

2006 HARD WINTER WHEAT

OVERVIEW: Growing season conditions for the 2006 Hard Winter Wheat nurseries were the same as the soft white winter nurseries that were most influenced by: (1) early, dry seed bed conditions until late season precipitation that started in late September and early October 2006, (2) mild winter temperatures coupled with above average precipitation in January 2006, (3) 3-day cold snap on February 17-19, 2006, (4) drought/heat stress from mid-April to mid-May, (5) excellent precipitation and cool weather in late May and early June and heat stress periods in both June and July 2006. **Stripe rust** (*Puccinia striiformis* F. sp. *Tritici*) was not a significant factor in the 2006 nurseries even though stripe rust could be observed on susceptible varieties.

Yield averages in 2006 were comparable with historical averages at most locations. In general, quality (test weight and percent grain protein) were good. Average **test weight** value for HRW across all locations was good at 61.2 lb/bu reflecting late May precipitation and June rainfall patterns coupled with cool weather that was extremely favorable to kernel development and fill. **Percent grain protein** had an average of 11.8% that exceeded the 11.5% protein requirement for the HRW market class.

There was a **high interest** in HRW wheat production during the 2006 season due to HRW prices being significantly higher than soft white wheat prices.

August 17, 2006 **Portland cash markets** had:

Soft white - \$3.97/bu,

Barley - \$110/ton,

DNS - \$5.35/bu

HRW - \$5.13/bu

(Source: T. Reidner, CLD Pacific, Lewiston, ID).

Three new HRW varieties garnered a lot of interest in 2006: Bauermeister (WSU), Eddy (Westbred, LLC) and AgriPro Paladin (AgriPro). Each of these varieties has stripe rust advantages over existing 'traditional' HRW varieties (Finley, Hatton, Buchanan) as well as production potentials 'outside' the traditional HRW production areas. Other varieties/experimental lines that stood out were: IDO621 (a UI Boundary replacement), Boundary (UI), WA007976 (WSU advanced line), ORN00B553 (OSU advanced line), and W98-344 (AgriPro advanced line). Not included in the 2006 trials, but will be included in the 2007 trials, is Declo that was planted on 19.3% of the acres in Washington State in 2006.

Listed below are summary evaluations for soft white winter wheat at seven (7) Hard Winter Wheat nurseries that included HRW and HDWH winter entries in the 2006 Variety Testing Program. Eltan is included in the hard winter nurseries for yield comparisons with a soft white winter wheat variety that is adapted to hard winter wheat production regions. One location (Lind, WA) is not listed in the 2006 data set since field variation (CV %) in this nursery was outside the limits for providing accurate performance evaluations among the varieties/experimental lines. A majority of information at the Lind location is available in the 2005 Variety Testing Data set on the web site (<http://variety.wsu.edu>).

ALMIRA HARD WINTER WHEAT

1. 2006 Hard Winter Wheat **yield data** from the WSU Variety Testing nursery at the Almira, WA location averaged 113.0 bu/ac that was 13.9% higher than the 3-year historical average (99.2 bu/ac). *NOTE: The Almira nursery was located 10 miles north of Almira, WA on Sorensen Rd (D. McKay farm).*
2. This nursery was **seeded early** on 7 September 2005 on summer fallow ground using a plot drill with hoe openers into soil moisture that was about 3-inches below the surface. This nursery had good emergence that resulted in a very even and uniform stand with fairly large wheat (6-8 inches tall) going into the winter.
3. **Stripe rust** was not a significant factor in the 2006 nursery even though stripe rust could be observed on varieties. Very susceptible varieties such as Hatton and Wanser had slight but fairly severe stripe rust infections that contributed them having the lowest yield averages in the nursery
4. This nursery survived the hits from the up-and-down weather patterns during the **2005-2006 growing season**. Exceptions were ORN00B507 and ACS 51084 that suffered considerable cold injury during the 17-19 Feb 2006 cold snap. Yield averages for these two lines were also at the low end of the yield data. The late season precipitation and cooler weather during kernel development seemed to enhance test weight values for many varieties.
5. **Yield average rankings** once again tracked closely with historical 2-yr and 3-yr averages. The highest yielding line was an experimental line from the University of Idaho (IDO 621) that is being developed as a Boundary replacement. Average **test weight** value was 61.9 lb/bu suggesting that late May precipitation and June rainfall patterns coupled with cool weather was extremely favorable to kernel development and fill. In part, the heavy test weight values probably contributed to lower grain protein values.
6. **Percent grain protein** had a range of 8.8% to 12.3% with most varieties on the bubble to hit the 11.5% protein requirement for the HRW market class. It is worth noting that this nursery was fertilized for an expected yield of 90 bu/ac based on historical estimates and existing soil moisture conditions for the growing season. Yield averages higher than estimated would have required additional nitrogen and sulfur fertilizer that would have contributed to higher protein values for all varieties/experimental lines in our opinion.

CONNELL HARD WINTER WHEAT

1. 2006 Hard Winter Wheat **yield data** from the WSU Variety Testing nursery at the Connell location averaged 62.3 bu/ac and was 12.6% higher than the 2-year historical average of 55.3 bu/ac. Yield ranking trends among varieties at this location remained fairly consistent with 2-year averages. *NOTE: The Connell nursery was located 5 miles east of Connell on Blackburn Rd (D. Bauermeister farm).*
2. This nursery was **seeded late** on 12 October 2005 on summer fallow ground using a plot drill with double disc openers. The late 2005 seeding was a result of dry August/September 2005 soil moisture levels where sub-surface moisture was well below the depth of seeding for even deep furrow (split packer drills). Precipitation during the first week of October 2005 provided enough surface moisture that double disc openers were able to place seed into moisture. Depth to soil moisture at seeding was 1/2-inch depth on October 12th. This nursery had even emergence and withstood the mid-February 2006 cold snap with little problem.
3. **Stripe rust** was not a factor in the 2006 nursery even though traces of stripe rust could be observed on susceptible varieties.
4. **Yield differences** among many varieties were very slight. There appears to be somewhat of a trend (similar in soft white winter wheat) that shows **later maturing (later heading dates) varieties with higher yield averages** at this location. This could be explained in part by the extreme dry weather pattern from mid-April (following Easter) to mid May where

there was no precipitation and at the end of this period (16-19 May 2006) temperatures soared into the 90's. A field evaluation on 11 May 2006 showed the soil was completely dry to the 6-inch level and a probe could not penetrate any deeper. Roots and crowns were sitting in this extremely dry soil zone. Earlier/faster growing varieties were probably more negatively impacted by this weather/moisture pattern. Late May and early June precipitation seemed to make the 2006 crop, particularly for varieties that had growth and development patterns that dovetailed with these precipitation events. The two highest yielding lines in 2006 trial were WA007976 and WA007977. Both are Estica/Finley crosses developed by the WSU Winter Wheat Breeding Program.

5. Average **test weight** values (62.6 lb/bu) were extremely high at this location, undoubtedly influenced by above average, late May/early June precipitation during critical periods of grain fill.
6. **Percent grain protein** range was 10.7%-13.2%. The majority of varieties exceeded the 11.5% minimum protein requirement for HRW market class. Fertility management was based on 3 pounds of nitrogen per expected bushel of production.

