

Small Grain Variety Comparisons at the Yuma Agricultural Center in 1987.

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Barley, bread wheat and durum wheat yield evaluations were conducted at the Yuma Valley Agricultural Center (YVAC). Commercial and experimental varieties were compared in randomized block designs with four replications each.

A fertilizer application of 150 lbs 11-52-0 was applied during land preparation. An unknown amount of residual nitrogen was present. Seeding was in a dry seed bed with an emergence irrigation on December 9, 1986. Subsequent irrigations were January 27, February 26, March 26 and April 16, 1987; each of the first three postplant irrigations were with 50 lbs N. Weeds were controlled with Buctril.

Each plot consisted of six 12-inch rows, 16 feet long. Barley and bread wheat was planted at 81 lbs per acre, and durum wheat at 86 lbs per acre. The center four rows of each plot were harvested for yield with a Hege plot combine.

The heavy silty clay loam soil at YVAC has a very good water holding capacity. Yields were very good with excellent test weights and grain quality.

Relative performance data for 8 barleys are presented in Table 1, 32 bread wheats in Table 2 and 32 durum wheats in Table 3.

Table 1. Barley varieties compared (CV=7.4%).

	Source	Plant height	Maturity range	Lodged %	Test weight lbs/bu	lbs/A ¹
Westbred Gustoe	WPB	short	med-late	0	51	8482a
Westbred Barcott	WPB	medium	very early	0	47	7928ab
Columbia	Germaine	med-tall	late	5	50	7843ab
Sunbar 409	NK	medium	medium	1	49	7758ab
Fiesta	WPB	short	early	0	52	7673ab
X-1558	NK	medium	late	5	48	7118 bc
Prato	U of C	tall	early-med	60	48	6735 c
Signal	U of C	medium	early	85	49	5840 d

¹ Variety yields followed by the same letter are not significantly different at the 5% probability level, using Duncan's Multiple Range Test.

Table 2. Bread wheat varieties and experimentals compared (CV=5.4%).

Test	Grain		Maturity range	Test weight lbs/bu	Grain yield lbs/A ^{1/}
	Source	Plant height			
UC633	UofC	med-tall	med-late	64.5	8269a
I694	UofA	short-med	med-tall	63.5	8227a
I736	UofA	short-med	early	63.0	8099ab
S8330501	Sogetal	med-tall	med-late	64.0	8014ab
I683	UofA	short-med	medium	61.0	7971abc
I709	UofA	short-med	medium	62.0	7928abcd
Yolo	UofC	med-tall	med-late	64.0	7928abcd
C79-97	UofA	medium	medium	62.0	7928abcd
I702	UofA	medium	medium	62.0	7886abcde
PH983-75	WPB	short-med	early	62.0	7800abcdef
Probrand 775	NK	short-med	early	63.0	7800abcdef
I455	UofA	medium	medium	62.0	7673abcdef
Yecora Rojo(ck)	UofC	short	very early	64.0	7673abcdef
UC635	UofC	med-tall	medium	64.0	7630abcdefg
PH983-69	WPB	short	very early	64.0	7630abcdefg
PH983-83	WPB	short-med	medium	62.0	7587abcdefg
Anza	UofC	medium	med-late	64.5	7502'bcdefg
I739	UofA	short-med	medium	63.0	7459 bcdefg
UC638	UofC	med-tall	med-late	64.0	7459 bcdefg
I791	UofA	tall	late	64.0	7417 bcdefg
82S723	NK	medium	late	62.5	7374 cdefg
Probred	NK	short	early	62.0	7332 cdefg
82S419	NK	very tall	medium	63.0	7332 cdefg
Cajeme 71	CIMMYT	medium	early	63.0	7246 defgh
C79-253	UofA	medium	late	61.0	7246 defgh
C79-268-1	UofA	medium	late	60.5	7246 defgh
I682	UofA	short	early	62.0	7204 efgh
I531	UofA	medium	medium	62.5	7161 fgh
UC628	UofC	med-tall	medium	64.0	7118 fgh
Westbred 911	WPB	short-med	late	62.0	6948 gh
Siete Cerros	CIMMYT	tall	med-late	64.0	6607 hi
Oslo	H&H	tall	early	63.0	6095 i

^{1/} Variety means followed by the same letter are not significantly different at the 5% probability level, using Duncan's Multiple Range Test.

Table 3. Durum wheat varieties and experimentals compared (CV=6.5%).

	Source	Plant height	Maturity range	Test weight lbs/bu	Grain yield lbs/A ^{1/}
Westbred Turbo	WPB	tall	med-late	64.0	8653a
Turbo-E	WPB	tall	med-late	65.0	8014ab
W627	UofA	medium	med-late	64.0	7928 bc
Altar 84	CIMMYT	tall	early-med	64.5	7928 bc
W433	UofA	med-tall	medium	62.0	7843 bcd
E412	PSC	medium	early	64.0	7843 bcde
840-9611	NK	medium	early-med	64.0	7800 bcde
PH884-32	WPB	short	early-med	64.5	7715 bcde
E416	PSC	short-med	early	64.0	7630 bcdef
850-9699	NK	med-tall	medium	63.0	7587 bcdefg
Yavaros 75	CIMMYT	med-tall	medium	64.0	7545 bcdefg
W465	UofA	med-tall	early-med	66.0	7545 bcdefg
85D-9698	NK	med-tall	medium	64.0	7459 bcdefg
85D-228	NK	very short	med-late	62.0	7459 bcdefg
W66	UofA	med-tall	med-late	66.0	7417 bcdefg
Aldura (ck)	NK	short	medium	64.0	7417 bcdefg
84D-9615	NK	medium	early	65.0	7374 bcdefg
84D-270	NK	short	medium	65.0	7374 bcdefg
E415	PSC	medium	medium	64.0	7374 bcdefg
E414	PSC	medium	med-late	62.0	7374 bcdefg
84D-156	NK	short-med	early-med	65.0	7289 bcdefg
E413	PSC	medium	medium	64.0	7289 bcdefg
84D-9614	NK	medium	medium	65.0	7246 bcdefg
PH883-15	WPB	med-tall	med-late	61.0	7246 bcdefg
84D-9606	NK	short-med	medium	65.0	7204 cdefg
W798	UofA	medium	early-med	63.0	7161 cdefg
W423	UofA	short	med-late	65.5	7161 cdefg
Westbred 881	WPB	short-med	early	63.5	7161 cdefg
85D-9687	NK	short	medium	64.0	7033 defg
85D-9643	NK	short	medium	63.0	6991 efg
84D-9612	NK	short	medium	65.0	6820 fg
PH883-2	WPB	medium	very early	64.5	6735 g

^{1/} Variety yields followed by the same letter are not significantly different at the 5% probability level, using Duncan's Multiple Range Test.