WHEAT AND BARLEY VARIETY AND DATE OF PLANTING YIELD COMPARISONS AT THE SAFFORD AGRICULTURAL CENTER 1985

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Growers in the Safford Valley are predominately interested in wheat for feed rather than bread or pasta making. Twelve high yielding common wheats, six high yielding durums and six barleys were grown in randomized blocks of four replications with three planting dates, November 1, December 6 and January 11.

Initial fertilization at planting was NH_3, 110 lbs N and 300 lbs 16-20-0 per acre. Additionally, Uran, 75 lbs N, was applied in irrigation water April 4. Each plot consisted of 6 rows, 1-foot apart and 12 feet long. The center four rows were harvested with a 'Hege' plot combine for grain yield.

With each planting date, the field was flooded for emergence. Although tillering profusely the final stand for the November date of planting was generally a little more 'skippy' than for the December and January dates. Also, the spring application of N probably was a bit too late to have any effect on yield for the November planting. Yields for all three crops, common wheat, durum and barley were significantly greater for the December planting than for the November planting and significantly greater for the November planting than for the January date.

Yield data for the barleys are presented for the three dates of planting in Table 1. In a like manner data, the common "feed" wheats and durum wheats are presented in Tables 2 and 3, respectively. Variety X date interactions were significant at the .01% level of probability for all three crops. Multiple range significance comparisons of the higher yielding entries are shown in the right column for comparing variety yields across planting dates. Three common wheat varieties in Table 2, AC79-97, Westbred 911, and Probrand 775 were within the top five ranking, for each date of planting.

An additional randomized block yield trial was planted December 6 to evaluate twelve quality bread wheats. These data are presented in Table 4.

Table 1. Barley variety yield evaluations at three dates of planting.

Variety	Source	Test Weight lbs/bu	Grain Yield lbs/A	
NOVEMBER 1 [3]				
Westbred Gustoe	WPB	52.5	6539 a [1]	AB [2]
Columbia	Germaines	51.5	6057 ab	BC
Westbred Gus	WPB	52.0	5401 bc	CD
Prato	Public	50.5	4877 c	
Signal*	Public	51.5	3642 d	
Westbred Barcott*	WPB	50.0	2246 e	
*early varieties with excessive freeze damage				
DECEMBER 6 [3]				
Columbia	Germaines	50.0	7261 a	A
Westbred Gustoe	WPB	52.0	7147 a	A
Westbred Gus	WPB	51.0	7005 a	A
Prato	Public	49.0	5790 b	CD
Westbred Barcott*	WPB	50.5	4916 c	
Signal*	WPB	51.5	4833 c	
*early varieties with some frost damage at flower				
JANUARY 11				
Prato	Public	48.5	5130 a	D
Signal	Public	48.5	4755 a	
Westbred Gustoe	WPB	51.0	3726 b	
Westbred Barcott	WPB	48.5	3606 b	
Columbia	Germaines	47.0	3531 b	
Westbred Gus	WPB	50.0	3196 b	

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

[2] Variety yields across planting dates followed by the same letter are not significantly different at .05% probability level using Duncan's Multiple Range Test.

[3] Yields for the December date of planting were significantly greater than for the November date and yields for the November date were significantly greater than for the January planting date.

Table 2. Common 'Feed' wheat variety yield test evaluation at three dates of planting.