HORSE HEAVEN HARD WINTER WHEAT

1. 2006 Soft Winter Wheat **yield data** from the WSU Variety Testing nursery at the Horse Heaven location averaged 45.1 bu/ac and was comparable to the 2-year average of 42.7 bu/ac. *NOTE: The Horse Heaven nursery was located near the Sellards/Davis Rd intersection (D. Roseberry farm).*
2. This nursery was **seeded late** on 18 October 2005 on summer fallow ground using a plot drill with hoe openers. The late 2005 seeding was a result of dry August/September 2005 soil moisture levels where sub-surface moisture was well below the depth of seeding for even deep furrow (split packer drills). Precipitation during the first week of October 2005 provided enough surface moisture that hoe drills were able to seed into moisture at a 3-inch depth on October 18th. This nursery had even emergence and withstood the mid-February 2006 cold snap with little problem.
3. **Stripe rust** was not a factor in the 2006 nursery even though susceptible varieties such as Hatton had a trace of stripe rust on a June 1, 2006 field evaluation.
4. **Percent grain protein** had a range of 11.5%-13.8% with an average Test Weight value of 60.6 bu/ac.

MOSES LAKE HARD WINTER WHEAT (IRRIGATED)

1. 2006 Hard Winter Wheat **yield data** from the WSU Variety Testing nursery at the Moses Lake location averaged 136.1 bu/ac that was about 11% less than the previous 2-year average (153.7 bu/ac). *NOTE: The Moses Lake nursery was located 5 east of Moses Lake on Road O NE.*
2. This nursery was seeded 14 October 2005 following potatoes.
3. **Stripe rust** was not a significant factor in the 2006 nursery even though traces of stripe rust could be observed on susceptible varieties.
4. **Yield differences** among varieties had a range of 108.2 bu/ac to 180.6 bu/ac. Since this is an irrigated nursery that is prone to lodging, many of the 'classical' hard red winter varieties grown in Washington under dryland conditions are not included in the Moses Lake irrigated nursery. With the increased interest in hard red winter wheat, a high percentage of this nursery contained experimental lines from winter wheat breeding programs that are striving to find new lines that are adapted to this region of the Columbia Basin.
5. **Percent grain protein** for nearly all varieties exceeded the 11.5% protein requirement for the HRW market class.
6. Average **test weight** value was 59.4 lb/bu.

PULLMAN HARD WINTER WHEAT

1. 2006 **Hard Winter** Wheat **yield data** from the WSU Variety Testing nursery at the Pullman, WA location averaged 131.8 bu/ac that was nearly 15% higher than the 3-year historical average (114.9 bu/ac). *NOTE: The Pullman nursery was located 6 miles southwest of Pullman, WA on Sand Rd (N. Druffel & Sons farm). The Soft White Winter and Hard Winter nurseries were co-located.*
2. This nursery was **seeded** on 30 September 2005 on re-crop ground following dry peas into fairly dry soil. Soil moisture was about 5-6-inches below the surface. It rained 1.33 inches during the 5-days following seeding that resulted in good emergence and a very even and uniform stand.
3. **Stripe rust** was not a significant factor in the 2006 nursery even though stripe rust could be observed on varieties.
4. This nursery survived the hits from the up-and-down weather patterns during the **2005-2006 growing season**. Varieties that showed winter injury at other locations were not hurt at the Pullman location. The late season precipitation and cooler weather during kernel development seemed to enhance test weight values for many varieties.
5. **Yield average rankings** once again tracked fairly closely with historical 3-yr and 5-yr averages. The highest yielding line was an experimental line from WSU (WA7976) is an Estica x Finley cross. A high number of the top yielding varieties in this nursery were experimental lines from public and private wheat breeding programs. The CV% of this nursery was moderate; however the LSD @0.10 is 19.4 bu/ac and as the yield averages reflect, a majority of varieties were grouped closely together and not statistically significant from each other.
6. **Lodging** was slight to moderate in this nursery except for varieties prone to lodging. The four lowest yielding varieties in this nursery also had the highest percent of lodging.
7. Average **test weight** value was 61.5 lb/bu reflecting late May precipitation and June rainfall patterns coupled with cool weather that was extremely favorable to kernel development and fill.
8. **Percent grain protein** had a range of 10.1% to 12.3% with over 2/3 of the varieties equaling or exceeding the 11.5% protein requirement for the HRW market class. This nursery was fertilized for an expected yield of 115 bu/ac based on historical estimates and existing soil moisture conditions for the growing season.

RITZVILLE HARD WINTER WHEAT

1. 2006 Hard Winter Wheat **yield data** from the WSU Variety Testing nursery at the Ritzville location averaged 52.4 bu/ac that was similar to the 3-year historical average (54.4 bu/ac). *NOTE: The Ritzville nursery was located 8 miles northwest of Ritzville on Dewald Rd (E. Maier farm).*
2. This nursery was **seeded early** on 2 September 2005 on summer fallow ground using a deep furrow plot drill with split packer double disc openers into soil moisture that was about 4-inches below the surface. This nursery had excellent emergence that resulted in a very even and uniform stand with fairly large wheat going into the winter. The 17-19 Feb 2006 cold snap caused some winter injury to less hardy varieties, most notably ACS 51084 and ORN00B507.
3. **Stripe rust** was not a significant factor in the 2006 nursery even though traces of stripe rust could be observed on susceptible varieties.
4. **Yield differences** among many varieties were fairly slight. There appears to be somewhat of a trend that shows earlier varieties (earlier heading dates) with lower yield averages at this location. This nursery in particular seemed to suffer from the up-and-down weather patterns during the 2005-2006 growing season. There was an extreme dry weather pattern from mid-April (following Easter) to mid May with no precipitation followed at the end of this

period (16-19 May 2006) with temperatures that soared into the 90's. Roots and crowns were sitting in extremely dry soil. Earlier/faster growing varieties were probably more negatively impacted by this weather/moisture pattern. Late May and early June precipitation seemed to make the 2006 crop, particularly for varieties that had growth and development patterns that dovetailed with these precipitation events. Late season precipitation and cooler weather during kernel development seemed to enhance test weight values for all varieties.

5. **Percent grain protein** had a range of 10.8%-13.2% and nearly all varieties met or exceeded the 11.5% protein requirement for the HRW market class.
6. Average **test weight** value was 61.4 lb/bu.

ST ANDREWS HARD WINTER WHEAT

1. 2006 Hard Winter Wheat **yield data** from the WSU Variety Testing nursery at the St Andrews (Douglas County) location averaged 60.0 bu/ac that was 8.3% lower than the 3-year historical average (65.5 bu/ac). *NOTE: The St Andrews nursery was located 5 miles northwest of Coulee City, WA off Highway 2 on the St. Andrews South Road NE (L. Tanneberg farm).*
2. This nursery was **seeded early** on 27 August 2005 on summer fallow ground using a deep furrow plot drill with split packer double disc openers into soil moisture that was about 5-inches below the surface. This nursery had good emergence that resulted in a very even and uniform stand with fairly large wheat going into the winter.
3. **Stripe rust** was not a significant factor in the 2006 nursery even though traces of stripe rust could be observed on susceptible varieties.
4. **Snow mold** had a substantial impact on many varieties/experimental lines in the 2006 nursery. Snow mold injury/death was not as severe as in other areas of Douglas County in 2006; however, it was a major contributor to a yield range of zero bu/ac (ORN00B507, ACS 51084) to 83.8 bu/ac (Eltan) in the hard winter nursery. Field evaluations on 23 March 2006 showed a wide variation of snow mold damage with many varieties already exhibiting considerable regrowth. Eltan continues as the most snow mold tolerant winter wheat variety. The majority of varieties/experimental lines in the top third of the nursery had pedigrees that included crosses to varieties classified with moderate resistance to snow mold.
5. In addition to snow mold, this nursery also took some hits from the up-and-down weather patterns during the 2005-2006 growing season that included the extreme dry weather pattern from mid-April (following Easter) to mid May with no precipitation followed at the end of this period (16-19 May 2006) with temperatures that soared into the 90's. Roots and crowns were sitting in extremely dry soil. The late May and early June helped plants recover, however, early June 2006 field evaluations showed considerable drought stress on all varieties. The late season precipitation and cooler weather during kernel development seemed to enhance test weight values for many varieties.
6. **Percent grain protein** had a range of 9.2% to 12.2% putting most varieties on the bubble to hit the 11.5% protein requirement for the HRW market class.
7. Average **test weight** value was 60.0 lb/bu.

