

Spring Wheat Varieties For Idaho

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Soft White Spring Wheat

Soft white spring wheat is normally grown on irrigated land in southern Idaho and on limited acreages of non-irrigated land in northern Idaho. In years when winter killing is severe, it is used to replant severely damaged areas in soft white winter wheat fields throughout the state. Yields of soft white wheats have historically exceeded yields of hard reds. However, the higher price paid for red wheats with good grain protein content often makes the return per acre less for white wheats than for reds.

Resistance to stripe rust (*Puccinia striiformis*) is an essential characteristic of any new variety, and all currently grown varieties except Fieldwin have that resistance. Growers who plant Fieldwin must consider the cost of a fungicide application for rust control if rust becomes a problem.

All of the contemporary soft white wheats are semidwarf types varying between 32 and 36 inches in height. Two new varieties, Bliss and Penawawa, and the older variety, Fieldwin, have slightly better resistance to lodging than the others. Maturity dates of varieties vary so one should consider the length of the local growing season when selecting a variety.

Agronomic and disease data for soft white spring wheats grown under irrigation at Aberdeen and Twin Falls and

on dryland at Tetonia are given in Tables 1, 2 and 3. Nez Perce County data are given in Table 4. Variations in the ranking of varieties for yield in the two irrigated nurseries were due to different field position, different years and experimental error.

Treasure

Treasure is a white-chaffed, awned, semidwarf variety. Treasure ranks slightly below Bliss and Fieldwin and similar to Owens in straw strength. It is about 1 inch shorter than Owens, however, so it has slightly better resistance to lodging. Treasure is resistant to prevalent races of stripe rust and is moderately susceptible to leaf infection by black chaff (*Xanthomonas campestris* pv. *translucens*). The expression of black chaff symptoms on Treasure heads is rare, however. An average 34 percent of kernels have shown black point (caused primarily by *Alternaria*), similar to percentages for Twin and Owens, but higher than levels observed on other commercial varieties. Treasure matures 1 to 3 days later than Owens and Dirkwin, which might be a factor in areas with a shorter growing season.

Yields of Treasure have averaged 106 percent of yields of the second ranked variety, Fieldwin, in the irrigated

Table 1. Summary of agronomic data obtained on soft white spring wheat grown under irrigation at Aberdeen from 1 to 5 years.

Variety	1981-85			1981-82				
	Date headed	Height (inches)	Straw strength ¹	1981 Leaf rust (%)	1981 Stripe rust (type) (%)		Black point (%)	Black chaff ²
Treasure	7-1	33	2.8	40	1	5	34	4.0
Bliss	7-3	36	1.7	25	3	3	12	2.0
Owens	6-30	34	2.3	10	2	5	32	3.5
Dirkwin	6-30	34	2.5	70	2	2	24	3.5
Fieldwin	6-30	35	2.1	40	8	50	24	3.5
Twin	7-1	33	2.3	80	0	0	35	3.5

¹ 1 = stiff, 5 = weak

² 1 = resistant, 5 = susceptible

Table 2. Summary of agronomic data obtained on soft white spring wheat grown under irrigation and on dryland, 1982-86.

Variety	Irrigated			Tetonia Dryland				
	Yield (bu/acre)			Test weight (lb/bu)			Yield (bu/acre)	Test weight (lb/bu)
	Aberdeen	Twin Falls	Avg.	Aberdeen	Twin Falls	Avg.		
Treasure	84.4	88.3	86.4	56.9	59.9	58.4	48.0	57.2
Bliss	75.9	81.5	78.7	57.4	58.7	58.0	45.1	56.5
Owens	83.4	78.7	81.1	58.1	60.7	59.4	45.9	58.9
Dirkwin	81.3	81.0	81.1	53.7	57.3	55.5	46.3	55.2
Fieldwin	79.4	83.1	81.3	58.3	61.2	59.7	45.0	58.1
Twin	78.8	79.3	78.9	55.0	57.7	56.4		

Table 3. Summary of agronomic data obtained on soft white wheat, 1984-87.

