PERFORMANCE OF IRRIGATED SOFT WHITE WINTER WHEAT IN ELMORE COUNTY. 1986-1994

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INTRODUCTION

Wheat variety choice can be critical for optimum economic production of small grains. Wheat nurseries were established at several locations in southwest Idaho to evaluate the relative performance of varieties in diverse environments of the state.

METHOD

Soft white winter wheat was planted 25 seeds per foot with a 7 inch row spacing. Varieties were arranged in a randomized complete block with three or four replications. All trials received the same management as the surrounding field. Wheat yield was calculated based on a test weight of 60 pounds per bushel.

RESULTS AND DISCUSSION

Variety performance is most accurately assessed by examining data over as many site years within a region as possible. Stephens, the most commonly grown soft white winter wheat in southwest Idaho, was less productive and higher in protein than either Malcolm or MacVicar. Madsen and Dusty were comparable in yield to Stephens but had better test weight. Malcolm and MacVicar have smaller seed and stronger straw than Stephens. Dusty and Basin had the lowest protein of all varieties. In summary, Malcolm and MacVicar have distinct advantages in yield, protein and lodging reisistance over the popular Stephens and should be grown by more producers, especially with October plantings. The “All Southwest Idaho” column provides the most reliable assessment of yield potential. However, the Elmore and eastern Owyhee County data showed the same trends.

Information on the agronomic performance of soft white winter wheat in all Idaho locations by years is available as Miscellaneous Series or Special Reports from the Ag Publications Office. Any questions should be directed to the Elmore County Extension Office.

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Table 1. Soft white winter wheat yield performance in Elmore and eastern Owyhee county sites. 1986-1992.

Variety	1985 MH[1/]	1986 MH	1987 H	1988 MH	1989 G	1989 SC	1990 G	1991 H	1992 MH	1994 MH
					bu/acre					
Malcolm	90	133	135	125	160	132	122	113	77	151
Stephens	79	125	130	132	132	133	120	114	67	144
Crew	70	--	--	--	--	--	--	--	--	--
Hill 81	84	115	122	--	--	--	114	--	--	--
Tres	64	101	--	--	--	--	--	--	--	--
Daws	--	--	118	--	117	--	117	113	--	--
Lewjain	74	119	96	--	--	--	--	--	--	--
Tyee	68	--	102	99	117	124	92	--	--	--
Dusty	--	131	113	133	149	150	122	123	--	--
Oveson	--	98	101	--	--	--	--	--	--	--
Salmon	--	--	114	115	--	--	--	--	--	
Basin	--	--	120	127	128	139	--	--	--	
Syringa	--	--	--	112	145	152	113	--	--	
MacVicar	--	--	--	--	165	146	119	125	72	154
Madsen	--	--	--	--	125	146	114	--	61	140
Hyak	--	--	--	--	108	119	--	--	--	--
Kmor	--	--	--	--	--	--	--	112	70	--
Rohde	--	--	--	--	--	--	91	--	--	--
Rod	--	--	--	--	--	--	--	--	61	133
W301	--	--	--	--	--	--	--	--	73	--

[1/]MH = Mountain Home, H = Hammett, G = Grandview, SC = Saylor Creek.

Table 2. Soft white winter wheat agronomic performance averaged across Elmore and eastern Owyhee county sites for selected time periods.

	All SW Idaho	Elmore and Eastern Owyhee Counties				
	Grain yield bu/A	Grain yield bu/A	Protein %	Test wt.	Height in	Lodging %
			1985-87			
	8 sites			sites 3		
Stephens	123	116	11.7	55.2	34	2
Malcolm	130	123	11.3	55.1	35	0
Hill 81	116	109	11.5	57.4	37	2
Lewjain	112	96	10.8	56.1	35	21
$LSD_{.10}$[1/]	6	7	.6	.8	1	15
			1987-89			
	10 sites			4 sites		
Stephens	123	132	11.0	58.0	37	4
Malcolm	125	138	10.6	57.5	38	0
Dusty	126	136	9.8	59.4	38	4
Basin	116	128	9.9	58.7	31	0
Tyee	105	110	10.5	57.4	39	25
$LSD_{.10}$	7	7	.6	1.0	1	6
			1989-90			
	8 sites			3 sites		
Stephens	116	128	10.4	59.6	37	0
Malcolm	119	137	9.8	59.5	37	0
Dusty	114	138	9.0	60.7	37	0
Madsen	113	127	10.0	60.6	37	0
MacVicar	124	141	9.7	60.1	38	0
$LSD_{.10}$	7	7	.6	.8	1	--
			1989-92, 1994			
	14 sites			6 sites		
Stephens	124	116	11.7	59.0	35	0
Malcolm	131	123	11.2	58.5	37	0
MacVicar	133	128	11.0	59.1	37	0
$LSD_{.10}$	4	7	.4	1.8	1	--

[1/]Means must differ more than the LSD to be statistically different at the 10% probability level.