WALLA WALLA HARD WINTER WHEAT

1. 2006 Hard Winter Wheat **yield data** from the WSU Variety Testing nursery at the Walla Walla location averaged 118.1 bu/ac and was 10.8% higher than the 3-year historical average of 106.5 bu/ac. Yield ranking trends among varieties at this location remained fairly consistent with historical 3-year averages. *NOTE: The Walla Walla nursery was located approximately 2 miles northeast of Prescott, WA (P. Dozier farm).*
2. This nursery was **seeded** on 27 Sept 2005 on summer fallow ground. This nursery had good emergence and withstood the mid-February 2006 cold snap with little problem.

3. **Stripe rust** was not a factor in the 2006 nursery even though susceptible varieties such as Hatton exhibited some stripe rust on a May 7, 2006 field evaluation.
4. **Percent grain protein** had a range of 11.0%-13.5% with an average **test weight** value of 60.9 bu/ac.
5. **Lodging** was fairly significant for some varieties due to the early fall (2005) growth and fairly vigorous early spring (2006) growth. In general, there appears to be a fairly strong trend associated with higher percent lodging and lower yields.

TABLE XMC0602(B). STRIPE RUST INFECTION TYPE (IT) AND SEVERITY (%) ON CULTIVARS AND LINES IN THE HARD WINTER EXTENSION DISEASE NURSERY (EXP02) AT SPILLMAN FARM (LOC 1), PLANT PATH FARM (LOC 3), AND WHITLOW FARM (LOC 4), NEAR PULLMAN, MT VERNON (LOC 5), WALLA WALLA (LOC 6), AND LIND (LOC 7), WA WHEN RECORDED AT THE INDICATED DATES AND STAGES OF PLANT GROWTH IN 2006 UNDER NATURAL INFECTION. SUSCEPTIBILITY TO LEAF RUST (LR), POWDERY MILDEW (PM), OR PHYSIOLOGICAL LEAF SPOT (PLS) AT WALLA WALLA (LOC 6) WAS MARKED WITH "X".

Entry	VARIETY#	CLASS	VARIETY	2006 PLOT	Stripe rust										Severity (%) of other diseases at Walla Walla		
					LOC 1		LOC 3	LOC 4	LOC 5		LOC 6		LOC 7				
					6/21	7/5	6/20	6/26	5/6	6/6	5/31	6/29	6/29				
					Flowering	S. dough	Flowering	S. dough	Early boot	Flowering	Flowering	S. dough	S. dough				
IT %	IT %	IT %	IT %	IT %	IT %	IT %	IT %	IT %	IT %	LR	PM	PLS					
1	Citr 013844	HRW	WANSER	58	8 80	8 100	8 90	8 40	8 40	8 100	3 5	8 80	8 40				
2	Citr 017772	HRW	HATTON	59	8 80	8 100	8 100	8 60	8 70	8 100	5 5	8 80	8 80				
3	Citr 017727	HRW	WESTON	60	8 2	8 40	2 5	8 10	2 10	8 5	5 2	8 60	8 40				
	PS 279		(S Check)	61	8 100	8 100	8 100	8 50	8 60	8 100	8 30	8 80	8 80				
4	PI 586757	HRW	FINLEY	62	2 5	3-5 10	2 1	8 20	2 10	8 20	2 5	5 40	8 20				
5	PI 532994	HRW	BUCHANAN	63	8 40	8 80	8 70	8 20	2 2	5 20	8 20	8 80	8 40				
6	PI 603039	HRW	BOUNDARY	64	5 20	3-5 40	2 1	8 10	5 40	3 20	2 5	2 20	3 40				
7	PI 638535	HRW	WA7975	65	2 1	5 40	2 1	8 10	- -	- -	2 1	5 30	3 20				
8	PI 634717	HRW	BAUERMEISTER	66	2 10	2-3 20	2 20	3 5	8 40	5 5	2 1	3 50	3 30				
9	WA007976	HRW	WA007976	67	2 1	2 2	2 1	2 2	2 2	2 2	0 0	0 0	0 0				
10	WA007977	HRW	WA007977	68	2 1	0 0	2 1	2 2	2 5	2 2	0 0	0 5	0 0				
11	WA008001	HRW	WA008001	69	2 1	0 0	2 1	2 2	2 5	2 2	0 0	0 0	0 0				
12	WA008002	HRW	WA008002	70	2 5	0 5 10	5 20	8 10	2 10	2 2	2 1	2 2	5 40				
13	WA008003	HRW	WA008003	71	2 1	2-3 10	5 5	2 2	2 10	2 2	2 1	5 10	3 50				
14	PI 620629	HRW	DW	72	2 1	3 10	2 1	8 5	- -	- -	8 5	3 50	3 40				
15	PI 639951	HRW	IDO575 (Juniper)	73	2 1	5 30	2 5	5 10	8 10	2 5	8 20	8 80	5 50				
16	IDO621	HRW	IDO621	74	2 1	3 20	2 1	8 20	5 20	2 10	5 10	5 30	5 30				
17	ORN98-0995	HRW	ORN98-0995	75	2 1	2 5	2 1	2 2	8 5	2 2	2 5	8 30	3 20				
18	ORN00B507	HRW	ORN00B507	76	2 1	2 5	2 1	2 2	2 10	3 10	0 0	0 0	2 20				
19	ORN00B553	HRW	ORN00B553	77	2 1	2 5	2 1	2 2	2 2	2 10	2 1	0 0	0 0			10	
20	BZ9W96-788-E	HRW	EDDY	78	8 20	8 70	5 5	8 10	8 20	8 20	8 30	8 80	5 30				
21	ACS 51084	HRW	ACS 51084	79	2 1	2 5	2 5	2 5	2 10	2 5	2 5	0 0	0 0				
22	W96-355	HRW	AGRIPRO PALADIN	80	2 5	2 5	2 1	8 10	8 70	8 100	2 5	0 0	5 50		60		
	PS 279		(S Check)	81	8 100	8 100	8 100	8 70	8 60	8 100	8 90	8 80	8 80				
23	W98-344	HRW	W98-344	82	5 1	2 5	2 1	2 5	8 40	5 20	2 1	8 80	0 0				
24	PI 634716	HDWH	MDM	83	2 1	2-3 20	2 10	2 5	2 10	5 10	2 20	2 5	0 0		20		
25	WA008004	HDWH	WA008004	84	2 1	2 5	2 1	2 2	2 2	2 2	2 1	2 2	0 0		20		
26	KGHWWW05	HDWH	ELTAN*2/MACON	85	2 10	2-3 30	2 10	3 10	5 10	2 2	2 20	3 30	3 30				
27	IDO604	HDWH	IDO604	86	2 1	2 5	2 1	2 2	5 10	2 2	2 1	2 2	0 0				
28	IDO641	HDWH	IDO641	87	8 10	3 8 40	5 1	8 30	8 50	8 90	8 50	8 80	3 30				
29	W96-359W	HDWH	W96-359W	88	8 1	5 10	2 1	8 5	8 20	2 20	5 5	2 2	8 50				
30	PI 536994	SWH	ELTAN	89	2 20	2-3 40	3 20	5 10	8 10	2 10	2 20	2 5	3 50				
	PS 279		(S Check)	90	8 100	8 100	8 90	8 60	8 50	8 90	8 90	8 80	8 80				

TABLE 31_06YD.

