



OKLAHOMA CORN PERFORMANCE TRIALS, 2010



PRODUCTION TECHNOLOGY CROPS

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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, and maturity information, 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 (Tables 3 and 4).

Irrigated test plots were established at the Oklahoma Panhandle Research and Extension Center (OPREC) near Goodwell and the Joe Webb farm near Guymon. 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 of 32,000 plants/ac. Plots were trimmed to 20 feet prior to being harvested to determine grain yield. The ensilage trial was seeded the same as the grain trial 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%). Corn ensilage was harvested at the early dent stage with average moisture content of 69% and production is reported as tons/ac adjusted to 65% moisture.

GROWING CONDITIONS

Corn planting started in early April but was delayed until mid April from rainfall. Most planting resumed April 28th and was not delayed again until mid May by which time most corn had been planted. Conditions for germination and emergence were good. Most corn acres required no pre-irrigation prior to planting, due to the 4.51 inches of precipitation received during the January through March time period. Temperatures during the growing season were near normal with no 100 °F recorded during May, June had 3, July had 4, and August had 10 days of 100 °F or greater. The number of days in August may have reduced yields on the later planted corn in 2010. Mean high temperatures for the period were near the long-term averages. The mean high temperature for May was 77 °F which is 2 degrees below the long term mean. For June, July and August the mean high temperatures were normal or slightly above, June 91°F compared to 88 °F, July 93 °F which is the long term mean, and August 93 °F compared to 91 °F. The number of 100 °F and higher than normal temperatures may have affected grain fill on the later planted corn. Rainfall for the period was above the long-term mean, but 38% was received in mid to late August (Table 1). Therefore irrigation scheduling was critical during most of the growing season. The harvest period had no major delays to weather and most producers reporting yields ranging from 200 bu/ac to over 250 bu/ac.

RESULTS

Grain yield, test weight, harvest moisture, and plant populations for OPREC and Webb trials are presented (Tables 3 and 4). 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 producers interested in comparing hybrids for consistency of yield should consult these.

The following people have contributed to this report by assisting in crop production, data collection, and publication; Roger Gribble, Jeff Bedwell, Tommy Puffinbarger, Donna George, Lawrence Bohl, Matt LaMar, Eddie Pickard, Wilson Henry, Cameron Murley, and Craig Chesnut. Their efforts are greatly appreciated.

Table 1. Rainfall and irrigation for irrigated corn performance trial locations in Texas County.

Location	April	May	June	July	Aug	Total
Long-term mean	1.33	3.25	2.86	2.58	2.28	12.30
2010	1.76	2.64	3.16	1.22	5.42	14.20
Irrigation						
Joe Webb	0.0	4.0	6.0	6.0	2.0	18.0
OPREC	0.0	1.3	3.9	3.9	1.3	10.4

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Table 2. Characteristics of Corn Hybrids in Panhandle Corn Performance Trials, 2010.

Company Brand Name	Hybrid	Plant Characteristics				MATURITY
		SV	SS	SG	EP	Days
Golden Acres	GA 26V21	1	1	2	M	115
Golden Acres	GA 208V81	2	2	2	M	118
Golden Acres	GA 27V01	2	2	2	High	117
Mycogen Seeds	TMF2H918	8	8	NA	NA	123
Mycogen Seeds	TMF2L844	7	7	NA	NA	119
Mycogen Seeds	F2F622	8	7	NA	NA	109
Mycogen Seeds	F2F700	8	8	NA	NA	113
Terral Seed, Inc	Rev TM 25HR39 TM	8	7	5	MH	115
Terral Seed, Inc	Rev TM 25R19 TM	8	7	5	MH	115
Terral Seed, Inc	Rev TM 26R60 TM	7	6	6	M	116
Terral Seed, Inc	Rev TM 28HR20 TM	7	7	7	MH	118
Terral Seed, Inc	Rev TM 28HR30 TM	7	7	8	MH	118
Terral Seed, Inc	Rev TM 28R30 TM	7	7	8	MH	118
Terral Seed, Inc	Rev TM 28R10 TM	7	7	7	MH	118
Triumph Seed Co. Inc.	1536H	2	3	3	M	115
Triumph Seed Co. Inc.	TRX01601	3	3	3	M	116
Triumph Seed Co. Inc.	7514X	3	3	3	M	114
Triumph Seed Co. Inc.	1420V	3	3	3	M	114
Triumph Seed Co. Inc.	1825V	3	2	2	MH	118
Triumph Seed Co. Inc.	2288H	3	2	1	H	122

* 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

Table 3. Grain Yield and Harvest Parameters Joe Webb location, Oklahoma Corn Performance Trials, 2010.