Variety	Irrigated						Dryland Tetonia		Aberdeen		
	Yield (bu/acre)			Test weight (lb/bu)			Yield (bu/acre)	Test weight (lb/bu)	Date headed	Straw strength ¹	Height (inches)
	Aberdeen	Twin Falls	Avg.	Aberdeen	Twin Falls	Avg.					
Owens	79.6	87.8	83.7	59.2	61.4	60.3	49.1	59.9	6-27	3.3	32
Waverly	85.8	82.1	84.1	58.6	59.7	59.2	46.8	57.2	6-30	3.0	33
Penawawa	90.6	85.6	88.1	58.8	60.1	59.5	56.0	59.4	6-30	3.0	31
Treasure	89.6	85.2	87.4	57.4	60.4	58.9	50.3	59.4	7-2	2.7	34
Wakanz	81.6	83.5	82.6	57.1	59.3	58.2	50.2	58.4	7-2	2.7	33
LSD 5%	6.0	6.0	4.3				4.3				

¹ 1 = stiff, 5 = weak

Table 4. Summary of agronomic data obtained on spring wheat grown at Nez Perce County, Idaho, 1984-86.

Variety	Average yield		Average test weight		Average whole grain protein ¹ 1985-86
	2-year	3-year	2-year	3-year	
	(bu/acre)		(lb/bu)		
Soft white					
Dirkwin	36.0	35.6	52.1	52.4	
Owens	35.7	35.4	54.7	55.2	
Penawawa	31.3		54.6		
Treasure	36.7		54.5		
Sterling	35.5		55.6		
Hard red					
Wampum	35.9	32.0	56.6	57.0	13.7
Borah	35.7	34.2	54.8	55.0	13.7
Pondera	33.7	33.1	58.3	58.5	14.8
Copper	38.2	36.6	56.5	56.6	14.2
Butte	45.8		58.2		14.7
Len	38.3		55.8		14.8

¹ Protein content given on an "as is" moisture basis.

tests at Aberdeen and Twin Falls. It was also the highest yielding variety on dryland at Tetonia and among the three best at Nez Perce. Treasure has a lower test weight than Fieldwin and Owens, but it has more uniform kernel size than Owens. Treasure was released by USDA-ARS and the Idaho and Oregon Agricultural Experiment Stations in 1986.

Bliss

Bliss is a white-chaffed, awned, semidwarf spring wheat. Though it is the tallest of varieties tested in the Aberdeen irrigated nurseries, it also has the stiffest straw and, consequently, the highest resistance to lodging. Bliss is resistant to stripe rust and is moderately resistant to leaf rust (*Puccinia recondita* f.sp. *tritici*) and black chaff. It has the lowest percent of kernels showing black point of any of the soft white wheats. Bliss can mature as much as 7 days later than Dirkwin and Owens, so it should not be planted in areas with a short growing season.

Bliss has yielded significantly less than Treasure and slightly less than the other varieties in irrigated trials, but its black chaff, black point and lodging resistance makes it a good variety of choice in areas where these problems exist. At Nez Perce, it ranked below Treasure, Dirkwin and Owens in yield. Bliss was released by USDA-ARS

and the Idaho and Oregon Agricultural Experiment Stations in 1983.

Owens

Owens is a white-chaffed, awned, semidwarf variety that has averaged 34 inches in height in the Aberdeen irrigated trials. It is similar to Twin in straw strength, slightly better than Dirkwin and Treasure and weaker than Fieldwin and Bliss. Owens is one of the earlier maturing soft white spring wheats. It is resistant to stripe and leaf rust but is susceptible to powdery mildew. It is moderately susceptible to leaf infections caused by black chaff and often has a higher than average percentage of kernels infected with black point.

Owens has been similar to Fieldwin and Dirkwin in yield under irrigation, slightly better than Twin and Bliss and lower than Treasure. Owens, Dirkwin and Treasure have produced similar yields at Nez Perce. In test weight, Owens ranked second behind Fieldwin among varieties tested under irrigation and first among varieties tested in the dryland nursery. Owens was released by the USDA-ARS and the Idaho Agricultural Experiment Station in 1981.

Penawawa

Penawawa is an awned, white-chaffed variety that is similar in height to Owens and Treasure. Penawawa has slightly stiffer straw than Owens and Treasure and, therefore, slightly better resistance to lodging. It matures about 2 days later than Owens. Penawawa has been resistant to moderately resistant to stripe rust, depending upon the race and year, and is resistant to leaf rust. Limited data obtained at Aberdeen in 1982 indicate Penawawa is susceptible to black chaff, so growers should be careful to plant seed that has a low incidence of black chaff. It is moderately susceptible to kernel black point.

Penawawa has ranked among the top yielding soft whites in the irrigated and dryland trials in southern Idaho. It was released by the USDA-ARS and the Washington and Oregon Agricultural Experiment Stations in 1985.