2006 WSU HARD WINTER WHEAT TRIAL SUMMARY

VARIETY NAME	YIELD (BU/A)							
	ALMIRA	CONNELL	HORSE HEAVEN	PULLMAN	RITZVILLE	ST. ANDREWS	WALLA WALLA	VARIETY MEAN
Hard Red Winter								
IDO621	145.6	69.5	54.0	141.8	60.0	61.4	142.6	96.4
WA007976	134.2	75.2	51.2	161.7	60.1	52.6	137.7	96.1
BOUNDARY	133.4	72.2	51.3	139.3	62.5	69.1	137.9	95.1
WA007977	127.7	72.7	46.8	135.2	65.0	73.0	124.9	92.2
WA008003	133.8	72.7	50.0	139.2	55.6	61.6	126.3	91.3
ORN98-0995	128.3	60.0	43.5	141.3	54.2	50.1	145.1	88.9
ORN00B553	113.8	60.3	42.3	143.4	51.3	46.3	142.3	85.7
EDDY	113.1	68.3	44.7	133.0	49.8	56.9	133.4	85.6
WA008002	120.4	62.3	45.4	139.6	50.6	52.3	126.1	85.2
WA008001	117.0	67.1	46.6	133.7	52.0	59.6	117.4	84.8
DW	131.2	55.5	42.6	144.1	42.6	56.5	118.0	84.4
AGRI PRO PALADIN	113.1	60.6	42.7	131.4	47.6	55.4	132.1	83.3
WA007975	116.2	69.1	52.1	136.2	55.9	61.0	85.5	82.3
BAUERMEISTER	121.5	66.7	39.3	113.1	56.7	66.9	105.9	81.4
JUNIPER	107.9	63.2	46.9	128.9	52.5	52.6	118.1	81.4
W98-344	116.8	49.1	43.5	129.9	47.9	47.6	127.5	80.3
BUCHANAN	112.4	69.3	47.4	125.3	60.5	61.0	81.5	79.6
FINLEY	106.4	65.1	41.3	106.4	51.6	65.4	108.7	77.8
WESTON	96.8	50.3	41.1	131.7	48.6	66.3	104.2	77.0
WANSER	84.5	63.1	46.1	119.3	43.8	60.3	105.1	74.6
HATTON	62.5	61.2	45.2	106.9	54.7	57.0	89.9	68.2
ACS 51084	62.6	44.8	44.6	137.6	23.9	SNOW MOLD	102.5	---
ORN00B507	87.3	55.1	47.9	147.9	34.1	SNOW MOLD	141.6	---
Hard White Winter								
MDM	135.6	61.7	36.2	136.5	64.1	69.9	125.6	89.9
IDO641	111.7	56.4	44.4	137.3	56.2	68.5	129.8	86.3
W96-359W	111.5	49.0	42.2	123.8	48.5	54.7	131.7	80.2
UI DARWIN	106.3	60.9	43.5	123.4	53.9	56.0	94.3	76.9
WA008004	107.1	57.1	41.1	135.3	43.9	50.8	103.0	76.9
ELTAN*2/MACON	93.8	66.2	47.4	96.4	58.8	65.2	86.8	73.5
Soft White Common								
ELTAN	136.4	64.9	43.6	134.8	65.6	83.8	116.0	92.2
STATISTICS								
C.V.	9.5	7.1	8.1	12.5	11.9	17.4	8.3	11.6
LSD	12.6	5.2	4.3	19.4	7.3	12.3	13.3	4.4
Average	113	62.3	45.1	131.8	52.4	60.0	118.1	83.8
Highest	145.6	75.2	54.0	161.7	65.6	83.8	145.1	96.4
Lowest	62.5	44.8	36.2	96.4	23.9	46.3	81.5	68.2

TABLE 31_06TW.

2006 WSU HARD WINTER WHEAT TRIAL SUMMARY

VARIETY NAME	TEST WEIGHT (LBS/BU)							
	ALMIRA	CONNELL	HORSE HEAVEN	PULLMAN	RITZVILLE	ST. ANDREWS	WALLA WALLA	VARIETY MEAN
Hard Red Winter								
WESTON	63.0	63.7	62.3	63.7	62.7	61.9	62.9	62.9
EDDY	64.0	63.7	60.5	63.4	63.2	62.5	62.7	62.9
FINLEY	63.0	64.0	62.3	62.8	62.3	62.2	62.2	62.7
WA008002	63.4	63.4	61.0	63.3	62.4	60.7	62.6	62.4
AGRIPRO PALADIN	63.6	64.1	61.7	63.0	61.9	61.1	61.0	62.3
W98-344	62.9	63.8	61.3	61.8	62.5	61.5	62.2	62.3
HATTON	58.4	64.7	62.9	62.7	63.4	62.2	61.7	62.3
WANSER	59.3	63.9	61.5	62.7	63.0	61.8	62.7	62.1
WA008003	63.2	62.9	61.0	62.9	61.6	60.4	61.6	61.9
DW	62.7	63.2	61.3	62.2	61.9	60.4	61.8	61.9
JUNIPER	62.7	63.3	61.8	62.4	61.7	60.3	61.1	61.9
IDO621	62.9	62.7	60.9	61.8	61.9	61.2	61.2	61.8
BOUNDARY	62.1	62.1	60.0	60.5	61.3	60.3	61.0	61.0
ORN00B553	61.7	63.6	61.6	61.5	61.2	55.5	62.1	61.0
WA007976	61.3	61.8	60.0	62.0	60.8	58.1	61.3	60.8
BUCHANAN	60.1	61.8	60.9	58.8	60.7	57.6	59.8	60.0
WA007975	60.5	60.3	59.7	60.1	59.8	58.2	58.3	59.6
BAUERMEISTER	60.4	61.5	59.1	58.2	60.6	58.3	57.2	59.3
WA008001	60.4	60.7	58.0	60.3	59.1	58.1	58.4	59.3
WA007977	60.1	58.8	57.9	60.7	59.0	57.8	59.9	59.2
ORN98-0995	58.9	59.9	57.7	57.0	57.8	54.7	57.6	57.7
ACS 51084	61.3	62.6	60.6	62.2	59.7	SNOW MOLD	61.2	---
ORN00B507	61.5	62.9	60.1	59.6	59.4	SNOW MOLD	60.8	---
Hard White Winter								
UI DARWIN	63.8	63.9	61.7	63.3	62.7	62.6	62.4	62.9
IDO641	63.3	63.9	61.1	62.3	63.6	62.9	61.8	62.7
ELTAN*2/MACON	64.1	64.2	61.7	61.6	63.1	59.6	62.0	62.3
W96-359W	62.8	62.8	60.4	62.3	62.4	62.4	62.0	62.2
WA008004	62.9	61.3	60.9	62.2	61.1	59.7	59.7	61.1
MDM	61.2	61.5	59.0	59.6	61.2	58.9	59.1	60.1
Soft White Common								
ELTAN	60.4	61.4	59.6	59.5	61.0	58.5	58.7	59.9
STATISTICS								
C.V.	1.0	0.9	0.8	1.1	1.0	2.0	1.6	1.2
LSD	0.8	0.7	0.6	0.8	0.7	1.4	1.3	0.3
Average	61.9	62.6	60.6	61.5	61.4	60.0	60.9	61.3
Highest	64.1	64.7	62.9	63.7	63.6	62.9	62.9	62.9
Lowest	58.4	58.8	57.7	57.0	57.8	54.7	57.2	57.6

TABLE 31_06PR.

