusted to moisture content of 15.5 percent). Corn ensilage was har- vested later than optimum for some hybrids in 201 with a moisture content of less than 55 percent and production is reported as tons/ac adjusted to 65 percent moisture.

Growing Conditions

The winter and early spring was one of the driest on record (Table 1). This lead to soil moisture being limited in some areas, and planting delays due to dry conditions (Figure 1). Although most corn in the body of the state was planted in late March or early April.

Highlights

Producers reported excellent yields east of I-35. Grain yields were helped by abundant rainfall in June and cooler than average temperatures in July. Grain yields at the Enid location were similar to 2013. The Ponca City location had grain yields over 200 bu/ac, which are the highest obtained in the last 16 years of testing. In the Panhandle region a storm on June 30th with high winds led to some fields being cut for silage or baled due to green snap. Grain yields for the drip location at OPREC were some of the highest ever obtained at this site.

In the Panhandle planting started mid-April and continued with short interruptions due to precipitation. Pre-irrigation was required for emergence of most irrigated corn in the Panhandle for emergence due to lack of rainfall throughout the winter and early spring. Precipitation was limited in most regions until late May after which it was at or above the long-term average. Temperatures during grain fill generally late June and July were near or below the long-term average (Figure 2). The average to above average yields can also be attributed to the above average precipitation in June (Figure 3). With the cooler temperatures and the rainfall the highest grain yields in the last 16 years of testing were obtained at the Ponca City location. For the panhandle region the cooler temperatures in July allowed for excellent pollination for corn that was able to withstand a storm on June 30th which had winds in excess of 60 mph. Some fields in the panhandle were baled or chopped for silage due to green snap from the storm (ratings for the trials at OPREC are only for companies that entered the trials, all companies had hybrids that green snapped from conversations with producers). No major insects or diseases were reported during the growing season. With the cooler temperatures in July and August harvest was later than normal for all regions of the state.

Results

Grain yield, test weight, harvest moisture, and plant populations for are presented in Tables 2 through 6. Least Significant Differences (L.S.D.) are shown at the bottom of each table. Unless two entries differ by at least the L.S.D. shown, little confidence can be placed in one being superior to another. The coefficient of variation (C.V.) is provided as an estimate of the precision of the data with respect to the mean. To provide some indication of yield stability, 2-year means are also provided in tables when available. Producers interested in comparing hybrids for consistency of yield should consult these.

The following people have contributed to this report by assist- ing in crop production, data collection, and publication; Jeff Bedwell, Tommy Puffinbarger, Donna George, Camron Nisly, Corbin DeWitt, Rick Nelson and Cameron Murley. Their efforts are greatly appreciated.