Dirkwin

Dirkwin is a white-chaffed, awnless, semidwarf, intermediate maturing wheat with straw strength similar to

Twin and Owens. Dirkwin has resistance to the prevalent races of stripe rust and has moderate resistance to powdery mildew. Dirkwin is resistant to most races of leaf rust found in the Pacific Northwest, but it is susceptible to race UN6B that is prevalent in some years. It is moderately susceptible to leaf infections by black chaff and is intermediate among the varieties tested for percent of kernels infected by black point. Dirkwin is slightly more susceptible to ergot than other spring wheat varieties which may be a problem in some areas of eastern and northern Idaho where abundant ergot inoculum is supplied by native and cultivated grasses.

At Aberdeen and Twin Falls, Dirkwin's average yield is similar to Owens and Fieldwin and less than Treasure. Its yield at Nez Perce was similar to Owens. Grain test weight of Dirkwin is significantly lower than all other varieties except Twin. Dirkwin was released by the USDA-ARS and the Idaho and Oregon Agricultural Experiment Stations in 1978.

Twin

Twin is a white-chaffed, awnless, semidwarf variety that is medium in maturity. It is not as resistant to lodging as Fieldwin and Bliss, but it is slightly better than Owens and Treasure. It is resistant to stripe rust and susceptible to leaf rust and powdery mildew. Twin is moderately susceptible to leaf infection by black chaff and has one of the highest percentages of kernel black point among spring wheat varieties grown in Idaho.

In the irrigated tests, Twin yielded about the same as Bliss, about 2 bushels per acre less than Owens, Fieldwin and Dirkwin and more than 6 bushels less than Treasure. In test weight, Twin is usually 3 pounds per bushel below Fieldwin and Owens. Twin was released by the USDA-ARS and the Idaho, Oregon and Washington Experiment Stations in 1971.

Wakanz

Wakanz was released by the Washington Agricultural Experiment Station and USDA-ARS in 1987. It is a white-chaffed, awned, semidwarf variety with straw strength similar to Bliss. Wakanz is also similar to Bliss in maturity, which will limit its use in the upper Snake River Valley. Wakanz has been moderately resistant to stripe rust and resistant to leaf rust. It is the first soft white spring

wheat with resistance to Hessian fly, which is a problem in some areas of the Pacific Northwest. Its reaction to black chaff is not known.

In yield, Wakanz is similar to Twin and Bliss and slightly lower than Penawawa, Owens and Dirkwin. Its grain test weight has averaged 1.5 and 2 pounds per bushel lower than Penawawa and Owens, respectively. Wakanz has not been tested at Nez Perce, but it has been among the top yielders at Pullman, Washington, and might be considered for use in Idaho areas with similar environment.

Fieldwin and Fielder

Fieldwin and Fielder are white-chaffed, awned, semi-dwarf soft white varieties with moderately stiff straw. Both are susceptible to stripe rust, and chemical rust control is necessary in years when rust is a problem. At Aberdeen, Fieldwin has been similar to Dirkwin and Owens in maturity. Its height averaged 35 inches, and it has shown moderately good resistance to lodging. Fieldwin's yield has been similar to Owens and Dirkwin but lower than Treasure in both the irrigated and dryland trials. Fielder has yielded slightly less than Fieldwin. Fieldwin has had the highest test weight among the soft white wheats tested. Fielder was released by USDA-ARS and the Idaho, Oregon and Washington Agricultural Experiment Stations in 1974, and Fieldwin by USDA-ARS and the Idaho, Oregon and Colorado Agricultural Experiment Stations in 1977.

Other Semidwarf Soft White Varieties

Waverly, Edwall, Urquie and Walladay, released by USDA-ARS and the Washington Agricultural Experiment Station, and Sterling and Crestone, developed by USDA-ARS and the Idaho Agricultural Experiment Station and released by the Colorado Agricultural Experiment Station, have not yielded as well in southern Idaho as the other soft white spring wheat varieties. At Pullman, Waverly's yield has been similar to Owens, but it has had a lower test weight.

Blanca, developed by the Idaho Agricultural Experiment Station and USDA-ARS and released by the Colorado Agricultural Experiment Station and USDA-ARS, yields well in Idaho but is susceptible to stripe rust.

