



New Winter Wheat Varieties

Rohde—A Winter Club Wheat

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Rohde is a winter club wheat jointly released by Oregon State University, University of Idaho, and Washington State University in 1993. It is an awned, bronze-chaffed club with excellent yield potential. It has adult plant resistance to stripe rust.

Recommended Areas

Rohde, unlike many club wheats, appears to be widely adapted. It has been successfully grown in small and large-scale field plots in low rainfall, high rainfall, and irrigated environments. Rohde is susceptible to strawbreaker footrot. This susceptibility may make it unsuitable for fields with a history of severe footrot problems.

Agronomic Characteristics

Height and lodging resistance. Rohde is similar in height to newer club wheats like Tres or Hyak, and is significantly shorter than the older clubs like Moro and Faro. It is taller than common wheat varieties like Stephens in high yielding environments, but may exhibit similar height under low yield, dryland conditions. Lodging resistance is superior to that of older club wheats. Under dryland conditions, little or no lodging has been observed. Lodging can occur in high yield environments, especially in fields where soil nitrogen levels are excessive.

Maturity. Rohde is similar to Stephens in maturity. It tends to be several days later than Hyak but is slightly earlier than Tres in dryland environments.

Disease resistance. Rohde has a good disease resistance profile. It has adult plant resistance to stripe rust. Its level of

stripe rust resistance is greater than that of any other currently grown club wheat. It has moderate resistance to cephalosporium stripe and common bunt, and is moderately susceptible to leaf rust, powdery mildew, and *Septoria* leaf blotch. Rohde is susceptible to strawbreaker footrot, and will need to be sprayed with fungicides for footrot control or be grown in fields where footrot has not been a problem.

Test weight and quality. Rohde test weights have been significantly better than those of other wheats, both common and club, across environments. This is unusual for a club wheat. A 1-pound test weight advantage is not uncommon. Grain quality (moisture, protein percent, and hardness) is comparable with currently grown club and common wheats. Milling and baking quality is adequate. Flour yield and cake volume/score tend to be lower than those of other clubs. Cooking quality is acceptable.

Winter hardiness. Rohde has a level of winter hardiness similar to that of Newain. This level of hardiness is adequate to allow production across all Oregon environments.

Yield

Rohde has the potential to outyield commonly grown club wheats across environments. It has had yields equivalent to common wheats in many situations. It appears to have broad adaptation and has yielded surprisingly well under high rainfall and irrigated production. With proper management, Rohde has yielded over 100 bushels per acre.

Development

Rohde was selected from progeny of the cross Pana/Selection 72//Daws. The initial cross was made by Bob Metzger, a USDA-ARS scientist located at Corvallis. Selection work was done by Chuck Rohde, long-time cereal breeder at the Columbia Basin Agricultural Research Center. Final purification was accomplished by Pamela Zwer, Rohde's successor.

Rohde was tested under the experimental designation OR855. Breeders seed was produced through a head row screening process. Rohde was officially released by Oregon State University in the spring of 1993. The first foundation seed field was planted in fall 1992. Funding for development of Rohde was provided by the OSU Agricultural Experiment Station and the Oregon Wheat Commission.

The name Rohde was selected to recognize Chuck Rohde's 36 years of service to Oregon State University and the cereal industries of Oregon.

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Table 1. Yield, test weight, and height data for four winter wheat varieties grown at seven eastern Oregon locations in 1989-91.

	Hyak	Rohde	Stephens	Tres	PLSD (5%)
	-----bu/A-----				
Arlington	25	27	26	25	NS
Athena	83	78	90	79	NS
Heppner	43	42	43	39	NS
LaGrande	117	111	113	116	NS
Lexington	42	41	48	40	NS
Moro	50	51	53	48	NS
Pendleton	75	72	82	71	NS
7 location average					
Yield (bu/A)	62	60	65	60	3
Test Wgt. (lb/bu)	57.8	60.3	58.7	59.1	0.8
Height (in)	32	31	30	33	1

Table 2. Heading date, height, lodging percent, yield, and test weight for wheat varieties grown over locations and years.

Location and year(s)	Hyak	Rohde	Stephens	Tres	PLSD (5%)
Corvallis (1990-91)					
Julian heading date	151	158	156	154	1
Height (in)	46	46	41	47	2
Lodging percent	4	10	8	20	—
Yield (bu/A)	87	116	120	88	21
Test weight (lb/bu)	59.4	62.3	60.7	62.0	1.2
Madras (1992)					
Julian heading date	148	154	149	151	—
Height (in)	34	35	37	40	2
Lodging percent	80	73	82	64	21
Yield (bu/A)	70	89	77	79	12
Test weight (lb/bu)	59.4	61.6	58.8	59.9	1.1
Moro (1992)					
Julian heading date	133	136	134	140	—
Height (in)	32	30	31	30	—
Lodging percent	0	0	0	0	—
Yield (bu/A)	61	69	63	60	8
Test weight (lb/bu)	56.6	60.6	57.7	58.6	—
Ontario (1992)					
Julian heading date	—	140	135	135	—
Height (in)	—	43	46	43	2
Lodging percent	—	85	59	85	26
Yield (bu/A)	—	115	120	99	14
Test weight (lb/bu)	—	58.4	57.9	56.9	2.1
Pendleton (1992)					
Julian heading date	133	135	133	142	—
Height (in)	31	35	34	37	—
Lodging percent	18	14	1	80	—
Yield (bu/A)	66	61	75	62	15
Test weight (lb/bu)	57.3	56.6	56.8	57.3	—
Western Regional Trials					
bu/A 1988 (16 locations)	79	87	84	81	—
bu/A 1989 (7 locations)	90	92	92	95	—
bu/A 1990 (11 locations)	95	98	105	94	—



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