Company Brand Name	Hybrid	Grain Yield Bu/ac	Test Weight Lb/bu	Harvest Moisture	Plant Population plants/ac
Triumph Seed Co. Inc.	1825V	232	58.0	13.8	33,200
Terral Seed, Inc	Rev TM 28R10 TM	205	60.5	13.9	31,700
Golden Acres	GA 208V81	203	59.9	13.8	29,800
Terral Seed, Inc	Rev TM 28HR20 TM	197	60.6	13.9	32,800
Terral Seed, Inc	Rev TM 28HR30 TM	192	60.5	14.5	31,300
Golden Acres	GA 27V01	190	56.9	12.3	31,500
Triumph Seed Co. Inc.	7514X	187	58.2	14.4	31,100
Triumph Seed Co. Inc.	2288H	185	59.2	17.8	28,300
Triumph Seed Co. Inc.	1420V	181	59.7	13.1	33,400
Mycogen Seeds	TMF2H918	181	58.0	20.7	30,900
Terral Seed, Inc	Rev TM 25HR39 TM	179	61.0	12.8	31,400
Terral Seed, Inc	Rev TM 28R30 TM	177	59.5	13.4	32,900
Terral Seed, Inc	Rev TM 26R60 TM	173	60.0	14.7	30,700
Terral Seed, Inc	Rev TM 25R19 TM	172	60.7	14.1	31,600
Golden Acres	GA 26V21	172	58.1	12.1	30,700
Triumph Seed Co. Inc.	1536H	164	60.3	12.6	30,500
Mycogen Seeds	TMF2L844	153	58.3	13.0	28,700
Mycogen Seeds	F2F622	145	60.3	12.3	34,300
Mycogen Seeds	F2F700	112	61.1	12.6	34,100
	Mean	179	59.5	14.0	31,500
	CV %	8.9	1.1	9.9	8.5
	L.S.D.	23	0.9	2.0	NS

Cooperator: Joe Webb

Soil Series: Richfield Clay Loam

Strip-Till: Following wheat in 2009

Soil Test: N: NA P: NA K: NA pH: NA

Fertilizer: N: 230 lbs/ac P: 50 lbs P2O5/ac K: 0 and 5 gal 10-34-0 in row with planter

Herbicide: 1.5qt/ac Harness Extra (Preemergence) + 3/4 oz/ac Balance

Planting Date: April 14, 2010

Harvest Date: September 21, 2010

Table 4. Ensilage Yields and Quality Panhandle Corn Performance Trial, 2010.

Company Brand Name	Hybrid	YIELD Tons/ac	Plant Population plants/ac	Harvest Moisture %
Golden Acres	GA 27V01	28.5	30,900	53.7
Triumph Seed Co. Inc.	1825V	28.2	29,200	51.9
Triumph Seed Co. Inc.	2288H	28.1	28,500	59.2
Golden Acres	GA 208V81	28.0	29,000	54.4
Mycogen Seeds	TMF2H918	27.8	28,700	57.6
Mycogen Seeds	TMF2L844	27.5	30,900	54.8
Terral Seed, Inc	Rev TM 26R60 TM	27.2	30,600	50.5
Terral Seed, Inc	Rev TM 25R19 TM	27.0	31,500	52.7
Triumph Seed Co. Inc.	1536H	26.2	30,200	49.5
Terral Seed, Inc	Rev TM 28HR30 TM	24.4	31,200	52.2
Terral Seed, Inc	Rev TM 28R30 TM	24.3	30,800	50.9
Triumph Seed Co. Inc.	1420V	24.3	32,500	52.6
Mycogen Seeds	F2F700	24.0	29,200	53.5
Terral Seed, Inc	Rev TM 28HR20 TM	23.8	30,200	52.1
Terral Seed, Inc	Rev TM 25HR39 TM	23.6	30,500	54.3
Terral Seed, Inc	Rev TM 28R10 TM	23.6	29,900	51.7
Golden Acres	GA 26V21	23.6	28,600	54.8
Triumph Seed Co. Inc.	7514X	23.1	29,800	52.7
Mycogen Seeds	F2F622	23.0	31,800	52.1
Triumph Seed Co. Inc.	TRX01601	22.6	27,600	52.3
	Mean	25.4	30,100	53.1
	CV %	13.9	7.4	5.3
	L.S.D.	NS	NS	4.6

Cooperator: OPREC

Soil Series: Richfield Clay Loam

Strip-till: wheat double crop sunflower in 2009

Soil Test: N: 28 P: 14 K: 876 pH: 7.6

Fertilizer: N: 230 lbs/ac P: 50 lbs/ac P₂O₅ K: 0 and 5 gal 10-34-0 in row with planter

Herbicide: 2 qt/ac Cinch ATZ Lite (Preemergence) + .75 oz Balance Flex

Planting Date: April 29, 2010

Harvest Date: September 11, 2010