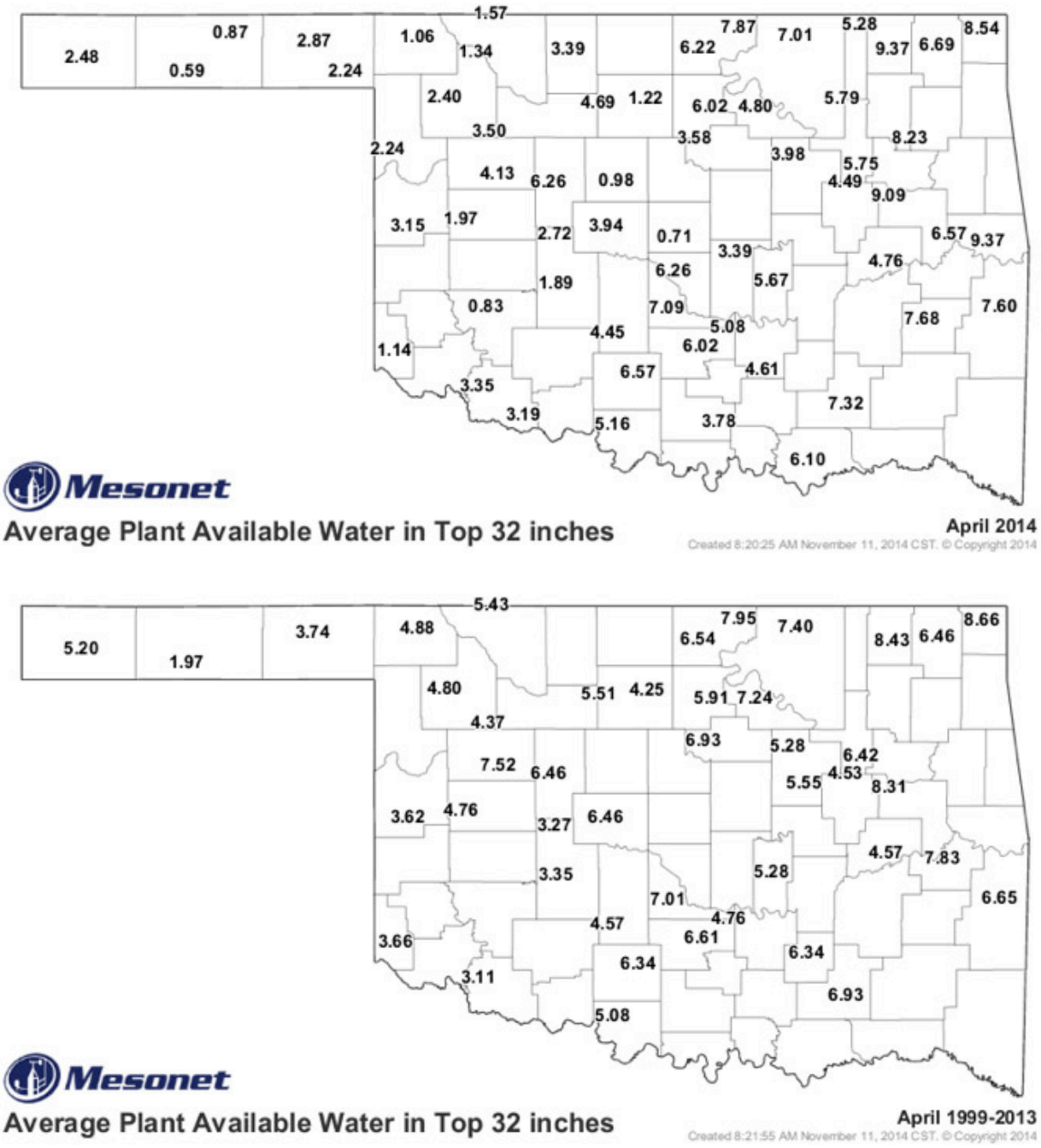

Figure 1. Long-term average soil moisture in top 32 inches of soil on April 1 and in 2014.

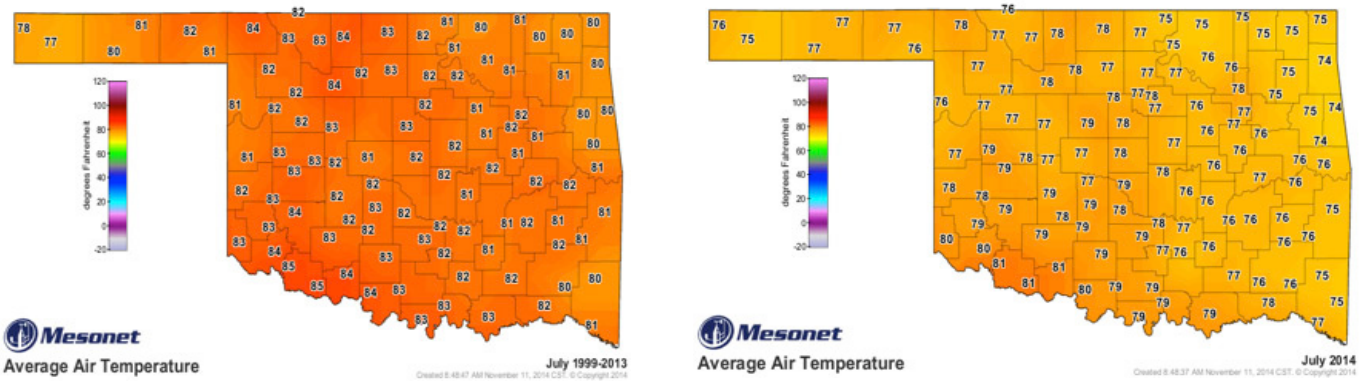

Figure 2. Long-term and 2014 average temperature for July.

