

## 2005 HARD WINTER WHEAT

**OVERVIEW:** Yield averages in 2005 were comparable with historical averages at most locations. In general, quality (test weight and percent grain protein) were good. Some of the unique features of the 2005 growing season that influenced yield and quality were: 1) good seed bed moisture and fall precipitation, 2) below normal winter and spring precipitation (drought conditions), 3) above average May 2005 precipitation and 4) early and heavy infections of Stripe rust (*Puccinia striiformis* F. sp. *Triticici*) throughout most of eastern Washington. Stripe rust susceptible hard winter wheat varieties sustained significant reductions at many locations.

Listed below are summary evaluations for hard red winter and hard white winter wheat at each WSU Variety Testing Program location:

### ALMIRA HARD WINTER WHEAT

1. 2005 Hard Winter Wheat yield from the WSU Variety Testing nursery at the St Andrews location averaged 92.9/ac and was nearly the same as the historical 2-year average at this location. *NOTE: The Almira nursery was located approximately 10 miles north of Almira, WA off Bagdad Rd (D. McKay farm).*
2. This nursery was planted on 9 Sept 2004 into excellent soil moisture. Fall 2004 GROWING CONDITIONS coupled with timely precipitation patterns in late spring 2005 undoubtedly were ideal for winter wheat development in this region for the 2005 crop.
3. STRIPE RUST infections on susceptible varieties first appeared around 25 May 2005 and generally gnawed away on susceptible varieties until the end of June. Susceptible varieties such as Hatton, Falcon, Wanser and Moreland also had the lowest yields in the nursery. Surprisingly, TEST WEIGHT was not affected by the stripe rust and the overall test weight for the hard winter wheat was excellent.
4. Protein values averaged 11.1% for this nursery. Total available nitrogen measured in February 2005 showed 320#N.
5. Eltan is included in the nursery as a yield check variety because of its adaptation to this area. Many of the newer HRW experimental lines show promise, both in terms of higher yield averages and stripe rust resistance.
6. PLANT HEIGHT values above normal are similar to the soft white winter wheat nursery at this location and also indicative of the high yield values in 2005. Average plant height of the HRW varieties in the 2005 nursery was 43.2 inches compared to an average plant height of 39.0 inches in the 2004 nursery – over 4-inches taller in 2005.
7. YIELD RANKING trends among varieties at this location remained fairly consistent with the historical yield rankings. Seven varieties averaged over 100 bu/ac in the nursery: WA7976, WA7977, WA7979 (Estica x Finley pedigrees); Residence (from CEBCO); DW U Idaho) and Bauermeister (Eltan x HRW cross). Excluding varieties that had susceptibility to stripe rust, all other varieties/experimental lines had fairly comparable yield values.

### CONNELL HARD WINTER

1. 2005 Hard Winter Wheat yield from the WSU Variety Testing nursery at the Connell location averaged 46.9 bu/ac. Factors contributing to the good yields were excellent germination and emergence during fall 2004. Timely spring precipitation also contributed significantly. (NOTE: 2-5 year averages are not included in this data set since the 2003 & 2004 nurseries were not harvested due to a late killing frost and poor emergence/wind storm damage at this location, respectively).
2. Stripe rust was present in the hard winter wheat at the Connell location. Hatton was severely infected noted in May 2005 and stripe rust seemed to nibble away on Hatton

- during the rest of the growing season. Yield reductions as approaching 60% in Hatton (23.3 bu/ac) compared to Eitan is indicative of the stripe rust pressure in this variety.
3. Protein values averaged 13.0% for this nursery. Total nitrogen measured in February 2005 showed 152# N for this nursery.

#### **HORSE HEAVEN HARD WINTER WHEAT**

1. 2005 Hard Winter Wheat yield from the WSU Variety Testing nursery at the Horse Heaven averaged 39.7 bu/ac that is over 50% higher than historical yields at this location. Contributing to the higher than average yield was excellent germination and emergence during fall 2004. Timely spring precipitation also contributed significantly. (NOTE: 2-5 year averages are not included in the data set since the 2004 nursery was not harvested due to poor emergence).
2. Stripe rust was present in the hard winter wheat at the Horse Heaven location. Varieties most severely infected were Hatton and Moreland as noted in the lower yields.