2006 WSU HARD WINTER WHEAT TRIAL SUMMARY

VARIETY NAME	PROTEIN (%)							
	ALMIRA	CONNELL	HORSE HEAVEN	PULLMAN	RITZVILLE	ST. ANDREWS	WALLA WALLA	VARIETY MEAN
Hard Red Winter								
WESTON	11.7	13.2	13.8	12.3	13.2	12.2	13.2	12.8
JUNIPER	11.5	12.1	12.5	11.8	13.0	12.0	13.2	12.3
W98-344	11.2	12.7	12.9	12.0	12.6	11.7	12.5	12.2
AGRIPRO PALADIN	11.5	12.2	12.7	12.0	12.9	11.5	12.7	12.2
ORN00B553	11.6	12.4	12.9	11.9	12.8	10.9	12.7	12.2
DW	11.2	12.1	13.0	11.3	12.9	11.2	12.5	12.0
EDDY	11.4	12.0	12.7	11.8	12.4	11.3	12.5	12.0
FINLEY	10.3	12.0	13.5	12.1	12.4	10.9	12.5	12.0
WANSER	10.9	12.2	12.8	11.5	12.3	11.3	12.1	11.9
WA007975	10.4	11.5	12.4	12.0	12.4	10.7	13.5	11.8
WA008002	10.5	11.6	13.0	11.3	12.0	11.1	12.9	11.8
ORN98-0995	10.9	11.4	12.4	12.0	11.8	10.9	12.7	11.7
BAUERMEISTER	10.1	11.8	13.1	11.6	11.8	9.9	13.4	11.7
BOUNDARY	10.8	11.8	11.9	12.0	11.6	10.8	12.5	11.6
WA007977	10.0	11.4	12.0	12.1	11.4	10.6	12.8	11.5
HATTON	11.3	11.7	12.4	11.2	10.8	11.5	11.0	11.4
WA008003	10.5	11.5	11.9	10.6	11.7	10.9	12.5	11.4
IDO621	10.7	11.6	11.6	11.5	11.9	10.0	12.1	11.3
WA008001	10.0	11.4	11.8	11.1	11.7	10.2	12.5	11.2
WA007976	9.4	10.7	11.5	11.5	11.2	10.3	12.4	11.0
BUCHANAN	9.2	10.8	12.1	10.9	11.2	9.4	11.9	10.8
ACS 51084	12.3	12.8	11.9	11.6	13.0	SNOW MOLD	12.8	---
ORN00B507	11.5	12.1	11.9	11.7	12.4	SNOW MOLD	12.0	---
Hard White Winter								
W96-359W	12.2	12.7	13.7	12.0	13.0	11.3	13.1	12.6
UI DARWIN	11.2	11.9	12.8	11.5	12.1	11.8	11.9	11.9
WA008004	10.1	12.4	13.4	11.2	12.0	11.0	12.7	11.8
ELTAN*2/MACON	10.5	11.1	12.2	11.9	11.7	11.3	12.3	11.6
IDO641	10.2	11.2	12.0	10.7	12.0	10.6	11.4	11.2
MDM	8.8	11.2	13.4	10.5	11.8	9.2	12.5	11.1
Soft White Common								
ELTAN	9.3	11.6	12.9	10.1	11.6	9.6	12.2	11.0
STATISTICS								
C.V.	6.4	2.9	4.1	5.4	6.1	9.3	3.0	5.6
LSD	0.8	0.4	0.6	0.7	0.9	1.2	0.5	0.3
Average	10.7	11.8	12.6	11.5	12.1	10.9	12.5	11.7
Highest	12.3	13.2	13.8	12.3	13.2	12.2	13.5	12.8
Lowest	8.8	10.7	11.5	10.1	10.8	9.2	11.0	10.8

2006 WSU EXTENSION HARD WINTER WHEAT NURSERY AT ALMIRA, WA.**TABLE WA3162.**

Variety Name	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2006					
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	LODGING (%)	PLANT HT	HEAD DATE
IDO621	--			145.6	62.9	10.7	0.0	32.0	154.6
ELTAN	--	113.4	113.0	136.4	60.4	9.3	22.5	38.3	160.6
MDM	--	113.7	115.4	135.6	61.2	8.8	31.3	40.3	160.6
WA007976	--		128.8	134.2	61.3	9.4	0.0	38.3	158.0
WA008003	--			133.8	63.2	10.5	0.0	45.0	159.1
BOUNDARY	--	109.7	116.1	133.4	62.1	10.8	0.0	34.3	157.6
DW	--	107.8	119.4	131.2	62.7	11.2	0.0	37.8	157.3
ORN98-0995	--			128.3	58.9	10.9	0.0	30.8	157.6
WA007977	--		123.3	127.7	60.1	10.0	0.0	39.0	161.0
BAUERMEISTER	--	107.8	112.8	121.5	60.4	10.1	42.5	38.5	160.6
WA008002	--			120.4	63.4	10.5	0.0	39.5	158.8
WA008001	--			117.0	60.4	10.0	0.0	41.0	159.5
W98-344	--		104.0	116.8	62.9	11.2	0.0	34.3	149.4
WA007975	--		103.8	116.2	60.5	10.4	43.8	45.3	161.0
ORN00B553	--			113.8	61.7	11.6	0.0	28.0	156.1
EDDY	--	97.0	103.3	113.1	64.0	11.4	0.0	33.5	152.8
AGRIPRO PALADIN	--	96.8	103.9	113.1	63.6	11.5	0.0	33.3	155.4
BUCHANAN	--	98.4	96.8	112.4	60.1	9.2	51.3	46.0	161.0
IDO641	--			111.7	63.3	10.2	0.0	34.8	153.9
W96-359W	--			111.5	62.8	12.2	0.0	32.0	150.9
JUNIPER	--			107.9	62.7	11.5	2.5	49.8	156.9
WA008004	--			107.1	62.9	10.1	3.8	40.8	157.3
FINLEY	--	102.0		106.4	63.0	10.3	33.8	46.3	154.3
UI DARWIN	--			106.3	63.8	11.2	16.3	43.8	156.9
WESTON	--	96.6	96.6	96.8	63.0	11.7	16.3	45.8	152.0
ELTAN*2/MACON	--			93.8	64.1	10.5	61.3	44.8	151.6
ORN00B507	--			87.3	61.5	11.5	0.0	26.0	152.4
WANSER	--	78.0	78.1	84.5	59.3	10.9	7.5	45.5	154.6
ACS 51084	--			62.6	61.3	12.3	0.0	26.8	154.3
HATTON	--	69.2	59.7	62.5	58.4	11.3	5.0	46.5	158.0
C.V. %	--	10.5	11.1	9.5	1.0	6.4	--	--	--
LSD '@ .10'	--	7.4	9.8	12.6	0.8	0.8	--	--	--
Average	--	99.2	105.0	113.0	61.9	10.7	11.3	38.6	156.5
Highest	--	113.7	128.8	145.6	64.1	12.3	61.3	49.8	161.0
Lowest	--	69.2	59.7	62.5	58.4	8.8	0.0	26.0	149.4