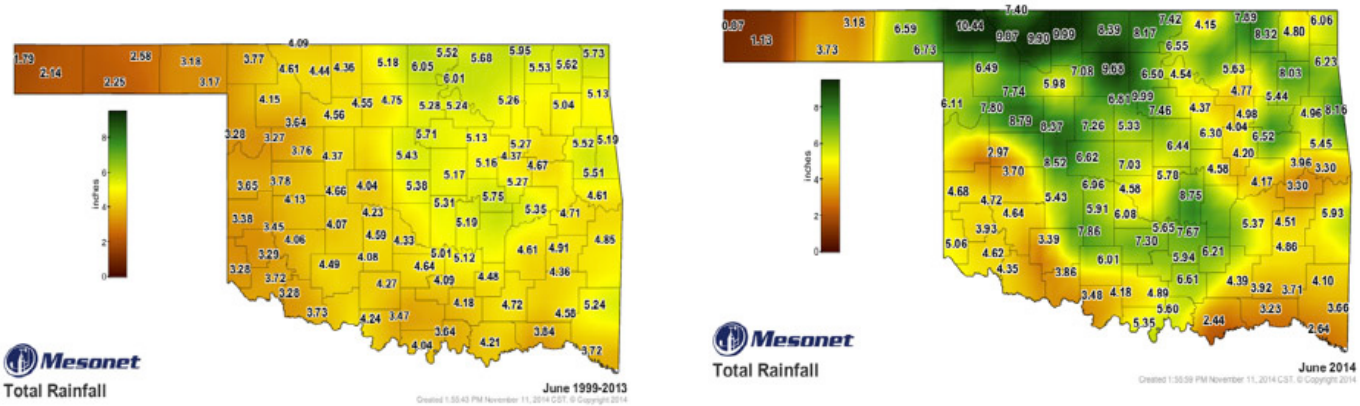

Figure 3. Departure from the average rainfall for June 2014.

Table 1. Oklahoma precipitation for November 1, 2013 through March 31, 2014.

Climate Division	*Total Rainfall*	*Normal*	*Departure from Pct of Normal*	*Rank since 1921 (93 periods)*	*Driest on Record*
Panhandle	1.42"	-2.95"	32%	7th driest	0.78" (1954-55)
N. Central	2.68"	-5.16"	34%	5th driest	1.81" (1955-56)
Northeast	6.14"	-6.72"	48%	6th driest	3.21" (1955-56)
W. Central	2.66"	-4.41"	38%	10th driest	1.64" (1955-56)
Central	4.66"	-6.11"	43%	6th driest	2.70" (1955-56)
E. Central	9.73"	-6.15"	61%	16th driest	6.58" (1955-56)
Southwest	3.64"	-4.37"	45%	13th driest	1.79" (1955-56)
S. Central	8.18"	-4.99"	62%	19th driest	4.47" (1966-67)
Southeast	13.89"	-5.66"	71%	23rd driest	9.28" (1966-67)
Statewide	5.76"	-5.22"	52%	8th driest	3.77" (1955-56)

Table 2. Characteristics of Corn Hybrids in Oklahoma Corn Performance Trials, 2014.