#### **LIND HARD WINTER WHEAT**

1. 2005 Hard Winter Wheat yield from the WSU Variety Testing nursery at the Lind location (Dryland Research Station) averaged 42.8 bu/ac. The 2005 Hard Winter wheat average yields were comparable to the 3-year average yields at this location (41.2 bu/ac).
2. Stripe rust was present in the hard winter wheat at the Lind location; however, infections were not as severe as noted in other locations such as the Horse Heaven or Connell locations. As in other locations, Hatton HRW wheat showed the most visible impact from stripe rust and it was also the lowest yielding variety at the Lind location.
3. Heading dates averaged slightly earlier (3-days) than in 2004.

#### **PULLMAN HARD WINTER WHEAT**

5. 2005 Hard Winter Wheat yield from the WSU Variety Testing nursery at the Pullman location averaged 96.9 bu/ac and was lower than the 3-year historical average of 116.6 bu/ac. However, it is worth noting a couple of other factors influenced lower average yields in 2005: (#1) Stripe rust susceptible varieties (such as Moreland, Hatton, Falcon, Buchanan, Wanser and Weston) had substantially reduced yields from stripe rust, (#2) increased plant height and subsequent lodging in the 2005 nursery contributed to lower yields in some varieties. *NOTE: The Pullman nursery was located approximately 8 miles south of Pullman, WA off Sand Road (N. Druffel & Sons farm).*
6. This nursery was planted on 1 Oct 2004 into excellent soil moisture. Fall 2004 GROWING CONDITIONS coupled with timely precipitation patterns in late spring 2005 undoubtedly were ideal for winter wheat development in this region for the 2005 crop.
7. STRIPE RUST infections were severe on susceptible varieties. Evaluations taken on 23 June 2005 showed nearly 100% infections on Moreland, Hatton, Falcon, Buchanan, Wanser and Weston. Most dramatic is Moreland that yielded only 12.1 bu/ac with a 47.8 lb/bu test weight. *This nursery was not treated with a fungicide for stripe rust control. A photo is attached that visibly shows the amount of grain from one plot of Moreland (12.1 bu/ac) compared to Boundary (134.9 bu/ac).*
8. Protein values averaged 12.3% for this nursery. Total nitrogen available to this nursery was 349.8#N.
9. PLANT HEIGHT values above normal are similar to other locations and also indicative of the high yield values in 2005. Average plant height of the hard winter varieties in the 2005 nursery was 45.2 inches compared to an average plant height of 39.7 inches in the 2004 nursery – over 5-inches taller in 2005. Associated with increased plant height was a much higher level of LODGING, 59.9% average in the 2005 nursery compared with only 6.7% in the 2004 nursery at this location. There was a fairly strong trend that

showed decreased yields with increased levels of lodging, especially if varieties that had severe stripe rust were not included in the comparisons.

10. YIELD RANKING trends among varieties at this location remained fairly consistent with the historical yield rankings.

#### **RITZVILLE HARD WINTER WHEAT**

1. 2005 Hard Winter Wheat yield from the WSU Variety Testing nursery at the Ritzville location averaged 52.6 bu/ac; however, stripe rust infections had a dominant role in yield reductions for many varieties. *NOTE: The 2005 nursery was located approximately 8 miles NW of Ritzville (E. Maier farm) – the previous nursery location was approximately 8 miles SE of Ritzville (D. Wellsandt farm). The 2005 location is located on a little lighter ground and not in as high a precipitation zone.*
2. Stripe rust: Nearly all of the stripe rust susceptible varieties that are commercially available (Buchanan, Q-542, CDC Falcon, Wanser, Weston, Hatton, Moreland) had 100% infection and were the lowest yielding varieties in the 2005 nursery. Extremely susceptible varieties such as Moreland and Hatton had 50% to 63% lower yields, respectively, than the previous year (2004) – much of this can probably be attributed to the impact of stripe rust on these varieties in 2005. It is worth noting that this nursery was seeded in late September 2004 and probably more prone to stripe rust infections in 2005 due to the lateness of plant maturity for this area of Ritzville.
3. Protein values averaged 11.6% for this nursery. Total nitrogen available measured in February 2005 showed 167# N for this nursery.
4. Eltan is included in the nursery as a yield check variety because it continues to be a highly popular and adapted variety in Ritzville area. Many of the newer HRW experimental lines show promise, both in terms of higher yield averages and stripe rust resistance.

