

EVALUATION OF WHEAT VARIETIES IN NAVARRO COUNTY, TEXAS

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SUMMARY:

Ten wheat varieties were planted west of Frost, TX in Navarro County to compare yield performance and economic return under local field growing conditions. The plot included 5 hard and 5 soft wheat varieties. Yields were good when compared with historical average yields for Navarro County. The adjusted yield of the top variety was Triumph 1536CBRR at 92.7 bu/a and the average of all early varieties was 84.28 bu/a. The adjusted yield of the top medium maturity variety was Garst 8248 RR at 88.7 bu/a and the average of all medium varieties was 81.60 bu/a.

PROBLEM:

Variety selection is one of several primary production inputs that impacts the profitability of farming enterprises. New varieties are introduced each year that have the potential to increase yield through improved genetics for yield and insect and disease resistance. These varieties need to be tested against established varieties under local growing conditions to determine which varieties have the greatest profit potential.

OBJECTIVE:

The purpose of this trial was to compare the yield performance and gross economic return of ten wheat varieties of under the same field growing conditions. Data from this trial should be compared to data from other counties and on the farm production to assist producers in making sound variety selection decisions.

METHODS AND MATERIALS:

Plots were planted November 8, 2007 using a John Deere 8300 grain drill at 90 pounds of seed per acre. Plots were 12 feet wide and 696.3 feet long. The site was a Houston Black Clay. Cotton had been the previous crop grown. Land preparation included 2 way discing then planting. Fertilization included 100 pounds per acre of 18-46-0 applied preplant followed by 50 pounds per acre of Anhydrous Ammonia (NH₃ or 82-0-0) topdressed and 200 pounds per acre of 32-0-0. Plots were harvested September 4, 2007 using a John Deere combine. Harvested plot size was 0.19 acres.

Yields were weighed with an electronic weigh wagon. Samples were taken on each variety to obtain bushel weight and moisture.

RESULTS AND DISCUSSION:

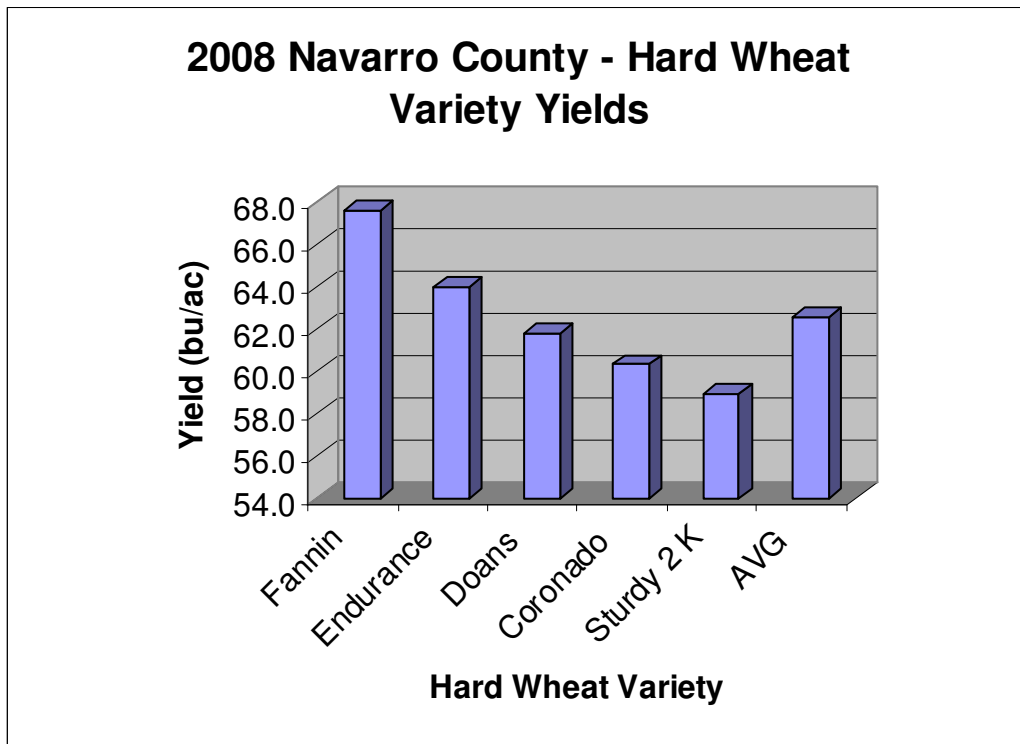
The adjusted yield of the top hard variety was Fannin at 67.7 bu/a. The lowest yielding hard variety was Sturdy 2K with an adjusted yield of 59.0 bu/ac. The hard variety yield range

between the highest and lowest yield variety was 8.7 bu/a. The average of all hard varieties was 62.6 bu/a. Refer to Figure 1.

