

Small Grains Variety Comparisons
at the Yuma Valley Agricultural Experiment Station

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Replicated comparisons of wheats and barleys were conducted on the Yuma Valley Station during the 1982-83 season. Included were varieties, strains, and breeding lines from various sources. Heading dates, test weights, and grain yields are shown in the following tables.

Plot yields were so variable among replications that in the hard red wheat, hard white wheat, and barley, mean yields had to differ by approximately a thousand pounds of grain before statistical analysis could show those differences to be significant. Differences among the Durum wheat means were not statistically significant.

1982-93 Crop History:

Planted:

Hard red wheat and durum: Dec. 7, 1982

Hard white wheat and barley: Dec. 20, 1982

Rainfall:

Dec. 8-10: 1.82 in.; Jan. 28-29: .57 in.; Feb. 3-4: .47 in.; Feb. 7: .08 in.; and March 2-4: .55 in.

Irrigations:

Dec. 30, March 11 and April 18

Fertilizer:

50 pounds of N per acre as ammonium nitrate during seed bed preparation Nov. 23, 50 pounds N as liquid ammonium nitrate in the Dec. 30 irrigation, and 50 pounds N in the March 11 irrigation.

Weed Control:

One application of barban (Carbyne) at the rate of $\frac{1}{4}$ pound per acre on the hard red and durum wheats Jan. 14, and $\frac{3}{8}$ pound per acre of barban on the hard white wheat and barley Jan. 26.

Previous Crop:

Wheat during the winter and spring of 1981-82.

Plot Size:

Each plot was 26 feet long with 5 rows spaced 7 inches apart. For the purpose of estimating yields, the bare alleys between plots were included as plot area. Yields, therefore, were computed on the basis of plots 26 feet long and $4 \frac{1}{3}$ feet wide.

Hard Red Bread Wheats ^{1/}

<u>Entry</u>	<u>Heading Date</u>	<u>Test Weight (lb/bu)</u>	<u>Calculated Yield (lb/acre)</u>
C79-97	3-18	62.8	7280 _a ^{2/}
C79-268-1	3-27	60.0	7242a
Westbred 911	3-27	62.8	7203ab
Yolo	3-19	63.9	7106ab
Glennson	3-23	63.0	6990ab
Genara	3-20	62.0	6901ab
X4236	3-17	61.5	6874ab
WRP 9-15	3-21	60.5	6631abc
Anza	3-21	63.3	6584abc
Yecora Rojo	3-16	62.0	6565abc
Probred	3-19	61.3	6333abc
Probrand 771	3-31	58.5	6302abc
Cajeme	3-20	61.0	6205abc
C-444	3-18	62.0	6198abc
7023	3-21	60.8	6186abc
Oslo	3-15	62.0	6043 bcd
X3940	3-15	61.8	5695 cd
Hermosilla	3-14	62.0	5691 cd
Westbred 906R	3-11	61.0	5007 de
SGW-069	3-14	62.5	4524 e

^{1/} Data are averages of 4 replications.

^{2/} Means followed by the same letter are not significantly different at the .05 level of probability.

Durum Wheats ^{1/}

<u>Entry</u>	<u>Heading Date</u>	<u>Test Weight (lb/bu)</u>	<u>Hard and Viterous (%)</u>	<u>Calculated Yield (lb/acre)</u>
Yavaros 77	3-28	64.0	96.5	7114
E-28-1-"S" 78	3-26	64.0	96.6	7064
Bittern "S"	3-25	64.0	97.2	6913
Cando	4-10	60.3	92.6	6909
Gem H2001	3-20	64.0	97.9	6901
Aldura	3-24	62.0	97.9	6766
Rokel "S"-15	3-21	61.8	99.6	6611
WAHA "S"	3-24	62.3	100.0	6553
Mexi "S" x Fg "S"-10	3-21	60.5	99.0	6522
Boy "S"	3-23	61.3	97.4	6310
SCA "S" x KIF "S"	3-20	61.3	98.0	6294
M82-W52	3-25	61.5	98.4	6290
M82-W68	3-30	62.0	100.0	6244
WDE-80-10	3-21	60.8	100.0	6205
ERP "S" x Russo	4-1	62.3	99.3	6012
Westbred 881	3-20	60.8	100.0	5993
Durati	3-25	60.8	100.0	5985
Mexicali 75	3-19	60.5	100.0	5374

^{1/} Data are averages of 4 replications.

^{2/} The variation in plot yields was such that no significant differences could be shown among varieties by the analysis of variance.

Barley Varieties ^{1/}

<u>Entry</u>	<u>Heading Date</u>	<u>Test Weight (lb/bu)</u>	<u>Calculated Yield (lb/acre)</u>
BFP-78-40C	3-26	48.8	7249 ^{2/} _a
Columbia	4-4	47.0	7037 _{ab}
BFP-79-18	3-27	51.3	7037 _{ab}
Gustoe	3-29	49.8	6758 _{abc}
AZ 76-15-1	3-25	49.5	6727 _{abc}
Sunbar Brand 409	3-30	43.5	6592 _{abcd}
BFP-80-30	3-25	48.0	6584 _{abcd}
BFP-80-24B	3-24	50.8	6565 _{abcd}
X-1275	3-30	42.8	6399 _{abcd}
Prato	3-25	47.3	6294 _{abcde}
Gus	3-26	48.3	6198 _{abcde}
BB-82-1 (Mix)	3-31	44.5	6147 _{abcdef}
Westbred R-501	3-26	48.3	5908 _{bcdef}
BB-82-2 (Mix)	3-28	44.0	5761 _{cdefg}
X-1558	3-30	45.5	5463 _{defgh}
FDN 78-78 (Lot R-705)	3-28	45.3	5231 _{efghi}
Signal	3-19	48.0	5076 _{fghi}
SV75858	3-27	50.3	4756 _{ghi}
SV75687	3-31	62.3	4524 _{hi}
SVA75229	3-31	49.8	4369 _i

^{1/} Data are averages of 4 replications.

^{2/} Means followed by the same letter are not significantly different at the .05 level of probability.

Hard White Bread Wheats ^{1/}

<u>Entry</u>	<u>Heading Date</u>	<u>Test Weight (lb/bu)</u>	<u>Calculated Yield (lb/acre)</u>
SGW-012	3-24	61.8	7307 ^{2/} _a
SGW-022	3-34	61.0	7184 _a
Nacozari 76	3-25	62.5	7153 _{ab}
Yecorato 77	3-24	62.0	7068 _{ab}
Vireo "S"	3-24	62.8	7068 _{ab}
M77-30	3-24	61.8	6913 _{ab}
Enamo Dwarf	3-25	60.2	6816 _{ab}
Veery No. 5	3-25	61.2	6689 _{ab}
Bob White "S"	3-24	61.5	6611 _{ab}
Pavon 76	3-25	63.5	6515 _{ab}
Klassic	3-24	62.2	5954 _{bc}
7702	3-23	62.2	5084 _c

^{1/} Data are averages of 4 replications.

^{2/} Means followed by the same letter are not significantly different at the .05 level of probability.