2006 WSU EXTENSION HARD WINTER WHEAT NURSERY AT CONNELL, WA.**TABLE WA3147.**

Variety Name	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2006					
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	LODGING (%)	PLANT HT	HEAD DATE
WA007976	--	--	69.9	75.2	61.8	10.7	0	26.0	141.8
WA007977	--	--	63.7	72.7	58.8	11.4	0	28.5	145.9
WA008003	--	--		72.7	62.9	11.5	0	30.3	141.4
BOUNDARY	--	--	57.3	72.2	62.1	11.8	0	27.3	139.5
IDO621	--	--		69.5	62.7	11.6	0	24.8	139.1
BUCHANAN	--	--	55.6	69.3	61.8	10.8	0	33.0	143.3
WA007975	--	--	58.8	69.1	60.3	11.5	0	33.5	145.9
EDDY	--	--	57.6	68.3	63.7	12.0	0	25.0	138.4
WA008001	--	--		67.1	60.7	11.4	0	27.5	141.4
BAUERMEISTER	--	--	58.4	66.7	61.5	11.8	0	31.8	144.0
ELTAN*2/MACON	--	--		66.2	64.2	11.1	0	34.0	137.3
FINLEY	--	--		65.1	64.0	12.0	0	31.3	138.0
ELTAN	--	--	59.6	64.9	61.4	11.6	0	30.3	144.4
JUNIPER	--	--		63.2	63.3	12.1	0	35.5	138.8
WANSER	--	--	51.1	63.1	63.9	12.2	0	31.5	138.0
WA008002	--	--		62.3	63.4	11.6	0	27.5	141.0
MDM	--	--	52.0	61.7	61.5	11.2	0	30.5	143.6
HATTON	--	--	42.3	61.2	64.7	11.7	0	29.5	139.5
UI DARWIN	--	--		60.9	63.9	11.9	0	33.3	136.9
AGRIPRO PALADIN	--	--	54.1	60.6	64.1	12.2	0	25.0	138.4
ORN00B553	--	--		60.3	63.6	12.4	0	24.0	140.3
ORN98-0995	--	--		60.0	59.9	11.4	0	24.3	141.4
WA008004	--	--		57.1	61.3	12.4	0	30.0	140.3
IDO641	--	--		56.4	63.9	11.2	0	26.5	138.8
DW	--	--	51.9	55.5	63.2	12.1	0	28.3	138.4
ORN00B507	--	--		55.1	62.9	12.1	0	21.8	139.5
WESTON	--	--	46.8	50.3	63.7	13.2	0	31.8	138.0
W98-344	--	--	50.4	49.1	63.8	12.7	0	26.8	138.4
W96-359W	--	--		49.0	62.8	12.7	0	25.5	139.1
ACS 51084	--	--		44.8	62.6	12.8	0	24.3	138.8
C.V. %	--	--	7.7	7.1	0.9	2.9	--	--	--
LSD '@. 10'	--	--	3.6	5.2	0.7	0.4	--	--	--
Average	--	--	55.3	62.3	62.6	11.8	0	28.7	140.3
Highest	--	--	69.9	75.2	64.7	13.2	0	35.5	145.9
Lowest	--	--	42.3	44.8	58.8	10.7	0	21.8	136.9

2006 WSU EXTENSION HARD WINTER WHEAT NURSERY AT HORSE HEAVEN, WA.**TABLE WA3120.**

Variety Name				2006					
	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	LODGING (%)	PLANT HT	HEAD DATE
IDO621	--	--		54.0	60.9	11.6	0	21.5	138.4
WA007975	--	--	44.1	52.1	59.7	12.4	0	25.8	142.9
BOUNDARY	--	--	46.2	51.3	60.0	11.9	0	21.3	140.3
WA007976	--	--	47.9	51.2	60.0	11.5	0	21.3	141.4
WA008003	--	--		50.0	61.0	11.9	0	25.3	140.3
ORN00B507	--	--		47.9	60.1	11.9	0	18.3	139.5
BUCHANAN	--	--	45.6	47.4	60.9	12.1	0	24.8	141.0
ELTAN*2/MACON	--	--		47.4	61.7	12.2	0	27.8	136.5
JUNIPER	--	--		46.9	61.8	12.5	0	28.5	138.4
WA007977	--	--	46.6	46.8	57.9	12.0	0	21.8	145.1
WA008001	--	--		46.6	58.0	11.8	0	21.5	141.0
WANSER	--	--	42.4	46.1	61.5	12.8	0	25.8	138.0
WA008002	--	--		45.4	61.0	13.0	0	23.5	140.6
HATTON	--	--	37.1	45.2	62.9	12.4	0	24.8	138.8
EDDY	--	--	43.4	44.7	60.5	12.7	0	21.3	138.8
ACS 51084	--	--		44.6	60.6	11.9	0	21.0	138.0
IDO641	--	--		44.4	61.1	12.0	0	23.0	137.6
ELTAN	--	--	41.5	43.6	59.6	12.9	0	25.0	143.6
ORN98-0995	--	--		43.5	57.7	12.4	0	20.5	142.5
W98-344	--	--	42.1	43.5	61.3	12.9	0	23.5	137.3
UI DARWIN	--	--		43.5	61.7	12.8	0	25.3	136.9
AGRIPRO PALADIN	--	--	42.1	42.7	61.7	12.7	0	21.8	138.8
DW	--	--	41.7	42.6	61.3	13.0	0	21.8	138.4
ORN00B553	--	--		42.3	61.6	12.9	0	20.8	141.0
W96-359W	--	--		42.2	60.4	13.7	0	21.8	138.4
FINLEY	--	--		41.3	62.3	13.5	0	24.3	138.8
WESTON	--	--	39.6	41.1	62.3	13.8	0	25.8	138.0
WA008004	--	--		41.1	60.9	13.4	0	26.5	139.5
BAUERMEISTER	--	--	40.0	39.3	59.1	13.1	0	25.5	142.1
MDM	--	--	39.9	36.2	59.0	13.4	0	25.3	143.3
C.V. %	--	--	7.8	8.1	0.8	4.1	--	--	--
LSD '@. 10'	--	--	2.8	4.3	0.6	0.6	--	--	--
Average	--	--	42.7	45.1	60.6	12.6	0	23.5	139.8
Highest	--	--	47.9	54.0	62.9	13.8	0	28.5	145.1
Lowest	--	--	37.1	36.2	57.7	11.5	0	18.3	136.5