#### **ST ANDREWS (Douglas County) HARD WINTER WHEAT**

1. 2005 Hard Winter Wheat yield from the WSU Variety Testing nursery at the St Andrews location averaged 76.2bu/ac and represented a 20 bu/ac increase over historical average yields at this location. *NOTE: The St Andrews nursery was located approximately 5 miles west of Coulee City, WA (L. Tanneberg farm).*
2. This nursery was planted on 31 August 2004 into excellent soil moisture. Fall 2004 GROWING CONDITIONS coupled with timely precipitation patterns in spring 2005 undoubtedly were ideal for winter wheat development in this region for the 2005 crop.
3. STRIPE RUST was generally not an issue in this soft white winter wheat nursery except in susceptible varieties such as Hatton that exhibited over 70% infection on a 2 June 2005 evaluation that probably contributed to its substantially lower yield in 2005.
4. Protein values averaged 9.4% for this nursery. Total available nitrogen measured in February 2005 showed 305#N. Plant growth and precipitation patterns in this nursery was typical of many locations in eastern Washington in 2005 (excellent fall 2004 emergence and growing conditions, mild winter, dry/cold spring soil conditions until May 2005, above average precipitation in May 2005, overcast conditions during June 2005 followed by hot, dry weather before harvest. Most of the root/crown systems survived on the surface precipitation in late May/June and as a result were somewhat 'lazy'. Roots were not forced to grow to normal soil depths in search of moisture and subsequently did not have the capacity to extract nitrogen lower in the soil profile. About the only explanation for the lower protein levels since there was sufficient nitrogen available for 12.5% HRW protein.
5. Eltan is included in the nursery as a yield check variety because it continues to be highly adapted variety in St Andrews area based on its winter hardiness and snow mold

resistance. Many of the newer HRW experimental lines show promise, both in terms of higher yield averages and stripe rust resistance.

6. PLANT HEIGHT values above normal are similar to the soft white winter wheat nursery at this location and also indicative of the high yield values in 2005. Average plant height of the HRW varieties in the 2005 nursery was 42.0 inches compared to an average plant height of 33.2 inches in the 2004 nursery – nearly 8-9 inches taller in 2005.
7. YIELD RANKING trends among varieties at this location remained fairly consistent with the historical yield rankings. Three varieties averaged over 90 bu/ac in the nursery: WA7976 and WA7977 (Estica x Finley pedigrees); MDM (hard white Eltan pedigree).

#### **WALLA WALLA HARD WINTER WHEAT**

1. 2005 Hard Winter Wheat yield from the WSU Variety Testing nursery at the Walla Walla location averaged 80.9 bu/ac. This is about 20 bu/ac less than the average of the soft white winter wheat nursery at this location. Lodging and stripe rust infections had dominant roles in yield differences among many varieties. (NOTE: the nursery was approx. 10 miles SW of Waitsburg on Lower Waitsburg Rd- T & J Beechinor farm).
2. LODGING was severe for many varieties in this nursery. (It is worth noting that lodging in some varieties is enhanced in plots when a variety severely prone to lodging, such as Edwin, that fall into the adjacent variety.) Average lodging for the entire nursery exceeded 60%. It appears that lodging was the major contributor to reduced yields and generally had the greatest impact on difference between varieties.
3. Plant height in the Walla Walla hard winter wheat nursery averaged 44.8 inches compared to 42.4 inches in 2004 for all varieties. In general, it appeared that all varieties were 2-3 inches taller in 2005 – a similar trend observed in the soft white winter wheat nursery at this location.
4. Stripe rust: Stripe rust was fairly severe on susceptible varieties and also contributed to substantial yield reductions in some varieties. Sifting out the impact of lodging vs. stripe rust is difficult. Probably one of the better indicators of stripe rust having a significant role is found in test weight values. Susceptible varieties such as Hatton, Wanser and Moreland had test weight values at 57#/bu or less (note that Moreland did not lodge).
5. Protein values averaged 8.9% for this nursery which is obviously low for HRW. It is speculated that lodging also influenced nitrogen assimilation in kernels during grain fill and limited protein development. Total nitrogen available measured in February 2005 showed 246# N for this nursery.
6. Eltan is included in the nursery as a yield check variety.

