



University of Idaho
College of Agriculture
Cooperative Extension Service
Agricultural Experiment Station

Current Information Series No. 408
September 1977

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NOV 3 1978

UNIVERSITY OF IDAHO

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Winter Wheat Varieties

Varieties for dryland and irrigated areas of southern Idaho, and irrigated areas of eastern Oregon, western and northern Nevada

Hard red winter wheats are grown on 300,000 acres of dryland in southern Idaho. These wheats are used primarily for breadmaking if they have acceptable protein level and other desirable characteristics. All the varieties described have desirable milling and baking properties. Soft white winter wheats are grown in the irrigated areas along the Snake River in southern Idaho

and eastern Oregon and in northern and western Nevada. In 1976 there were approximately 150,000 acres of irrigated winter wheat in southern Idaho, 25,000 acres in eastern Oregon and 15,000 acres in western and northern Nevada. White winter wheats are used primarily for cookies, crackers and pastries.

Hard Red Winter Wheat

Cardon

Cardon is a tall, awned, brown-glumed variety with moderately stiff straw. It has not yielded as well as Heglar, Jeff or Ranger when grown on dryland. Cardon was developed by Utah State University. Its main advantages are its resistance to dwarf bunt and lodging.

Franklin

Franklin is an awned, white-glumed wheat of medium maturity. It is tall with medium-strength straw. Franklin has shown average emergence characteristics and seedling vigor. The variety normally threshes easily, but under certain conditions may show medium to heavy shattering. Franklin is resistant to the prevalent races of stripe rust and dwarf bunt in Idaho. It was developed cooperatively by ARS-USDA and the University of Idaho Agricultural Experiment Station.

Hansel

Hansel is an awned, brown-glumed variety. It has excellent seedling emergence and early spring vigor. It produces average yields on dryland but should not be grown where lodging is a problem. It is resistant to stripe rust and dwarf bunt. Hansel was developed at Utah State University.

Heglar

Heglar is an awned, white-glumed medium-maturity variety with tall, moderately stiff straw. Heglar is resistant to common bunt and stripe rust but is susceptible to dwarf bunt. Therefore, its usefulness will be limited to dwarf bunt-free areas of southern Idaho. It has averaged slightly higher than Tendoy and Wanser in grain yield, test weight and protein content in southern Idaho trials. It was developed cooperatively by ARS-USDA and the University of Idaho Agricultural Experiment Station.

Jeff

Jeff is a tall, awned, brown-glumed variety with moderately stiff straw. It is superior to Ranger in seedling vigor and has high resistance to stripe rust and dwarf bunt. It has medium maturity, good yield and test weight and may be suited for production throughout southern Idaho. It is more resistant to shattering than Franklin. Among varieties grown 3 years at Idaho dryland stations, Jeff averaged highest in both yield and test weight. It is also a good yielder when grown under irrigation at Aberdeen. Jeff was developed cooperatively by ARS-USDA and the University of Idaho Agricultural Experiment Station.

Ranger

Ranger is an awned, brown-glumed wheat of medium height and maturity. It emerges rather slowly, is somewhat lacking in seedling vigor and has moderately weak straw. It is very resistant to stripe rust and has less than 10% dwarf bunt in trials in which susceptible varieties have had more than 60% infected plants. Ranger was developed cooperatively by ARS-USDA and the University of Idaho Agricultural Experiment Station.

Wanser

Wanser is an awned, brown-glumed variety with moderately stiff straw and medium maturity. Under dryland conditions in Idaho, it has averaged about 28 inches in height and has been highly resistant to lodging. It has produced average grain yields of medium to high test weight in dryland trials and the highest yields in irrigated trials. Wanser is resistant to stripe rust and common bunt but is susceptible to dwarf bunt. Wanser was developed and released by Washington State University.

SUMMARY OF AGRONOMIC DATA ON HARD RED WINTER WHEAT VARIETIES GROWN AT SEVERAL DRYLAND LOCATIONS IN SOUTHERN IDAHO

Variety	Yield (bu/acre)				Test-Weight (lb/bu)				Protein (%)			
	Heglar ¹	Preston ¹	Tetonia ²	Average	Heglar	Preston	Tetonia	Average	Heglar	Preston	Tetonia	Average
Cardon	27.5	37.3	37.5	34.1	61.3	60.8	58.9	60.3	11.6	12.9	16.6	13.7
Franklin	27.9	34.2	35.6	32.6	61.6	59.8	59.4	59.2	10.4	13.2	16.7	13.4
Hansel	28.0	35.3	40.7	34.7	61.5	60.9	59.0	60.5	11.2	12.6	16.2	13.3
Heglar	27.8	41.0	41.8	36.9	62.2	61.5	59.1	60.9	11.4	14.0	15.5	13.6
Jeff	29.7	43.0	42.8	38.5	62.8	61.9	59.4	61.4	10.8	12.2	15.8	12.9
Ranger	29.3	39.6	42.2	37.0	61.8	60.0	58.5	60.1	10.6	13.4	15.3	13.1
Wanser	25.4	35.0	42.4	34.3	61.9	61.0	59.0	60.6	9.7	12.3	14.5	12.2

Variety	Date Headed	Height	(Inches)	Dwarf Bunt (%)
	Tetonia	Preston	Tetonia	Preston
Cardon	7/4	36	22	0
Franklin	7/4	39	24	0
Hansel	7/4	36	25	4
Heglar	7/2	36	22	
Jeff	7/2	39	23	2
Ranger	7/1	33	24	8
Wanser	7/1	34	21	70

