BARLEY, BREAD WHEAT, AND DURUM WHEAT EVALUATED FOR DOUBLE CROPPING WITH COTTON AT THE UNIVERSITY OF ARIZONA MARICOPA AGRICULTURAL CENTER IN 1985

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Early barley, bread wheat and durum wheat varieties and selections were evaluated in 6 x 6 Latin square designs for use in double cropping with cotton. Six barleys, 11 bread wheats and 17 durum wheats were grown with the same management treatment. The management goal was to obtain optimum and economical yields within the time frame of a successful cotton production year.

This test was planted in moisture after a preplant irrigation, December 19. The seeding rate was 100 lbs per acre. All of the fertilizer, 230 lbs N and 28 lbs P was applied during seedbed preparation. Irrigation cut off was after three post emergence irrigations to obtain optimum production with a May 1 harvest of the earliest barleys.

The bread wheat data are presented in Table 1, the barley data in Table 2 and the durum in Table 3. The season was characterized by a cold February with some delay in heading and a hot April with rapid depletion of soil moisture after irrigation cut off. The bread wheats seemed to be more adversely affected than the durums.

Table 1. Bread wheat varieties and experimentals.

Variety	Source	Heading Date	Plant Height in.	Lodging %	Yellow Berry %	Test Weight lbs/bu	Grain Yield lbs/A [1/]	Grain Yield % of Yecora Rojo
Latin Square 59 (CV=7.7%)								
P 983-13	WPB	3-20	39.8	0	1	61.5	5111 a	131
P 983-29	WPB	3-26	40.6	0	1	62.0	4944 a	127
P 983-40	WPB	3-24	35.5	0	0	59.5	4752 ab	122
P 983-68	WPB	3-28	41.8	0	0	60.0	4359 b	112
Yecora Rojo	Public	4-2	30.7	0	0	57.5	3899 c	100
Tan"S"-24	Public	3-30	39.0	0	1	57.0	2865 d	73
Latin Square 60 (CV=6.9%)								
Maya-Nac"S"-59W	Public	4-5	40.2	0	0	61.0	5192 a	115
A83-39-184	Public	4-1	42.2	0	0	59.5	5037 a	111
LIP-40	Public	4-2	42.2	0	1	61.5	4526 b	100
Yecora Rojo	Public	4-2	31.9	0	0	58.0	4524 b	100
E-1059	Nutriseed	4-3	32.3	0	0	58.0	4051 c	90
Westbred 906 R	WPB	3-31	40.2	20	0	56.5	3645 d	81

Table 2. Barley varieties and experimentals compared in 6x6 latin squares.

Variety	Source	Heading Date	Combine Ready Date	Plant Height in.	Lodging %	Test Weight lbs/bu	Grain Yield lbs/A [1/]
Latin Square 61 (CV=7.0%)							
Westbred Barcott	WPB	3-23	5-6	34.3	8	46.0	6058 a
Poco	Wilbur-Ellis	3-15	4-30	27.2	45	50.5	5985 a
43291-150	NK	3-28	5-10	31.9	39	49.5	5399 b
40712	NK	3-18	5-4	37.4	25	48.0	5088 bc
Westbred Gustoe	WPB	4-7	5-19	29.9	42	44.0	4965 bc
43291-151	NK	3-31	5-14	33.1	52	51.0	4840 c

Table 3. Durum wheat varieties and experimentals.

Variety	Source	Heading Date	Plant Height in.	Lodging %	Hard Vitreous %	Text Weight lbs/bu	Grain Yield lbs/A [1/]	Grain Yield % of Aldura
Latin Square 62 (CV=5.9%)								
Waha"S"	Public	4-5	38.6	0	98	62.8	6181 a	107
Mesaoria	Public	4-1	31.5	0	99	60.0	5791 b	100
Aldura	NK	4-6	32.3	0	98	61.0	5765 b	100
Mexicali 75	Public	4-3	38.6	12	99	60.0	5010 c	87
A83-40-20	Public	3-31	37.0	4	99	58.0	4835 c	84
A83-39-122	Public	4-1	38.2	50	98	55.5	3223 d	60
Latin Square 63 (CV=8.3%)								
AW-46	Public	4-2	36.2	0	97	63.3	6116 a	118
AD-2	Public	4-7	32.7	0	100	63.0	5484 b	106
AW-30	Public	4-6	32.7	0	98	63.0	5435 b	105
Aldura	NK	4-6	31.5	0	100	61.5	5181 b	100
80-10	WPB	3-31	34.3	0	100	61.0	4970 bc	96
Westbred 881	WPB	4-1	35.9	0	100	61.0	4547 c	88
Latin Square 64 (CV=5.2%)								
Bittern"S"	Public	4-6	35.9	0	96	63.5	5932 a	106
P883-8	WPB	4-1	38.6	0	99	61.5	5876 a	105
Aldura	NK	4-6	32.7	0	99	61.0	5606 ab	100
P883-28	WPB	3-31	38.2	5	99	61.5	5441 b	97
Rokel"S"	Public	4-5	35.5	1	99	60.0	4707 c	84
P883-38	Public	4-3	37.4	15	96	60.5	4700 c	84

[1/] Variety yields within each latin square followed by the same letter are not significantly different at .05% probability level using Duncan's Multiple Range Test.