Hard Red Spring Wheat

Hard red spring wheats have been developed that yield well under irrigation. When adequately fertilized with nitrogen, they can produce grain that has protein content above 14 percent and has satisfactory milling and baking properties. Hard red spring wheats do not normally yield as well as the best soft whites when grown under equal conditions, so prospective growers should consider the protein premium being paid as well as the expected yield

and protein content of a particular variety. The hard red spring wheat varieties also have larger differences in height, maturity date, lodging resistance, test weight and resistance to shattering than the soft whites, so each grower should carefully select varieties to fit specific needs. Data obtained on the hard red spring wheats are given in Tables 4 through 7.

Table 5. Agronomic characteristics of hard red spring wheats grown under irrigation at Aberdeen.

Variety	1983-86					1981-82		
	Headed date	Height	Straw strength ¹	Stripe rust		Leaf rust	Black point ²	Black chaff ³
		(inches)		(type)	(%)	(%)	(%)	
Borah	6-25	31	3.0	0	0	10	10	4
McKay	6-28	35	2.0	0	0	10	21	2
Bannock	6-24	37	2.8	0	0	40	13	3
Pondera	6-26	34	2.0	0	0	10	22	2
Copper	6-26	32	3.0	0	0	20	16	3

¹ 1 = stiff, 5 = weak

² % infected kernels

³ 1 = resistant, 5 = susceptible

Table 6. Agronomic data obtained on hard red spring wheat grown under irrigated and dryland conditions, 1981-87.

Variety	Aberdeen (4) ¹ grain protein	Irrigated stations								Tetonia dryland (6)			
		Yield, bu/acre (7)				Test weight, lb/bu (7)				Yield (bu/acre)	% Borah	Test weight (lb/bu)	% Borah
		Aber- deen	Twin Falls	Avg.	% Borah	Aber- deen	Twin Falls	Avg.	% Borah				
Borah	13.4	71.4	79.0	75.2	100	58.6	60.0	59.3	100	46.3	100	58.1	100
McKay	12.4	78.6	81.7	80.2	107	58.8	59.8	59.3	100	54.4	117	58.2	100
Bannock	13.8	63.4	65.8	64.6	86	58.8	60.8	59.3	100	44.3	96	57.6	99
Pondera	13.9	76.1	80.9	78.5	102	60.5	61.4	61.0	103	44.6	96	59.0	102
Copper	12.9	80.6	86.4	83.5	111	59.7	60.7	60.2	102	43.3	94	58.3	100
Spillman ²	12.9	101(5)	105(5)		103(5)	98.0	97.0		98(5)		110(5)		98(5)

¹ Numbers within praentheses indicate number of years of testing at each location.

² Yields in % of Borah grown for the same years.

Table 7. Summary of agronomic data obtained from commercial nursery varieties grown in Aberdeen, 1986-87.

Variety	Yield		Test weight		Grain protein		Headed date	Height	Straw strength ¹
	1986	1987	1986	1987	1986	1987			
	(bu/acre)		(lb/bu)		(%)			(inches)	
Cenex Success	66.0		59.3		11.7		7-3	42	3.5
Norseman	72.7	83.5	57.5	57.3	12.0	13.0	7-1	32	3.0
Kodiak	60.4	65.7	49.2	52.5	12.4	12.4	6-26	24	1.5
Bronze Chief	53.5	60.6	52.0	55.7	13.6	14.1	6-26	32	2.0
Solar	58.9		58.3		11.3		7-4	37	3.0
Copper	85.6	112.6	59.5	59.8	12.2	12.1	6-29	35	3.0
WestBred 906R	91.7	89.7	58.3	59.6	12.3	12.9	6-26	35	2.0
WestBred 926 ²		88.3		59.8		12.6	6-27	36	2.0
Pondera	89.2	99.9	61.0	61.3	11.9	12.5	7-1	38	3.0
Probrand 751	96.6	111.5	57.8	60.3	10.9	11.5	6-26	34	1.5
WestBred 911	67.4		59.3		10.9		7-3	42	3.5
Germain's 444	77.3	74.3	57.8	59.3	11.4	12.7	6-24	32	2.0
Celtic ²		92.9		59.3		12.6	6-29	40	2.5
Tammy ²		96.1		61.2		12.4	6-28	39	2.0
LSD .05	12.4	15.7							

¹ 1 = stiff, 5 = weak

² 1987 data

Copper

Copper is a brown-chaffed, semidwarf variety that has moderately stiff straw. Its average height is 32 inches, the same as Borah but 1 inch shorter than Pondera and 2 inches shorter than McKay. Although Copper's heading date is similar to Pondera, it is 2 to 3 days later in maturity. Copper is resistant to stripe rust and moderately resistant to leaf rust, black chaff and kernel black point.

