Result Demonstration and Applied Research Test Report

2007-2008 Concho, Runnels, McCulloch, Taylor and Gillespie Counties
Dryland Wheat Variety Tests

Robert Pritz, Callahan County Extension Agent-Agriculture
Michael Palmer, Concho County Extension Agent-Agriculture
Bill Botard, Gillespie County Extension Agent-Agriculture
Marty Gibbs, Runnels County Extension Agent-Agriculture
Rocky Vinson, Shackelford County Extension Agent-Agriculture
Gary Bomar, Taylor County Extension Agent-Agriculture
Rick Minzenmayer, Extension Agent-IPM,
Dr. Gaylon Morgan, Associate Professor and Extension Agronomist
Dr. Billy Warrick, Professor and Extension Agronomist

SUMMARY

Of the nine wheat variety tests established during the fall of 2007 in West Central Texas, five made it to harvest and were summarized in this report. The yield in these tests reflect the variability of rainfall across the region this year. Yields ranged from a low of 18.35 bushels in the Concho County test to a high of 67.1 bushels in the McCulloch County Test. Many of the varieties compared in these tests could be successfully grown in our region. This is only one year of results, continued testing is recommended before making a significant switch to a new variety.

PROBLEMS

Several new varieties of wheat are marketed each year. When these are combined with the varieties already available, selection of planting seed becomes increasingly difficult. Producers need local production information to help in selecting adapted high yielding varieties with desirable milling traits.

OBJECTIVE

With improved varieties being introduced each season, testing is a necessary part of any farming operation. Field tests are established to compare new and traditional varieties. The main focus will be to find those varieties that provide high yield with desirable milling traits. Since some varieties have a limited success within a narrow range of production conditions, local testing is necessary and justified. These tests will allow area producers to determine if new varieties being introduced are more productive than what they are currently planting. Also, it will provide area producers the opportunity to examine the differences in plant development between the old and new varieties.

MATERIALS AND METHODS

Production information and yield data from the five tests summarized in Table 1 are found in the appendix. These include:

Grain yields were determined by hand harvest in the Concho and Gillespie county tests. The grain yields for the Runnels, McCulloch and Taylor County Test were determined using a small plot combine.

Table 1. Agronomic Data from five Dryland Wheat Variety Tests Conducted in West Central Texas in 2007-2008

Variety	Concho County Yield Per Acre (bushel)	Rank	Runnels County Yield Per Acre (bushel)	Rank	McCulloch County Yield Per Acre (bushel)	Rank	Taylor County Yield Per Acre (bushel)	Rank	Gillespie County Yield Per Acre (bushel)	Rank
TAM 112	22.05	4	26.73	1	58.4	2				
2158	21.07	7	23.22	8			51.3	4		
Santa Fe					67.1	1				
Sturdy 2K	21.23	6	25.94	2	35.3	28	40.5	9	29.6	7
TAM 111	25.59	2	23.71	7	49.2	3	56.9	2		
WinMaster	25.68	1			30.0	37	43.8	8	41.2	2
Cutter	20.08	9	24.35	4	40.1	22	52.9	3	43.8	1
Coronado	25.10	3			38.3	26			34.2	5
Jagalene					44.0	12	59.3	1		
Fannin	20.66	8	23.84	6	40.2	21			35.8	4
2174	18.35	10	21.96	10			45.1	6		
Dumas	18.35	10	19.25	11	39.0	24	50.2	5		
Doans			23.16	9	42.1	16				
TAM 304			25.76	3	32.1	31				
Longhorn	21.97	5			30.2	36				

Materials and Methods

Cooperating County Producers:	Millersview Community farmers
Location:	Millersview, Texas
Planting Date:	December 28, 2007
Seeding Rate:	70 pounds per acre
Drill Spacing:	8 inches
Soil Moisture Condition at Planting:	Adequate for germination
Fertilizer Applied:	None
Herbicide Applied:	1/3 ounce of Amber applied per acre prior to planting and 4.75 ounces of Osprey applied April 11, 2008

