



2003-2004 Runnels County Dryland Wheat Variety Test

Cooperator: David Workman

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Summary:

Sixteen wheat varieties were planted on the David Workman farm December 11, 2003 in the Hatchel community of Runnels County. These varieties were raised using normal dryland wheat production practices. Hardeman Grain (HG-9), Jagalene, Abilene Ag EXP. 1, and Jagger topped the test with grain yields of 50.2 bushels/acre, 46.5 bushels/acre, 46.2 bushels/acre and 45.9 bushels/acre, respectively. When reviewing the test results, producers should keep in mind that this is only one year's data. Year to year consistency should be a primary consideration in selecting varieties of wheat to be planted.

Problem:

Over 85,617 acres of wheat are planted annually in Runnels County. The average dryland wheat yield for the county is 21.49 bushels per acre (1989-2003). Several new varieties of wheat become available each year and when combined with the varieties already available makes planting seed selection increasingly difficult. Producers need local data to help in selecting consistently high yielding adapted varieties.

Objectives:

Variety tests provide producers with the opportunity of comparing new varieties of wheat with varieties of wheat that have been successfully grown under varying weather conditions in Runnels County. Utilization of new varieties, which are equal to or exceed currently available varieties, should increase production and income of county producers.

Materials and Methods:

Cooperating County Producers:	David Workman
Location:	Runnels County
Planting Date:	December 11, 2003
Seeding Rate:	75 lbs.
Drill Spacing:	7 ½ inch
Soil Moisture Condition at Planting:	Good
Fertilizer Applied:	None
Herbicide Applied:	None

In each variety of wheat, four hand harvested samples were collected. The grain yields from these samples were then analyzed and the statistical separation of these are reported in the table on the next page. All varieties that have the same letter after it are statistically the same (that means yield difference reported are not stable enough to choose one variety over the other from this data). All yields that have the same letter after it should be considered the same regardless of the yield difference reported. Due to the variability in yield between each of the hand harvested samples, a large difference in yield was necessary to be significant.

Results and Discussion:

The 2003-2004 wheat crop was one that should go down in the record books. Grain yields were the highest they have ever been according to many grain producers. Rainfall came at the right times and temperatures were such that it allowed excellent growth and produced record yields for producers in Runnels County. Not everyone was so fortunate though, Hessian flies were found in many wheat fields and approximately sixty fields were destroyed by the pest. Management strategies will need to be implemented before next year's crop is planted to combat this new pest for Runnels County wheat producers.

Hardeman Grain (HG-9), Jagalene, Abilene Ag EXP. 1, and Jagger topped this test with grain yields of 50.2 bushels/acre, 46.5 bushels/acre, 46.2 bushels/acre and 45.9 bushels/acre, respectively. Yield data and gross returns are summarized in Table 1.

Economic Analysis

The difference in yield between Hardeman Grain (HG-9), Jagalene, Abilene Ag Exp. 1, Jagger, Weathermaster 135, and Coronado were significantly better than 2174 and Thunderbolt. The difference in gross income between the highest and lowest varieties was over \$107 per acre using a selling price of \$3.70 per bushel. In this test, the higher income of the top yielding varieties was significant enough to justify their selection over 2174 and Thunderbolt.

Table 1. Agronomic Data from David Workman's farm (Runnels County, 2004)

Variety	Yield Per Acre (pounds)	Yield Per Acre (bushels)	Statistical Difference (same letter means no difference in yield)	Gross Return Per Acre @\$3.70 per bushel
Hardeman Grain (HG-9)	3010	50.2	a	\$185.64
Jagalene	2789	46.5	ab	\$171.96
Abilene Ag EXP. 1	2771	46.2	ab	\$170.85
Jagger	2753	45.9	ab	\$169.74
Weathermaster 135	2549	42.5	abc	\$157.16
Coronado	2429	40.5	abc	\$149.77
Sturdy 2K	2165	36.1	abcd	\$133.50
WinTex	2129	35.5	abcd	\$131.28
Cutter	2021	33.7	bcd	\$124.62
WinMaster	1943	32.4	bcd	\$119.81
Lockett	1907	31.8	bcd	\$117.60
Weathermaster 135 (treated)	1871	31.2	bcd	\$115.38
TAM 111	1817	30.3	bcd	\$112.05
TAM 110 CL	1601	26.7	cd	\$98.74
2174	1283	21.4	d	\$79.14
Thunderbolt	1268	21.1	d	\$78.21

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