It has been the top yielder in the irrigated trials but it and all other varieties ranked well below McKay in the

dryland trials at Tetonia. At Rockland, where the 2-year average yields were under 20 bushels, Copper and Borah were the top yielders. In test weight, Copper ranked second behind Pondera. When properly fertilized, Copper will produce high yields of grain with a protein content of 14 percent or above. Its major weakness is that it is slightly more susceptible to lodging than Pondera and several of the proprietary varieties. Copper was released by the USDA-ARS and the Idaho and Oregon Agricultural Experiment Stations in 1986.

McKay

McKay is a white-chaffed, awned, semidwarf variety that has moderately stiff straw. It has averaged 1 inch taller than Pondera and 4 inches taller than Borah, and has slightly better lodging resistance than Borah. McKay is moderately resistant to powdery mildew and resistant to the prevalent races of leaf and stripe rust. McKay and Copper have produced similar yields under irrigation, but on dryland, McKay has yielded significantly higher than the other varieties. Low protein is one of the major disadvantages of McKay when grown under irrigation. Even under ideal conditions, grain protein content rarely exceeds 13 percent. McKay was released by the USDA-ARS and the Idaho, Oregon and Colorado Experiment Stations in 1981.

Pondera

Pondera is a white-chaffed, awned, semidwarf variety with moderately stiff straw. Pondera has averaged 34 inches in height, but has had better resistance to lodging than Borah and has a good reputation for not lodging under commercial production. Pondera has a weaker coleoptile and germinates and emerges slower than most other varieties which can result in reduced stands if soil crusting occurs before emergence. Pondera is resistant to the races of stripe rust and moderately resistant to the races of leaf rust present in the Pacific Northwest.

Grown under irrigation at Aberdeen and Twin Falls, Pondera yielded 1.7 bushels per acre less than McKay and 5 bushels less than Copper, but ranked highest of the three varieties in grain protein content. In a 3-year comparison in the Aberdeen commercial nurseries (data not shown in the tables), Pondera, 906R and Probrand 751 yielded 80.7, 70.5 and 78.6 bushels per acre with grain protein of 13.5, 13.9 and 12.7 percent, respectively. Borah, in the same trials, yielded 79.2 bushels per acre with grain protein content of 13.4 percent. Pondera has not yielded as well as Borah and Copper under poor growing conditions. Pondera has excellent milling and baking quality and has had the highest grain test weight among varieties evaluated. Pondera was released by the USDA-ARS and the Montana Agricultural Experiment Station in 1980.

Borah

Borah is a white-chaffed, awned, semidwarf variety that has moderate straw strength. Grown under irrigation, Borah is slightly more susceptible to lodging than other varieties. It is intermediate to early in maturity. It has averaged 31 inches tall under irrigation and 20 inches tall at Rockland where dryland nursery yields averaged about 20 bushels per acre. Borah is resistant to stripe rust and moderately resistant to leaf rust and black point. It is susceptible to head and leaf infections by black chaff, therefore growers should be careful to plant seed free of black chaff bacteria.

Borah has ranked second to McKay in yield in the dryland nurseries at Tetonia. In 2 years of tests at Rock-

land, it has produced yields similar to those of Copper and Bannock and should be considered for use for reseeding winter wheat fields and when planting spring wheat in the higher rainfall dryland areas of southern Idaho. Borah was released by the USDA-ARS and the Idaho and Oregon Experiment Stations in 1974.

Bannock

Bannock has yielded well in the dryland areas of southern Idaho. It is not recommended for use under irrigation. Bannock is an awned, white-glumed, early maturing variety. It is a moderately stiff-strawed, medium-height variety with good resistance to lodging and shattering. It is moderately resistant to stripe and leaf rust when grown on dryland and moderately susceptible when grown under irrigation. In dryland areas where maturity is not a problem, growers should consider Borah, Copper or McKay ahead of Bannock, since those varieties have had slightly higher yields than Bannock. Bannock's grain protein content on dryland is slightly higher than Borah and Copper. Bannock was released by USDA-ARS and the Idaho Agricultural Experiment Station in 1972.

Butte

Butte has been an outstanding variety in 2 years of testing at Nez Perce (Table 4), averaging 45.8 bushels per acre compared with 38.3 and 38.2 for Len and Copper, the second and third ranked varieties. In test weight, Butte has been similar to Pondera and 1.5 pounds per bushel better than other varieties. Its grain protein content has averaged 14.7 percent, compared to Len and Pondera at 14.8.