Figure 1: Hard Wheat Variety Yield Data

Wheat Variety	Bushel Weight (lbs)	Moisture%	Yield (lbs)	Yield per acre	Yield Bu/ac	Adj Yield Bu/ac
Fannin	60	11.9	760	3962.4	66.0	67.7
Endurance	58.5	12	720	3753.8	62.6	64.0
Doans	59.5	11.6	692	3607.8	60.1	61.8
Coronado	58.5	10.9	670	3493.1	58.2	60.3
Sturdy 2 K	58	12.9	670	3493.1	58.2	59.0
Average						62.6

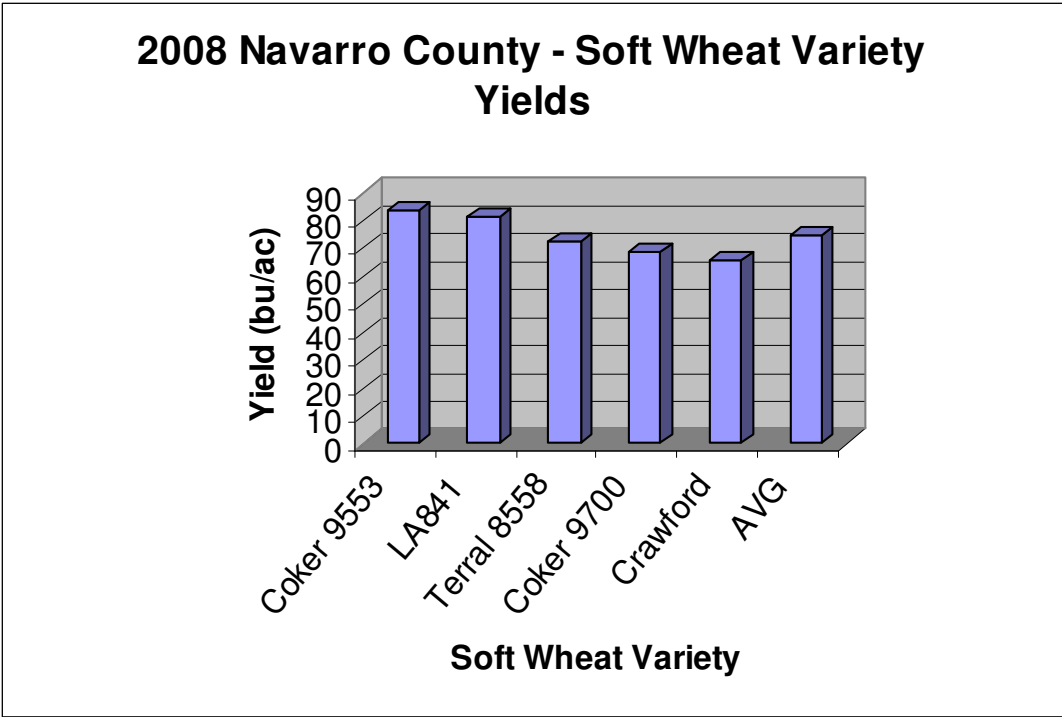
*All yields adjusted to 14% moisture for comparison



The adjusted yield of the top soft variety was Coker 9553 at 83.8 bu/a. The lowest yielding soft variety was Crawford with an adjusted yield of 65.6 bu/a. The soft variety yield range between the highest and lowest yield variety was 18.2 bu/a. The average of all medium varieties was 74.5 bu/a. Refer to Figure 2.

Figure 2: Soft Wheat Variety Yield Data

Wheat Variety	Bushel Weight (lbs)	Moisture%	Yield (lbs)	Yield per acre	Yield Bu/ac	Adj Yield Bu/ac
Coker 9553	60	11.6	938	4890.4	81.5	83.8
LA841	62	11.3	910	4744.4	79.1	81.6
Terral 8558	58	11.7	812	4233.5	70.6	72.4
Coker 9700	59.5	11.6	772	4024.9	67.1	69.0
Crawford	58	11.1	730	3806.0	63.4	65.6
Average						74.5



* All yields adjusted to 14% moisture for comparison

ECONOMIC ANALYSIS:

The highest economic return will be associated with the highest yielding varieties. Due to the fluctuations in prices of wheat and the locality of prices, no prices will be provided in this report.

CONCLUSIONS:

Variety selection is an important decision in farming enterprises in determining profits and economic feasibility of agronomic practices. As wheat prices continue an upward trend producers will want to pay closer attention to wheat variety selection and agronomic practices to enhance yields and profits. Producers should evaluate yearly data and compare to other years data of new and established varieties to evaluate their performance under different weather and growing conditions in different locations. Producers should be aware that this demonstration only has one replication and therefore data should be compared to other demonstrations or on-farm production data to enhance value and improve decision making capabilities.

ACKNOWLEDGMENTS:

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