

# Wheat and Barley Variety Test at the Bruce Church Ranch, Poston, Az - 1987

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## ABSTRACT

*A wheat and barley test on the Bruce Church Ranch, Poston, Arizona, La Paz County, harvested June 8 & 9, 1987, gave crop and variety performance differences under grower management conditions. The top-yielding barley variety was Fiesta, 6990 lbs/ac. The leading durum varieties were Turbo, Gem and Aldura. Durum wheat Westbred 881 was highest in protein (13.7%). In red wheat varieties, yields ranged from 4660 to 5750 lbs/ac. The top three varieties were Baker, Probred and Yecora Rojo. Baker was highest in protein (14.6%), followed by Yecora Rojo (14.2%). Continued testing over several years is necessary to assess variety performance under grower management conditions.*

## INTRODUCTION

In La Paz County, the performance of wheat and barley varieties, as tested in growers' fields, is increasingly important. For economic and marketing reasons, varieties producing both high quality grain and yield are preferred.

To assist growers, four barley, six durum wheat, and six bread (red) wheat varieties were evaluated in a demonstration test planted December 18, 1986 on the Bruce Church Ranch, Poston, La Paz County, Arizona. Characteristics evaluated included yield, protein, and bushel weight.

## CROP DATA

Elevation: 400 feet  
Previous Crop: Cotton  
Plot Size: .25/ac  
Date Planted: 12-18-86  
Date Harvested: 6-9&10-87  
Seeding Rates: Wheat 114 lbs per acre, barley 91 lbs per acre  
Irrigation: 28 inches of Colorado River water applied in 7 irrigations  
Fertilizer: 211 lbs total N, 119 lbs preplant NH<sub>3</sub>  
Herbicide: 2 pints Buctril  
Insecticide: None  
Soil Texture: Silt loam

## RESULTS

### BARLEY

The top-yielding variety was Fiesta (6690lbs/ac), with a significant yield increase over the next two varieties, NK X 1558 (6080lbs/ac) and Westbred Barcott (5990 lbs/ac). Fiesta also had the highest bushel weight (47.4 lbs/bu), followed by Gustoe (44.4 lbs/bu), NK X 1558 (43.0 lbs/bu) and Westbred Barcott (42.0 lbs/bu). Protein was not evaluated.

### DURUM WHEAT

The top-yielding durum wheats were Westbred Turbo (5310 lbs/ac), Gem (5190lbs/ac) and Aldura (5000 lbs/ac). These showed a significant yield difference over Westbred 881 (4460 lbs/ac), Val Blend 357 (4380 lbs/ac), and Yavaros (4260 lbs/ac) which were next in yield performance as a group.

Bushel weight ranged from 59.7 lbs/bu to 63.1 lbs/bu with no significant differences between these durum varieties.

Protein was calculated on one replication only, indicating that Westbred 881 was highest in protein (13.7%), followed by Aldura (12.6%), Val Blend 357 (12.4%), Gem and Westbred Turbo (11.8%) and Yavaros (10.9%).

### BREAD WHEAT

The top-yielding varieties, Westbred Baker (5750 lbs/ac) and Probred (5720 lbs/ac), were significantly higher than the second ranked varieties, Yecora Rojo (5460 lbs/ac) and Topaz (5450 lbs/ac). Next were Westbred 911 (4760 lbs/ac) and Probrand 775 (4660 lbs/ac).

The bushel weight of Westbred Baker (62.9 lbs/bu) ranked first, followed by Yecora Rojo (62.6 lbs/ac), Probred (62.2 lbs/ac), Topaz (60.9 lbs/ac), Westbred 911 (60.3 lbs/ac) and Probrand 775 (57.8 lbs/ac).

Protein was calculated on one replication only, indicating that Westbred Baker was highest in protein with 14.6 percent. All varieties fell in the 14 percent range, except Westbred 911 (13.7%) and Probrand 775 (12.8%).

Bruce Church Ranch, Poston, Az 1987  
La Paz County  
Test Data

Crop	Variety	Test Wt (lbs/bu)	Protein <sup>1</sup> (%)	Yield <sup>2</sup> (lbs/A)
Barley	Fiesta	47.4 a <sup>3</sup>	-	6990 a
	NK X1558	43.0 c	-	6080 b
	Westbred Barcott	42.0 d	-	5990 b
	Westbred Gustoe	44.4 b	-	4983 c
Durum Wheat	Aldura	59.7 a	12.6	5000 a
	Gem	62.5 a	11.8	5190 a
	Val Blend 357	61.1 a	12.4	4380 b
	Westbred 881	60.3 a	13.7	4460 b
	Westbred Turbo	61.3 a	11.8	5310 a
	Yavaros	63.1 a	10.9	4260 b
Red Wheat	Probrand 775	57.8 c	12.8	4660 c
	Probred	62.2 a b	14.0	5720 a
	Topaz	60.9 b	14.2	5450 a b
	Westbred Baker	62.9 a	14.6	5750 a
	Westbred 911	60.3 b	13.7	4780 b c
	Yecora Rojo	62.6 a b	14.2	5460 a b

- 1 Grain protein reported on "as is" moisture basis
- 2 Grain Yield adjusted to 10.7 moisture
- 3 Means within a column for a particular crop followed by the same letter are not significantly different at P=0.05 according to Fisher's LSD