Company Brand Name	*Hybrid*	*Plant Characteristics* SV	SS	SG	EP	*Maturity Days*	*Trial Locations*
Terral Seed, Inc	Rev® 17HR73™	NA	NA	NA	NA	107	All
Terral Seed, Inc	Rev® 18BHR84™	NA	NA	NA	NA	108	All
Terral Seed, Inc	Rev® 22BHR55™	NA	NA	NA	NA	113	All
Terral Seed, Inc	Rev® 22BHR43™	NA	NA	NA	NA	112	All
Terral Seed, Inc	Rev® 28HR20™	7	7	7	MH	118	All
Terral Seed, Inc	Rev® 26BHR50™	3	3	3	MH	116	All
Terral Seed, Inc	Rev® 28R10™	7	7	7	MH	118	All
Terral Seed, Inc	Rev® 25BHR44™	NA	NA	NA	NA	115	All
Terral Seed, Inc	Rev® 27HR83™	NA	NA	NA	NA	117	All
Terral Seed, Inc	Rev® 24BHR93™	NA	NA	NA	NA	114	All
Mycogen Seeds	2V709	2	3	3	M	112	All
Mycogen Seeds	2V717	2	4	3	M	111	All
Mycogen Seeds	2Y816	3	2	2	MH	117	Pan. Only
Mycogen Seeds	2C799	NA	NA	NA	M	113	Pan. Only
Mycogen Seeds	TMF2L825	2	2	2	H	118	Pan. Only
Mycogen Seeds	2C788	3	3	3	M	113	Pan. Only
Mycogen Seeds	TMF2H747	2	3	2	H	113	Pan. Only
Mycogen Seeds	2C788	3	3	3	M	113	All
Mycogen Seeds	2Y767	3	3	3	M	113	Pan. Only
NuTech Seed, L.L.C	5F-200™	NA	NA	NA	NA	100	NC
NuTech Seed, L.L.C	5Z-002™	NA	NA	NA	NA	102	NC
NuTech Seed, L.L.C	5H-806™	NA	NA	NA	NA	106	NC
NuTech Seed, L.L.C	5Z-707™	NA	NA	NA	NA	107	NC
NuTech Seed, L.L.C	5F-709™	NA	NA	NA	NA	109	NC
NuTech Seed, L.L.C	5H-905™	NA	NA	NA	NA	105	NC
Hoegemeyer	HPT 8066 AM	NA	3	4	4	110	NC
Hoegemeyer	HPT 8408AM	NA	3	2	4	114	NC
Hoegemeyer	HPT 7644 Hx/LL/RR	NA	4	4	5	106	NC

* Plant Characteristics: SV - Seedling Vigor; SS - stalk strength; SG - stay green; EP - ear placement (Low, Medium, High)
Rating scale for above characteristics except ear placement 1 = excellent - 9 = poor
NA: Not available at this time

Trial locations: All; all trial locations, Pan.only; Panhandle trials only; NC only; North Central locations only

Table 3. Grain Yield and Harvest Parameters for the Garfield/Grant county location (Enid), Oklahoma Corn Performance Trials, 2014.

Company Brand Name	Hybrid	Grain yield Bu/ac 2014	Grain yield Bu/ac 2-year	Grain yield Bu/ac 3-year	Test weight lb/bu 2014	Test weight lb/bu 2-year	Test weight lb/bu 3-year	Harvest Moisture %	Plant Population plants/ac
Terral Seed, Inc	Rev® 22BHR43™	141	133	121	59	59	57	12.3	21,200
Mycogen Seeds	2V717	143	131	120	55	55	53	11.7	23,500
Mycogen Seeds	2V709	130	123	116	55	56	54	11.8	20,400
Hoegemeyer	HPT 8066 AM	135	123	113	56	56	54	11.6	23,000
Hoegemeyer	HPT 8408AM	145	119	110	56	55	54	12.7	25,300
Terral Seed, Inc	Rev® 24BHR93™	127	110	101	58	58	55	12.6	24,600
Terral Seed, Inc	Rev® 27HR83™	111	103	96	57	57	55	12.2	22,800
Terral Seed, Inc	Rev® 28HR20™	124	91	85	58	57	55	13.3	27,800
Terral Seed, Inc	Rev® 28R10™	105	87	84	58	58	56	12.8	24,100
Terral Seed, Inc	Rev® 18BHR84™	137	135	----	56	56	----	11.8	24,800
Terral Seed, Inc	Rev® 17HR73™	142	123	----	55	55	----	11.9	23,300
Terral Seed, Inc	Rev® 25BHR44™	120	102	----	58	58	----	13.3	25,400
NuTech Seed, L.L.C	5H-905™	137	----	----	53	----	----	10.9	24,300
NuTech Seed, L.L.C	5Z-002™	133	----	----	55	----	----	11.2	27,100
NuTech Seed, L.L.C	5F-709™	133	----	----	56	----	----	11.7	25,900
Hoegemeyer	HPT 7644 Hx/LL/RR	132	----	----	54	----	----	11.2	24,300
Terral Seed, Inc	Rev® 22BHR55™	130	----	----	57	----	----	11.7	24,900
Mycogen Seeds	2C788	130	----	----	55	----	----	11.7	24,700
Terral Seed, Inc	Rev® 26BHR50™	126	----	----	58	----	----	13.7	26,400
NuTech Seed, L.L.C	5H-806™	123	----	----	54	----	----	11.1	23,500
NuTech Seed, L.L.C	5Z-707™	119	----	----	55	----	----	11.5	20,600
NuTech Seed, L.L.C	5F-200™	118	----	----	54	----	----	11.1	30,200
	Mean	129	115	105	56	57	55	12.0	24,300
	CV %	10.6	13.8	14.4	1.2	1.5	1.9	4.6	18.2
	L.S.D.	19	16	12	1	1	1	0.8	6,300