In southern Idaho irrigated trials, Butte has had rather weak straw and has ranged from 34 to 41 inches in height depending on the year. It has yielded less than Pondera and Copper under irrigation and less than Pondera and Borah in the Tetonia dryland trials. Although Butte is among the top varieties for protein content, its baking quality is not as good as Copper and Pondera. Butte was released by the North Dakota Agricultural Experiment Station in 1979.

Spillman

Spillman was released by USDA-ARS and the Washington Agricultural Experiment Station in 1987. Three years of data in southern Idaho indicate it is slightly lower in yield and lower in test weight than Pondera and Copper when grown under irrigation. In the Tetonia dryland nursery, its yield was similar to Copper and Pondera, but it was still somewhat low in test weight.

Other Semidwarf Hard Red Varieties

Several older hard red spring wheat varieties that are still being grown on limited acreages and that have been included in previous trials are:

Table 8. Summary of agronomic data obtained on durum wheat varieties grown under irrigation at Aberdeen, 1985-87.

Variety	Average yield		Average test weight		Whole grain protein ²		Date headed	Height	Straw strength ³
	1985-87	Modoc ¹	1985-87	Modoc ¹	1985	1986			
	(bu/acre)	(%)	(lb/bu)	(%)				(inches)	(1-5)
Modoc	75.6(3) ⁴	100	59.1	100	13.6	14.2	6-25	32	3.0
Irridur	63.4(3)	84	59.4	101	14.0	14.9	7-4	31	2.8
WAID	52.0(3)	69	55.3	94	14.0	15.0	7-2	33	3.0
Loyd	56.1(3)	74	55.9	95	13.7	15.8	7-3	31	1.8
Signadur ⁵	77.8(2)	103	59.3	101	13.7	15.8	7-3	34	2.5
Durox	67.5(3)	89	60.8	103	14.8	15.7	6-29	37	2.3
WPB881	51.0(3)	67	55.1	93	14.4	16.5	6-27	31	2.0
Laker	93.4(3)	124	60.4	102	13.8	11.9	7-2	36	3.5
Turbo ⁵	64.3(2)	100	53.5	91		14.2	6-29	31	3.0
LSD (.05)	9.7								

¹ % of Modoc

² As is moisture

³ 1 = stiff, 5 = weak

⁴ Number of years grown in parentheses ().

⁵ Signadur grown in 1985-86, Turbo grown in 1986-87.

Fremont, a high-quality, moderately stiff-strawed variety which has yielded slightly less than Pondera and Copper in the irrigated nurseries. Fremont has been moderately resistant to the prevalent races of stripe rust found in southern Idaho. Fremont was released by the Utah Agricultural Experiment Station in 1970.

Sawtell, released by USDA-ARS and the Idaho, Oregon and Washington Experiment Stations in 1977, is susceptible to stripe rust and produces grain with lower than average protein.

Wared, released by the USDA-ARS and the Washington Agricultural Experiment Station in 1974, has not yielded as well as Borah.

Wampum, released by the USDA-ARS and the Washington and Idaho Agricultural Experiment Stations in 1979, did not yield as well as Butte at Nez Perce.

Fortuna, **Newana** and **Marberg**, released by USDA-ARS and the Montana Agricultural Experiment Station, have not yielded as well as Borah in our dryland tests.

Proprietary Varieties

Each year, more proprietary varieties of soft white and hard red spring wheats are developed and marketed in

Idaho. We have tested many of them but we have been unable to test them all. Among those tested for more than 1 year, WestBred 906R, Probrand 751 and Prodax have produced satisfactory yields. However, 906R is very susceptible to shattering, and severe losses can occur if it is exposed to high winds at maturity. Table 7 lists data obtained from proprietary varieties grown in the Aberdeen irrigated nursery for 1 or 2 years. Copper and Pondera were the standard varieties included in the nursery.

Experimental error is high when varieties are tested at a single location for 1 year, so only major yield differences can be considered significant. WestBred, 906R and Probrand 751 appeared to be the best yielding proprietary varieties in the trials. Germaine's W-444 was one of the earliest maturing varieties.

Spring Durum Wheat

Limited acreages of spring durum wheat are grown in southern Idaho. Most of them are grown under contract, and the varieties grown are determined by the contractor. Growing durums without an assured market is not recommended. Table 8 contains data obtained on durum varieties.

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