Rainfall:	September 2007	0.20"	January 2008	0.25"
	October 2007	0.55"	February 2008	0.45"
	November 2007	1.00"	March 2008	5.45"
	December 2007	0.35"	April 2008	4.10"

Table 2. Agronomic Data from Millersview Wheat Test (Concho Co., 2007-2008)

Variety	Yield Per Acre (pounds)	Yield Per Acre (bushels)	Gross Return Per Acre ($8.00/bu.)
WinMaster	1541	25.68	205.41
TAM 111	1536	25.59	204.75
Coronado	1506	25.10	200.80
TAM 112	1323	22.05	176.44
Longhorn	1318	21.97	175.78
Sturdy 2K	1274	21.23	169.86
2158	1264	21.07	168.54
Fannin	1239	20.66	165.25
Cutter	1205	20.08	160.64
Dumas	1101	18.35	146.81
2174	1101	18.35	146.81

Note: Grain yields were determined by hand harvest

Acknowledgments

Sincere appreciation is expressed to the Millersview Community farmers for establishing and managing the dryland wheat variety test. Also, a word of thanks to all the seed companies that donated seed for the test plot.

Materials and Methods:

Cooperating County Producers:	Lowell Freeman
Location:	Runnels County
Planting Date:	December 5, 2007
Seeding Rate:	75 lbs.
Drill Spacing:	8-inch
Soil Moisture Condition at Planting:	Fair
Fertilizer Applied:	32 lbs. N
Herbicide Applied:	Ally 0.10 ounce per ace
Harvest Date:	June 11, 2008

Table 3. Agronomic Data from Lowell Freeman farm (Runnels County, 2008)

Variety	Yield Per Acre (pounds)	Yield Per Acre (bushels)	Test Weight Per Bushel	Gross Return Per Acre @$8.00 Per Bushel
TAM 112	1625	26.73 a	60.78	$213.84
Sturdy 2K	1549	25.94 a	59.70	$207.52
TAM 304	1478	25.76 ab	57.36	$206.08
Cutter	1472	24.35 abc	60.45	$194.80
TAM 203	1360	24.28 abc	56.74	$194.24
Fannin	1437	23.84 abc	60.28	$190.72
TAM 111	1420	23.71 a-e	59.91	$189.68
2158	1383	23.22 a-e	59.55	$185.76
Doans	1397	23.16 a-e	60.31	$185.28
2174	1245	21.96 a-f	56.69	$175.68
Dumas	1155	19.25 c-i	59.99	$154.00

In Table 3 the individual or combination of letter a through i in the yield per acre column, to the right of the bushels produced per acre, are to indicate statistical significance. There is no statistical difference between numbers that have the same letter (even when there appears to be a large difference in results).

Acknowledgments:

Sincere appreciation is expressed to Lowell Freeman for establishing and managing the dryland wheat variety test. Also, a word of thanks to all the seed companies that donated seed for the test plot.

Materials and Methods

Cooperating County Producers:	David and Mary Holubec
Location:	Western McCulloch County - FM 3022 & CR 158
Planting Date:	October 24, 2007
Seeding Rate:	65pounds per acre
Soil Moisture Condition at Planting:	Short from planting to March
Fertilizer Applied:	25-25-0-8 per acre
Herbicides:	none
Insecticides:	none
Harvest Date:	June 4, 2008

Table 4. Agronomic Data from David and Mary Holubec's Wheat Test (McCulloch Co., 2008)