Cooperator: Ed Regier
Soil Series: Dale Silt Loam **Strip-Till:** Following soybean in 2013 **Soil Test:** N: 114 P: 38 K: 617 pH: 6.6
Fertilizer: N: 20 lbs/ac + 5 gal/ac 10-34-0 in row with planter **Herbicide:** 28 oz RT3 + 4 oz Sterling Blue + 1 lb atrazine + 3.3 oz Corvus
Target population: 25,000 plants/ac **Planting Date:** April 2, 2014 **Harvest Date:** September 11, 2014

	Apr.	May	June	July	**Total**
2014:	0.55	1.40	9.68	6.03	**17.66**
Long term mean:	2.99	4.86	4.26	2.89	**15.00**

Table. 4 Grain Yield and Harvest Parameters for the Kay county location (Ponca City), Oklahoma Corn Performance Trials, 2014.

Company		*Grain yield Bu/ac*		*Test weight lb/bu*		*Harvest*	*Plant*
Brand Name	*Hybrid*	*2014*	*2-year*	*2014*	*2-year*	*Moisture %*	*Population plants/ac*
Mycogen Seeds	2V717	177	156	55	55	13.0	27,000
Hoegemeyer	HPT 8408AM	202	156	55	57	14.6	28,300
Terral Seed, Inc	Rev® 28R10™	184	152	59	59	15.3	23,200
Mycogen Seeds	2V709	177	152	56	56	13.5	24,200
Terral Seed, Inc	Rev® 27HR83™	184	151	58	58	14.0	24,900
Hoegemeyer	HPT 8066 AM	184	149	55	56	12.9	25,800
Terral Seed, Inc	Rev® 17HR73™	174	148	56	56	13.1	24,300
Terral Seed, Inc	Rev® 25BHR44™	182	148	59	59	14.6	24,600
Terral Seed, Inc	Rev® 18BHR84™	164	147	56	57	12.9	29,600
Terral Seed, Inc	Rev® 24BHR93™	166	145	57	58	14.0	25,600
Terral Seed, Inc	Rev® 28HR20™	147	136	58	59	16.0	21,000
Terral Seed, Inc	Rev® 22BHR43™	144	132	59	59	14.0	25,700
Mycogen Seeds	2C788	221	----	57	----	14.1	29,000
Terral Seed, Inc	Rev® 22BHR55™	181	----	56	----	13.0	27,400
Terral Seed, Inc	Rev® 26BHR50™	181	----	59	----	15.7	25,700
NuTech Seed, L.L.C	5F-709™	173	----	56	----	12.7	24,700
Hoegemeyer	HPT 7644 Hx/LL/RR	172	----	55	----	12.2	27,200
NuTech Seed, L.L.C	5H-806™	170	----	56	----	12.1	24,300
NuTech Seed, L.L.C	5Z-002™	161	----	56	----	12.3	25,700
NuTech Seed, L.L.C	5H-905™	161	----	55	----	12.2	25,000
NuTech Seed, L.L.C	5F-200™	150	----	56	----	12.0	24,600
NuTech Seed, L.L.C	5Z-707™	135	----	55	----	12.3	20,100
	Mean	173	148	57	57	13.5	25,400
	CV %	13.6	15.3	1.1	1.4	3.8	11.3
	L.S.D.	33	NS	1	1	0.7	4,100