Variety	Source	Test Weight lbs/bu	Grain Yield lbs/A	
NOVEMBER 1 [3]				
AC79-97	Public	62.0	6300 a [1]	AB [2]
Zaragoza	Public	61.5	6200 ab	AB
Glennson	Public	63.0	6119 abc	ABC
Westbred 911	WPB	61.5	6067 abc	ABC
Probrand 775	NK	62.5	6050 abc	ABC
Anza	Public	63.0	5821 abc	BC
Nacozari 76	Public	63.0	5602 bc	BC
Super-X	Public	62.5	5531 c	C
AC79-162-1	Public	62.0	5530 c	C
Klassic	NK	63.5	4701 d	
Yecora Rojo	Public	63.0	4637 d	
OR 750753	Public	61.0	4627 d	
DECEMBER 6 [3]				
Probrand 775	NK	61.5	6632 a	A
Westbred 911	WPB	61.0	6329 ab	AB
AC79-97	Public	60.5	6319 ab	AB
Anza	Public	62.0	6112 abc	ABC
Nacozari 76	Public	61.0	5985 bc	ABC
Zaragoza	Public	58.0	5945 bc	ABC
Super-X	Public	61.0	5822 bcd	BC
Yecora Rojo	Public	63.0	5771 bcd	BC
Glennson	Public	61.5	5752 bcd	BC
Klassic	NK	63.0	5676 cd	BC
AC79-162-1	Public	59.5	5279 d	
OR 750753	Public	58.5	4534 e	
JANUARY 11				
AC79-97	Public	60.5	5417 a	C
Probrand 775	NK	59.5	5310 ab	
Glennson	Public	61.0	5094 ab	
Westbred 911	WPB	60.0	5019 ab	
Yecora Rojo	Public	61.5	4863 abc	
Anza	Public	60.5	4800 bcd	
Nacozari 76	Public	60.0	4715 bcde	
Klassic	NK	60.5	4357 cdef	
Super-X	Public	57.0	4274 cdef	
Zaragosa	Public	57.0	4234 def	
OR 750753	Public	59.0	4184 ef	
AC79-162-1	Public	59.0	3786 f	

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[2] Variety yields across planting dates followed by the same letter are not significantly different at the .05% probability level using Duncan's Multiple Range Test.

[3] Yields for the December date of planting were significantly greater than for the November date and yields for the November date were significantly greater than for the January planting date.

Table 3. Durum variety yield evaluation at the three dates of planting.

Variety	Source	Test Weight lbs/bu	Grain Yield lbs/A	
NOVEMBER 1 [3]				
Waha"S"	Public	63.0	6528 a [1]	BCD [2]
Bittern"S"	Public	64.5	6514 a	BCD
Aldura	NK	63.0	6384 a	CD
Yavaros 79	Public	64.0	6151 ab	CD
G 5003	Germaines	63.0	5791 bc	
Westbred 1000 D	WPB	58.5	5393 c	
DECEMBER 6 [3]				
Aldura	NK	63.0	7648 a	A
Waha"S"	Public	63.0	7024 b	B
Bittern"S"	Public	64.0	6863 bc	BC
Westbred 1000 D	WPB	59.0	6662 bcd	BCD
G 5003	Germaines	62.0	6504 cd	BCD
Yavaros 79	Public	63.5	6329 d	D
JANUARY 11				
Aldura	NK	62.0	5289 a	
Waha"S"	Public	61.5	4685 b	
Yavaros 79	Public	60.5	4539 bc	
Bittern"S"	Public	62.5	4364 bc	
Westbred 1000 D	WPB	56.0	4288 bc	
G 5003	Germaines	60.5	4146 c	

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

[2] Variety yields across planting dates followed by the same letter are not significantly different at .05% probability level using Duncan's Multiple Range Test.

[3] Yields for the December date of planting were significantly greater than for the November date and yields for the November date of planting were significantly greater than for the January date of planting.

Table 4. Bread wheat quality variety and experimental yield evaluation planted December 6.

Variety	Source	Test Weight lbs/bu	Grain Yield lbs/A [1]
IS 8350l	IPRI	63.0	7197 a
P 983-83	WPB	60.0	6247 b
P 983-63	WPB	62.0	6220 bc
P 983-69	WPB	62.5	6164 bc
IS 8322	IPRI	61.5	6134 bc
Probred	NK	62.0	5980 bcd
AI-26	Public	60.5	5781 bcd
Cajeme	Public	62.5	5672 bcd
Oslo	H&H	61.0	5581 bcd
AC79-162-1	Public	60.0	5567 cd
IS 8314	IPRI	60.0	5566 cd
Yecora Rojo	Public	60.0	5317 d

[1] Variety yields followed by the same letter are not significantly different at the .05% level of probability using Duncan's Multiple Range Test (CV=6.8%).