Variety	Yield Per Acre (bushels)	Test Weight Per Bushel	Gross Return Per Acre ($8.00/bu.)
Sante Fe	67.1 a	63.1	$536.80
TAM 112	58.4 b	62.9	$467.20
TAM 111	49.2 c	63.1	$393.60
Bullet	47.3 cd	62.4	$378.40
Shocker	47.1 cd	61.8	$376.80
OK Rising	45.9 cde	61.8	$367.20
TAM 110	45.7 cde	61.0	$365.60
Jackpot	45.1 cde	61.0	$360.80
Fuller	44.9 cdef	63.2	$359.20
Jagalene	44.0 cdef	61.6	$352.00
Duster	43.2 cdefg	62.4	$345.60
Overley	42.5 cdefg	62.7	$340.00
Doans	42.1 cdefg	62.8	$336.80
TAM W-101	41.3 cdefgh	61.8	$330.40
Jagger	40.9 cdefgh	60.8	$327.20
Art	40.7 cdefghi	62.3	$325.60
TAM 203	40.7 cdefghi	60.9	$325.60
Fannin	40.2 defghij	63.3	$321.60
Cutter	40.1 defghij	62.7	$320.80
Dumas	39.0 defghij	62.8	$312.00
Coronado	38.3 efghijk	61.6	$306.40
Endurance	36.3 fghijk	61.2	$290.40
Sturdy 2K	35.3 ghijk	61.4	$282.40
TAM 401	35.3 ghijk	60.7	$282.40
Ogallala	33.1 hijk	61.8	$264.80
TAM 304	32.1 ijk	60.7	$256.80
Deliver	31.7 jk	62.2	$253.60
Longhorn	30.2 k	61.0	$241.60
WinMaster	30.0 k	61.0	$240.00

In Table 4 the individual or combination of letter a through k in the yield per acre column, to the right of the bushels produced per acre, are to indicate statistical significance. There is no statistical difference between numbers that have the same letter (even when there appears to be a large difference in results).

Materials and Methods

Cooperating County Producers:	Danny Lewis
Location:	3.3 miles east of Abilene, TX on Farm Road 351
Planting Date:	October 23, 2007
Seeding Rate:	60 pounds per acre
Drill Spacing:	7.5 inches
Soil Moisture Condition at Planting:	Dry
Fertilizer Applied:	Applied 215 pounds of 32-16-4 plus 152 pounds of 46-0-0 per acre prior to planting.
Herbicides:	No herbicides applied
Insecticides:	Applied 8 ounces of dimethioate in the spring to control greenbugs.

Table 5. Agronomic Data from Danny Lewis' Wheat Variety Test (Taylor Co., 2008)

Variety	Yield Per Acre (pounds)	Yield Per Acre (bushels)	Gross Return Per Acre ($8.00/bu.)
Jagalene	3561	59.3	474.40
TAM 111	3414	56.9	455.20
Cutter	3177	52.9	423.20
2158	3078	51.3	410.40
Dumas	3010	50.2	401.60
2174	2703	45.1	360.80
Abilene Ag #1	2673	44.5	356.00
WinMaster	2630	43.8	350.40
Sturdy 2K	2428	40.5	324.00

Acknowledgments

Sincere appreciation is expressed to Danny Lewis for establishing and managing this dryland wheat variety test. Also, a word of thanks to all the seed companies that donated seed for the test plot.

Materials and Methods

Cooperating County Producers: Ronald Stehling
Location: Stehling Farms 5.5 miles out East US Highway 290 in Gillespie County
Planting Date: December 6, 2007
Seeding Rate: 100 pounds per acre
Drill Spacing: 7.5 inches
Soil Moisture Condition at Planting: Marginal
Fertilizer Applied: At planting 200# of 19-6-3-2; Topdress 125# 28-0-03
Herbicide Applied: RAVE & Dimethoate applied by Allied Ag in Stonewall, Texas

Rainfall:				
	Jan.	0.03 inch	April	1.18 inches
	Feb.	0.25 inch	May	2.22 inches
	March	2.18 inches		

Table 6. Agronomic Data from Stehling's Wheat Test (Gillespie Co., 2007-2008)

Variety	Yield Per Acre (pounds)	Yield Per Acre (bushels)	Gross Return Per Acre ($8.00/bu.)
Cutter	2626	43.8	$350.18
WinMaster	2473	41.2	$329.74
Norm	2340	39.0	$312.03
Fannin	2146	35.8	$286.14
Coronado	2054	34.2	$273.88
Express	1891	31.5	$252.07
Sturdy 2K	1778	29.6	$237.09

Note: Grain yields were determined by hand harvest

Acknowledgments

Sincere appreciation is expressed to Ronald Stehling for establishing and managing the dryland wheat variety test. Also, a word of thanks to all the seed companies that donated seed for the test plot.