Cooperator: Otto Farms
Soil Series: Kirkland Silt Loam
No-Till: Following soybean in 2013
Soil Test: N: 6 P: NA K: NA pH: 5.5
Fertilizer: N: 130 lbs/ac + 5 gal 10-34-0 in row with planter
Herbicide: (March burndown 25 oz Roundup PowerMax + 40 oz Banvel + 1 lb atrazine) + 1.5 qt Halex GT post
Target population: 25,000 plants/ac
Planting Date: April 2, 2014
Harvest Date: September 11, 2014

Monthly Rainfall (in.)	Apr.	May	June	July	**Total**
2014:	0.51	5.95	8.17	5.04	**19.67**
Long term mean:	5.08	4.16	5.64	3.41	**18.29**

Table. 5. OPREC Grain Yields for Panhandle Corn Performance Trial utilizing drip irrigation, 2014.

Company Brand Name	*Hybrid*	*Grain yield Bu/ac 2014*	*Test weight lb/bu 2014*	*Harvest Moisture %*	*Plant Population plants/ac*	*Green Snap*
Terral Seed, Inc	Rev® 26BHR50™	266	59	18.6	35,600	0
Mycogen Seeds	2Y816	258	53	19.3	34,200	0
Terral Seed, Inc	Rev® 22BHR55™	255	58	17.2	35,200	0
Terral Seed, Inc	Rev® 27HR83™	250	58	18.3	31,600	5
Terral Seed, Inc	Rev® 28HR20™	249	59	17.5	34,700	3
Mycogen Seeds	2C788	242	56	17.9	32,500	0
Mycogen Seeds	2Y767	238	54	17.4	33,400	0
Terral Seed, Inc	Rev® 24BHR93™	237	57	18.4	33,100	0
Terral Seed, Inc	Rev® 25BHR44™	231	60	16.9	33,300	5
Mycogen Seeds	2V707	225	57	16.7	31,400	8
Terral Seed, Inc	Rev® 22BHR43™	222	61	16.1	33,200	0
Mycogen Seeds	TMF2H747	222	53	17.0	32,800	22
Mycogen Seeds	X13728	221	55	15.5	31,900	9
Mycogen Seeds	TMF2H918	216	55	23.6	32,300	0
Terral Seed, Inc	Rev® 28R10™	212	60	17.4	30,900	0
Terral Seed, Inc	Rev® 18BHR84™	209	58	16.6	33,300	9
Mycogen Seeds	2V717	209	56	16.7	33,800	18
Mycogen Seeds	TMF2L825	206	54	17.7	33,900	5
Terral Seed, Inc	Rev® 17HR73™	193	56	16.2	33,400	10
Mycogen Seeds	2C799	193	57	16.2	32,900	24
	Mean	228	57	17.5	33,200	----
	L.S.D.	9.0	1.0	5.0	7.3	----
	CV %	29	1	1.2	NS	----

Note: A storm with high winds on June 30, 2014 caused the green snap. These rating are only for hybrids entered into the trials at OPREC. Producers have reported green snap was a problem with hybrids from all of companies with some circles replanted and others chopped for silage or baled as hay.

Cooperator: OPREC
Soil Series: Gruver Clay Loam (formerly Richfield)
Conventional till fallow since summer of 2013
Soil Test: N: 11 P:149 K: 1060 pH: 7.9
Fertilizer: N: 225 lbs/ac, P: 50 lbs P2O5/ac, + 5 gal 10-34-0 in row with planter
Herbicide: 2.0qt/ac Cinch ATZ Lite (Preemergence) + 1 oz/ac Balance pro
Target population: 32,000 plants/ac
Planting Date: May 5, 2014
Harvest Date: October 8, 2014

Monthly Rainfall (in.)	May	June	July	Aug	Sept.	**Total**
2014:	3.42	3.73	2.90	0.97	1.63	**12.65**
Long term mean:	3.25	2.86	2.58	.22	1.73	**12.64**
Irrigation:	May 1–Jun 28,	June 28-July 25,	July 26-Aug 29			
	4.00	5.40	8.70	18.10		

Table. 6. OPREC Grain Yields for Panhandle Corn Performance Trial utilizing sprinkler irrigation, 2014.