¹ 1972-74 data

² 1972-75 data

³ 1972-73 data

SUMMARY OF AGRONOMIC DATA ON HARD RED WINTER WHEAT VARIETIES GROWN UNDER IRRIGATION AT ABERDEEN (1972-1975)

Variety	Yield (bu/acre)	Test Weight (lb/bu)	Protein ² (%)	Height (Inches)	Date Headed	Lodging ¹
Cardon	93.4	62.0	14.0	48	6/17	2
Franklin	79.8	60.1	15.4	51	6/17	4
Hansel	87.9	62.3	14.2	49	6/17	4
Heglar	91.5	62.7	14.5	47	6/16	3
Jeff	96.6	63.0	14.5	48	6/16	6
Ranger	90.5	62.8	14.4	46	6/14	5
Wanser	101.9	63.0	12.9	43	6/15	2

¹ Lodging index — 1 - erect 9 - prostrate

² 1972-74 data

Soft White Winter Wheat Varieties

Barbee

Barbee is an awned, brown-glumed, semi-dwarf club wheat developed at Washington State University. It has about the same height and maturity as Nugaines. Barbee is resistant to stripe rust, flag smut and common bunt. It has yielded as well as Nugaines in irrigated trials in Idaho but substantially less in Nevada trials. Barbee is the highest yielding club variety.

Daws

Daws was developed by Washington State University as a replacement for Nugaines. It is resistant to stripe rust and common smut. Lodging resistant is about the same as Nugaines. Yields and test weights are similar to those expected with Nugaines.

Hyslop

Hyslop is a semi-dwarf which has yielded well under irrigation in the western states. It was released by Oregon State University. It is an awned wheat with short, stiff straw and white glumes. Hyslop has yielded better than Nugaines in tests at Ontario, Oregon, and about equal at Aberdeen and Reno. The test weight is equal to or slightly lower than Nugaines. It has better resistance to lodging than Nugaines, but is not as winter-hardy. Hyslop is resistant to common bunt and stripe rust.

McDermid

McDermid is a high yielding semi-dwarf variety developed by Oregon State University. It has yielded better than Nugaines at Ontario and Reno and equaled Nugaines at Aberdeen. It is slightly earlier in maturity than Nugaines. McDermid has good test weight and is resistant to common bunt and stripe rust.

About This Research

Wheat investigations in Idaho are conducted cooperatively by the Western Region, Agricultural Research Service, U.S. Department of Agriculture, and the Idaho Agricultural Experiment Station at University of Idaho Research and Extension Centers at Aberdeen and Teton. Wheat investigations in Oregon were conducted at Oregon State University Malheur Branch Experiment Station located at Ontario, and in Nevada at the University of Nevada Valley Road Field Laboratory at Reno.

Nugaines

Nugaines is the most common semi-dwarf, soft white winter wheat variety grown under irrigation. It yields well and produces grain which has high test weight. Nugaines is resistant to common bunt but is susceptible to dwarf bunt. It was developed cooperatively by Washington State University and ARS-USDA. The milling and baking trade likes Nugaines.

Raeder

Raeder is an awned, brown-glumed variety developed by Washington State University. It has yielded as well as Nugaines and produces grain of high test weight. Raeder is resistant to stripe rust, common bunt and some races of dwarf bunt.

Rew

Rew is a tall variety developed by Oregon State University. It has consistently yielded less than Nugaines in all trials. Test weights and lodging resistance have been satisfactory. It would not be suited for production with wheel-line sprinkler irrigation systems because of its height. Rew is not as winter-hardy as Nugaines.

Stephens

Stephens is an awned semi-dwarf variety recently released by Oregon State University. It has yielded equal to or slightly better than Nugaines in all trials. Stephens is early in maturity and has good lodging resistance. It is not as winter-hardy as Nugaines.

Other Varieties

Ark, Coulee, Faro, Luke, McCall, Paha, Sprague, Tendoy and Yamhill have been tested at several locations. These varieties have not performed as well as the varieties currently recommended.

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**SUMMARY OF AGRONOMIC DATA ON SOFT WHITE WINTER WHEAT
VARIETIES GROWN UNDER IRRIGATION**

Variety	Yield (bu/acre)	Test Weight (lb/bu)	Height (Inches)	Date Headed	Lodging Index ²
Aberdeen, Idaho (1974-1976)					
Barbee ^{1 3}	120.8	60.2	33	6/21	2
Daws	115.9	61.4	34	6/19	1
Hyslop	119.2	60.7	34	6/19	1
McDermid	118.4	61.0	34	6/17	2
Nugaines	119.8	62.6	34	6/20	2
Raeder ¹	123.0	62.5	35	6/20	2
Rew	113.7	62.0	39	6/18	1
Stephens	122.2	60.0	35	6/16	1
Reno, Nevada (1974-1976)					
Barbee ^{1 3}	90.6	57	32	5/30	2
Daws	109.7	61	33	5/28	2
Hyslop	99.1	59	33	5/27	2
McDermid	108.6	60	33	5/26	3
Nugaines	101.9	61	33	5/28	2
Raeder ¹	104.3	60	34	5/28	2
Rew	103.7	60	38	5/27	1
Stephens	97.6	60	32	5/26	1
Ontario, Oregon (1974-1976)					
Hyslop	140.6	59.8	37	5/29	1
McDermid	152.4	59.7	37	5/27	3
Nugaines	131.8	60.5	35	5/30	1
Rew ¹	130.2	60.0	43	5/29	2
Stephens	143.8	58.9	37	5/26	1

¹ Only 2-years data available. Averages shown were weighted with Nugaines

² Lodging index: 1 - erect, 9 - prostrate

³ Soft white club variety

10 cents per copy

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