2006 WSU EXTENSION HARD WINTER WHEAT NURSERY AT PULLMAN, WA.**TABLE WA3102.**

Variety Name				2006					
	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	LODGING (%)	PLANT HT	HEAD DATE
WA007976			134.0	161.7	62.0	11.5	36.3	41.3	158.6
ORN00B507				147.9	59.6	11.7	0.0	27.5	156.8
DW	121.5	128.9	124.8	144.1	62.2	11.3	2.5	36.0	159.0
ORN00B553				143.4	61.5	11.9	0.0	28.0	158.3
IDO621				141.8	61.8	11.5	0.0	30.5	158.6
ORN98-0995				141.3	57.0	12.0	0.0	29.0	159.4
WA008002				139.6	63.3	11.3	15.0	41.8	158.6
BOUNDARY	124.7	137.4	137.1	139.3	60.5	12.0	0.0	33.3	159.0
WA008003				139.2	62.9	10.6	3.8	43.3	159.0
ACS 51084				137.6	62.2	11.6	0.0	28.5	155.6
IDO641				137.3	62.3	10.7	3.8	33.0	156.8
MDM		127.9	121.4	136.5	59.6	10.5	70.0	36.0	162.0
WA007975			101.1	136.2	60.1	12.0	65.0	41.3	163.5
WA008004				135.3	62.2	11.2	32.5	37.8	160.1
WA007977			128.0	135.2	60.7	12.1	0.0	42.0	163.5
ELTAN	121.7	128.6	117.2	134.8	59.5	10.1	55.0	34.0	161.6
WA008001				133.7	60.3	11.1	40.0	39.0	160.5
EDDY		127.3	122.1	133.0	63.4	11.8	0.0	30.3	156.0
WESTON	104.3	109.1	96.8	131.7	63.7	12.3	70.0	41.8	155.6
AGRIPRO PALADIN		130.0	123.6	131.4	63.0	12.0	0.0	31.3	156.4
W98-344			132.9	129.9	61.8	12.0	0.0	32.5	153.8
JUNIPER				128.9	62.4	11.8	15.0	45.0	158.6
BUCHANAN	97.3	93.1	90.3	125.3	58.8	10.9	96.3	38.3	163.5
W96-359W				123.8	62.3	12.0	0.0	27.5	155.3
UI DARWIN				123.4	63.3	11.5	20.0	39.3	158.6
WANSER	94.0	102.8	89.1	119.3	62.7	11.5	0.0	42.8	154.1
BAUERMEISTER		109.3	95.6	113.1	58.2	11.6	92.5	34.0	161.6
HATTON	61.1	70.5	64.0	106.9	62.7	11.2	57.5	42.8	156.4
FINLEY	101.9	114.5		106.4	62.8	12.1	88.8	43.3	156.8
ELTAN*2/MACON				96.4	61.6	11.9	96.3	39.3	155.6
C.V. %	10.4	11.7	13.4	12.5	1.1	5.4	--	--	--
LSD '@.10'	6.2	9.5	13.1	19.4	0.8	0.7	--	--	--
Average	103.3	114.9	111.9	131.8	61.5	11.5	28.7	36.4	158.4
Highest	124.7	137.4	137.1	161.7	63.7	12.3	96.3	45.0	163.5
Lowest	61.1	70.5	64.0	96.4	57.0	10.1	0.0	27.5	153.8

2006 WSU EXTENSION HARD WINTER WHEAT NURSERY AT RITZVILLE, WA.**TABLE WA3117.**

Variety Name	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2006					
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	LODGING (%)	PLANT HT	HEAD DATE
ELTAN	--	60.2	58.0	65.6	61.0	11.6	0	33.5	155.6
WA007977	--		67.8	65.0	59.0	11.4	0	33.0	156.0
MDM	--	59.4	59.5	64.1	61.2	11.8	0	34.0	155.6
BOUNDARY	--	59.9	61.2	62.5	61.3	11.6	0	29.3	152.6
BUCHANAN	--	58.6	55.2	60.5	60.7	11.2	0	36.5	156.0
WA007976	--		67.3	60.1	60.8	11.2	0	31.3	153.0
IDO621	--			60.0	61.9	11.9	0	28.0	149.6
ELTAN*2/MACON	--			58.8	63.1	11.7	0	38.8	146.6
BAUERMEISTER	--	61.5	61.8	56.7	60.6	11.8	0	33.3	155.6
IDO641	--			56.2	63.6	12.0	0	30.0	148.9
WA007975	--		55.7	55.9	59.8	12.4	0	37.3	156.0
WA008003	--			55.6	61.6	11.7	0	34.0	154.1
HATTON	--	50.6	46.2	54.7	63.4	10.8	0	35.3	153.0
ORN98-0995	--			54.2	57.8	11.8	0	27.0	152.6
UI DARWIN	--			53.9	62.7	12.1	0	37.3	151.9
JUNIPER	--			52.5	61.7	13.0	0	40.3	151.9
WA008001	--			52.0	59.1	11.7	0	34.3	154.5
FINLEY	--	55.3		51.6	62.3	12.4	0	37.3	149.3
ORN00B553	--			51.3	61.2	12.8	0	26.8	151.1
WA008002	--			50.6	62.4	12.0	0	32.0	153.8
EDDY	--	55.2	52.1	49.8	63.2	12.4	0	28.5	147.8
WESTON	--	47.0	44.7	48.6	62.7	13.2	0	36.8	147.0
W96-359W	--			48.5	62.4	13.0	0	27.3	145.9
W98-344	--		44.5	47.9	62.5	12.6	0	29.8	144.4
AGRIPRO PALADIN	--	50.7	51.1	47.6	61.9	12.9	0	29.3	150.4
WA008004	--			43.9	61.1	12.0	0	31.8	152.3
WANSER	--	46.4	43.0	43.8	63.0	12.3	0	34.8	149.6
DW	--	47.7	47.9	42.6	61.9	12.9	0	30.0	152.3
ORN00B507	--			34.1	59.4	12.4	0	23.8	147.4
ACS 51084	--			23.9	59.7	13.0	0	26.0	149.3
C.V. %	--	10.2	11.5	11.9	1.0	6.1	--	--	--
LSD '@ 10'	--	3.7	5.0	7.3	0.7	0.9	--	--	--
Average	--	54.4	54.4	52.4	61.4	12.1	0	32.3	151.5
Highest	--	61.5	67.8	65.6	63.6	13.2	0	40.3	156.0
Lowest	--	46.4	43.0	23.9	57.8	10.8	0	23.8	144.4

2006 WSU EXTENSION HARD WINTER WHEAT NURSERY AT ST. ANDREWS, WA.**TABLE WA3154.**

Variety Name	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2006					
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	LODGING (%)	PLANT HT	HEAD DATE
ELTAN	68.2	76.5	85.8	83.8	58.5	9.6	0.0	36.8	157.5
WA007977			82.9	73.0	57.8	10.6	0.0	38.3	159.4
MDM		74.7	80.7	69.9	58.9	9.2	0.0	35.5	157.9
BOUNDARY	67.2	71.9	78.8	69.1	60.3	10.8	0.0	32.0	155.3
IDO641				68.5	62.9	10.6	0.0	34.5	155.3
BAUERMEISTER		71.6	72.8	66.9	58.3	9.9	6.3	38.0	158.3
WESTON	58.7	64.8	70.1	66.3	61.9	12.2	0.0	43.0	152.3
FINLEY	56.8	61.4		65.4	62.2	10.9	7.5	44.8	154.9
ELTAN*2/MACON				65.2	59.6	11.3	17.5	41.0	153.0
WA008003				61.6	60.4	10.9	0.0	40.3	157.1
IDO621				61.4	61.2	10.0	0.0	29.5	155.3
BUCHANAN	57.8	60.2	65.8	61.0	57.6	9.4	12.5	40.8	158.3
WA007975			71.0	61.0	58.2	10.7	12.5	41.8	159.0
WANSER	55.8	58.8	62.7	60.3	61.8	11.3	0.0	39.5	153.0
WA008001				59.6	58.1	10.2	0.0	38.0	157.5
HATTON	60.0	60.3	59.3	57.0	62.2	11.5	0.0	42.0	156.4
EDDY		69.4	72.2	56.9	62.5	11.3	0.0	33.0	153.4
DW	60.0	62.4	62.7	56.5	60.4	11.2	0.0	33.3	155.6
UI DARWIN				56.0	62.6	11.8	6.3	41.5	156.0
AGRIPRO PALADIN		53.7	58.8	55.4	61.1	11.5	0.0	31.5	154.5
W96-359W				54.7	62.4	11.3	0.0	31.0	152.6
WA007976			75.6	52.6	58.1	10.3	0.0	35.8	157.5
JUNIPER				52.6	60.3	12.0	0.0	44.3	155.3
WA008002				52.3	60.7	11.1	0.0	38.0	156.8
WA008004				50.8	59.7	11.0	0.0	38.0	156.0
ORN98-0995				50.1	54.7	10.9	0.0	28.8	157.5
W98-344			61.0	47.6	61.5	11.7	0.0	32.5	152.6
ORN00B553				46.3	55.5	10.9	0.0	27.5	156.4
ORN00B507									
ACS 51084									
C.V. %	14.6	16.1	15.0	17.4	2.0	9.3	--	--	--
LSD '@. 10'	4.8	7.0	8.3	12.3	1.4	1.2	--	--	--
Average	60.5	65.5	70.7	60.0	60.0	10.9	2.2	36.8	155.9
Highest	68.2	76.5	85.8	83.8	62.9	12.2	17.5	44.8	159.4
Lowest	55.8	53.7	58.8	46.3	54.7	9.2	0.0	27.5	152.3