Company		*Grain yield*			*Bu/ac Test weight lb/bu*			*Harvest*	*Plant*	
Brand Name	*Hybrid*	*2014*	*2-year*	*3-year*	*2014*	*2-year*	*3-year*	*Moisture %*	*Population plants/ac*	*Green Snap*
Mycogen Seeds	2C788	171	196	171	56	55	55	12.9	34,500	13
Mycogen Seeds	2Y816	170	187	161	56	55	56	13.7	35,900	5
Terral Seed, Inc	Rev® 18BHR84™	166	188	----	57	57	----	12.0	35,200	7
Terral Seed, Inc	Rev® 26BHR50™	163	----	----	60	----	----	13.9	37,500	8
Terral Seed, Inc	Rev® 22BHR43™	157	173	161	59	59	59	12.6	35,900	0
Terral Seed, Inc	Rev® 22BHR55™	157	----	----	57	----	----	11.7	37,600	8
Mycogen Seeds	2V707	153	184	171	57	57	57	13.0	34,600	13
Terral Seed, Inc	Rev® 28HR20™	152	178	151	59	59	58	13.5	35,500	14
Terral Seed, Inc	Rev® 24BHR93™	151	181	168	58	58	58	12.2	33,700	3
Mycogen Seeds	2V717	151	176	159	56	56	56	12.4	36,400	25
Mycogen Seeds	2Y767	149	172	147	55	55	55	12.4	35,000	5
Terral Seed, Inc	Rev® 17HR73™	136	164	----	56	56	----	11.8	35,300	8
Mycogen Seeds	TMF2H918	136	----	----	58	----	----	17.6	30,600	16
Mycogen Seeds	TMF2L825	132	171	143	54	54	54	14.9	34,600	40
Terral Seed, Inc	Rev® 25BHR44™	130	164	----	58	58	----	12.2	37,000	10
Mycogen Seeds	X13728	130	----	----	51	----	----	11.0	34,800	20
Terral Seed, Inc	Rev® 27HR83™	121	157	152	58	58	58	12.4	34,600	16
Terral Seed, Inc	Rev® 28R10™	117	133	125	59	59	58	13.3	32,000	23
	Mean	147	173	155	57	57	57	12.9	35,000	----
	L.S.D.	22	16	16	1	1	1	0.8	3,200	----
	CV %	10.7	9.5	13.0	1.0	1.0	1.6	4.4	6.4	----

Note: A storm with high winds on June 30, 2014 caused the green snap. These rating are only for hybrids entered into the trials at OPREC. Producers have reported green snap was a problem with hybrids from all of companies with some circles replanted and others chopped for silage or baled as hay.

Information for fertilizer, planting date, ect. is the same as for silage trial.

Table. 7. OPREC Ensilage Yields for Panhandle Corn Performance Trial, 2014.

Company		*Yield Tons/ac*			*Plant Population*	*Harvest Moisture*	*Green Snap*
Brand Name	*Hybrid*	*2014*	*2-year*	*3-year*	*plants/ac*	*%*	*%*
Mycogen Seeds	2V707	25.4	24.4	22.7	35,000	0.60	18.8
Terral Seed, Inc	Rev® 26BHR50™	25.0	----	----	36,900	0.51	11.3
Terral Seed, Inc	Rev® 22BHR55™	24.1	----	----	34,800	0.60	7.5
Mycogen Seeds	2Y767	23.7	22.7	----	37,000	0.62	2.5
Terral Seed, Inc	Rev® 24BHR93™	23.1	23.2	----	35,000	0.59	2.5
Terral Seed, Inc	Rev® 18BHR84™	23.0	23.2	----	36,700	0.52	2.5
Terral Seed, Inc	Rev® 28R10™	22.7	23.2	21.9	34,100	0.59	25.0
Mycogen Seeds	TMF2L825	22.6	22.9	----	35,700	0.66	35.0
Mycogen Seeds	2C788	22.4	21.8	----	36,700	0.62	12.5
Terral Seed, Inc	Rev® 25BHR44™	22.2	24.0	----	36,200	0.58	13.8
Mycogen Seeds	TMF2H918	22.0	----	----	31,500	0.69	6.3
Mycogen Seeds	2Y816	21.8	21.5	21.0	36,700	0.64	3.8
Terral Seed, Inc	Rev® 22BHR43™	20.8	21.4	----	35,400	0.58	3.8
Terral Seed, Inc	Rev® 17HR73™	20.6	20.9	----	32,500	0.59	7.5
Terral Seed, Inc	Rev® 28HR20™	20.5	21.1	20.7	37,500	0.52	20.0
Mycogen Seeds	X13728	19.8	----	----	36,300	0.63	22.5
Terral Seed, Inc	Rev® 27HR83™	19.5	20.7	----	35,100	0.59	17.5
Mycogen Seeds	2V717	19.1	21.0	21.9	37,500	0.61	23.8
Mycogen Seeds	2C799	18.5	21.1	----	35,900	0.60	52.5
Mycogen Seeds	TMF2H747	15.7	19.7	----	36,000	0.67	80.0
	Mean	21.6	22.1	21.6	35,600	0.61	----
	CV %	13.3	12.6	12.8	6.4	3.2	----
	L.S.D.	4.8	3.2	NS	NS	0.03	----

Note: A storm with high winds on June 30, 2014 caused the green snap. These rating are only for hybrids entered into the trials at OPREC. Producers have reported green snap was a problem with hybrids from all of companies with some circles replanted and others chopped for silage or baled as hay.

Cooperator: OPREC
Soil Series: Gruver Clay Loam (formerly Richfield)
Strip-Till: Following wheat double crop sunflower in 2013
Soil Test: N: 11 P:149 K: 1060 pH: 7.9
Fertilizer: N: 225 lbs/ac, P: 50 lbs P2O5/ac, + 5 gal 10-34-0 in row with planter
Herbicide: 2.0qt/ac Cinch ATZ Lite (Preemergence) + 1 oz/ac Balance pro
Target population: 32,000 plants/ac
Planting Date: April 15, 2014
Harvest Date: August 28, 2014

Monthly Rainfall (in.)	Apr.	May	June	July	Aug	**Total**
2014:	0.57	3.42	3.73	2.90	0.97	**11.59**
Long term mean:	1.33	3.25	2.86	2.58	2.28	**12.30**
Irrigation:	1.25	3.75	2.50	3.75	2.50	

The Oklahoma Cooperative Extension Service
Bringing the University to You!

The Cooperative Extension Service is the largest, most successful informal educational organization in the world. It is a nationwide system funded and guided by a partnership of federal, state, and local governments that delivers information to help people help themselves through the land-grant university system.

Extension carries out programs in the broad categories of agriculture, natural resources and environment; family and consumer sciences; 4-H and other youth; and community resource development. Extension staff members live and work among the people they serve to help stimulate and educate Americans to plan ahead and cope with their problems.

Some characteristics of the Cooperative Extension system are:

- The federal, state, and local governments cooperatively share in its financial support and program direction.
- It is administered by the land-grant university as designated by the state legislature through an Extension director.
- Extension programs are nonpolitical, objective, and research-based information.
- It provides practical, problem-oriented education for people of all ages. It is designated to take the knowledge of the university to those persons who do not or cannot participate in the formal classroom instruction of the university.
- It utilizes research from university, government, and other sources to help people make their own decisions.
- More than a million volunteers help multiply the impact of the Extension professional staff.
- It dispenses no funds to the public.
- It is not a regulatory agency, but it does inform people of regulations and of their options in meeting them.
- Local programs are developed and carried out in full recognition of national problems and goals.
- The Extension staff educates people through personal contacts, meetings, demonstrations, and the mass media.
- Extension has the built-in flexibility to adjust its programs and subject matter to meet new needs. Activities shift from year to year as citizen groups and Extension workers close to the problems advise changes.

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Director of Cooperative Extension Service, Oklahoma State University, Stillwater, Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Vice President, Dean, and Director of the Division of Agricultural Sciences and Natural Resources and has been prepared and distributed at a cost of 84 cents per copy. Revised 1214 GH.