2006 WSU EXTENSION HARD WINTER WHEAT NURSERY AT WALLA WALLA, WA.

TABLE WA3115.

Variety Name	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2006					
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	LODGING (%)	PLANT HT	HEAD DATE
ORN98-0995	--			145.1	57.6	12.7	0.0	36.0	142.0
IDO621	--			142.6	61.2	12.1	15.0	36.3	137.0
ORN00B553	--			142.3	62.1	12.7	0.0	33.3	139.5
ORN00B507	--			141.6	60.8	12.0	0.0	31.0	136.5
BOUNDARY	--	129.8	119.0	137.9	61.0	12.5	26.7	41.0	141.5
WA007976	--		107.5	137.7	61.3	12.4	60.0	42.0	142.5
EDDY	--	129.4	118.4	133.4	62.7	12.5	45.0	40.3	137.0
AGRIPRO PALADIN	--	123.6	116.3	132.1	61.0	12.7	25.0	38.7	138.0
W96-359W	--			131.7	62.0	13.1	0.0	35.3	136.5
IDO641	--			129.8	61.8	11.4	33.3	36.7	137.0
W98-344	--		105.8	127.5	62.2	12.5	13.3	39.0	136.0
WA008003	--			126.3	61.6	12.5	46.7	47.3	142.5
WA008002	--			126.1	62.6	12.9	8.3	43.0	142.5
MDM	--	113.1	99.7	125.6	59.1	12.5	73.3	43.3	144.5
WA007977	--		109.0	124.9	59.9	12.8	1.7	44.7	146.5
JUNIPER	--			118.1	61.1	13.2	76.7	52.3	142.0
DW	--	114.2	105.1	118.0	61.8	12.5	26.7	39.7	140.0
WA008001	--			117.4	58.4	12.5	80.0	40.3	142.5
ELTAN	--	119.8	96.6	116.0	58.7	12.2	86.7	41.7	145.0
FINLEY	--	109.1		108.7	62.2	12.5	66.7	46.0	140.0
BAUERMEISTER	--	111.6	94.2	105.9	57.2	13.4	90.0	42.7	144.0
WANSER	--	85.1	78.1	105.1	62.7	12.1	55.0	46.3	135.5
WESTON	--	99.4	84.7	104.2	62.9	13.2	51.7	46.7	136.0
WA008004	--			103.0	59.7	12.7	91.7	42.0	141.5
ACS 51084	--			102.5	61.2	12.8	0.0	35.3	138.5
UI DARWIN	--			94.3	62.4	11.9	50.0	44.0	138.5
HATTON	--	74.8	64.1	89.9	61.7	11.0	66.7	45.3	142.0
ELTAN*2/MACON	--			86.8	62.0	12.3	78.3	48.0	137.0
WA007975	--		77.0	85.5	58.3	13.5	86.7	43.3	147.0
BUCHANAN	--	85.4	75.6	81.5	59.8	11.9	55.0	43.3	144.0
C.V. %	--	8.6	8.0	8.3	1.6	3.0	--	--	--
LSD '@. 10'	--	6.7	7.5	13.3	1.3	0.5	--	--	--
Average	--	107.9	96.7	118.1	60.9	12.5	43.7	41.5	140.4
Highest	--	129.8	119.0	145.1	62.9	13.5	91.7	52.3	147.0
Lowest	--	74.8	64.1	81.5	57.2	11.0	0.0	31.0	135.5

2006 WSU EXTENSION IRRIGATED HARD WINTER WHEAT NURSERY AT MOSES LAKE, WA.

TABLE WA9761.

Variety Name				2006					
	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	LODGING (%)	PLANT HT	HEAD DATE
RESIDENCE	--	--	180.6	166.5	59.5	13.3	0.0	38.8	142.0
IDO621	--	--	153.1	155.2	61.0	12.0	12.5	34.5	140.0
BOUNDARY	--	--	160.7	155.0	60.0	12.8	30.0	36.3	141.0
ORN00B553	--	--	166.6	153.3	62.0	13.0	0.0	34.5	140.8
DH940361	--	--		150.4	62.3	12.3	3.8	33.0	138.0
ORN98-0995	--	--	163.8	147.4	56.8	13.0	0.0	33.8	141.3
W96-359W	--	--	155.1	145.9	62.3	13.3	0.0	33.5	138.0
W98-344	--	--	140.7	145.1	62.3	13.3	13.8	37.5	137.8
WA007976	--	--		143.6	60.3	13.3	71.3	43.5	143.3
ORN00B507	--	--	159.8	142.9	59.0	13.0	0.0	32.3	140.0
AGRIPO PALADIN	--	--	146.5	141.3	62.3	13.3	0.0	35.5	140.8
9802	--	--		140.8	55.5	14.0	0.0	40.3	142.3
MAYFAIR	--	--	147.3	139.5	50.8	13.8	0.0	31.3	142.5
DECLO	--	--	150.2	139.4	59.8	13.3	12.5	34.8	140.5
ACS 51084	--	--		139.3	61.3	13.0	0.0	36.3	139.5
BZ9W02-2032	--	--		138.1	61.0	13.3	15.0	38.5	137.5
STEPHENS	--	--	144.1	134.4	56.3	12.8	18.8	36.3	140.8
WA007977	--	--		134.3	57.5	13.3	5.0	43.8	142.8
EDDY	--	--		126.1	63.0	12.5	21.3	36.5	139.5
MDM	--	--	127.0	125.2	57.5	13.5	87.0	38.3	143.5
IDO641	--	--	122.5	119.8	61.3	12.0	53.8	37.5	140.3
WA008004	--	--		119.0	59.0	14.3	77.5	41.8	142.0
IDO660	--	--		118.1	60.3	12.5	12.5	37.8	139.0
BZ9W02-2053	--	--		117.4	58.0	14.0	35.0	36.0	140.0
DW	--	--	117.0	113.9	59.5	13.3	90.0	34.5	142.0
MORELAND	--	--	125.8	113.8	58.5	12.5	0.0	34.3	138.0
BAUERMEISTER	--	--	118.5	108.2	55.8	14.0	89.8	39.0	142.0
C.V. %	--	--	9.1	8.1	1.5	2.9	--	--	--
LSD '@. 10'	--	--	11.6	12.9	1.1	0.4	--	--	--
Average	--	--	145.8	136.1	59.4	13.1	24.1	36.7	140.6
Highest	--	--	180.6	166.5	63.0	14.3	90.0	43.8	143.5
Lowest	--	--	117.0	108.2	50.8	12.0	0.0	31.3	137.5