TABLE XMC0502. STRIPE RUST INFECTION TYPE (T) AND SEVERITY (%) ON CULTIVARS AND LINES IN THE **HARD WINTER** EXTENSION DISEASE NURSERY AT SPILLMAN FARM (LOC01) AND WHITLOW FARM (LOC04) NEAR PULLMAN, MT VERNON, (LOC05); WALLA WALLA (LOC06); AND LIND (LOC07), WA WHEN RECORDED AT THE INDICATED DATES AND STAGES OF PLANT GROWTH IN 2005 UNDER NATURAL INFECTION. (Chen, X., USDA/ARS, August 2005).

		Stripe Rust - 2005													
		LOC 01		LOC 04		LOC 05		LOC 06		LOC 07					
		Spillman Farm		Whitlow Farm <sup>1)</sup>		Mt Vernon		Walla Walla		Lind					
		6/12/05		6/1/05		4/21/05	5/23/05	4/20/05	5/17/05	6/9/05					
		Headed		Boot		Stem elong.	Heading	Stem elong.	Stage	Milk					
CLASS	VARIETY	IT	%	IT	%	IT	%	IT	%	IT	%	IT	%	IT	%
HRW	WANSER	8	100	8	60	8	70	8	70	8	5	8	60	5-8	20
HRW	HATTON	8	100	8	80	8	80	5	30	8	10	8	80	8	90
HRW	WESTON	8	90	8	30	2	5	2	2	0	0	8	10	8	10
HRW	FINLEY	5-8	50	5-8	30	2	5	2	2	0	0	2	1	0	0
HRW	BUCHANAN	8	70	8	70	3	10	2	2	0	0	8	50	8	40
HRW	BOUNDARY	5	60	8	2	2	5	2	2	0	0	8	40	0	0
HRW	WA007975	2	5	5	5	5	20	2	5	0	0	5	30	0	0
HRW	WA007939	2	20	5	40	8	40	2	2	8	2	3	10	2	2
HRW	WA007976	2	5	0	0	2	5	2	2	0	0	2	1	0	0
HRW	WA007977	2	5	0	0	2	5	2	2	0	0	2	1	0	0
HRW	WA007978	2	5	2	2	2	5	2	2	0	0	2	5	2	2
HRW	WA007979	2	2	0	0	2	5	2	2	0	0	2	1	0	0
HRW	WA007980	8	50	8	5	2	5	2	2	0	0	2	2	0	0
HRW	DW	2	5	2	2	2	5	2	2	0	0	2	1	0	0
HRW	MORELAND	8	100	-	-	5	30	8	80	8	5	8	20	8	50
HRW	AGRIPRO PALADIN	2	5	-	-	8	60	5	60	8	5	8	5	2	2
HRW	W98-157	2	5	-	-	8	50	2	30	8	5	8	20	2	2
HRW	W98-263	2	5	-	-	8	80	8	60	8	5	8	20	8	20
HRW	W98-344	2	5	-	-	8	60	2	2	0	0	2,8	1	2	2
HRW	RESIDENCE	0,5	50	-	-	5	10	2	2	0	0	2	1	0	0
HRW	Q. HYB 542	5	70	-	-	5	10	2	5	0	0	8	30	0,3	5
HRW	CDC FALCON	5	80	-	-	8	60	5	30	8	2	5	50	2-5	20
HRW	BZ9W96-788-E	8	80	-	-	5	10	2	2	8	20	8	30	0,8	10
HDWH	WA007936	2	20	-	-	2	5	2	2	8	10	3	5	2	5
SWH	ELTAN	2	20	-	-	2	5	2	2	8	2	3	10	2-3	5

<sup>1)</sup> Missing data is a result of herbicide injury to plants in the nursery.

Table 31GWTH. 2005 WSU EXTENSION UNIFORM CEREAL VARIETY TESTING HARD WINTER WHEAT SPRING GROWTH RATINGS

VARIETY	Percent of Boundary	Walla Walla Feb 4	Almira Mar 8	St. Andrews Mar 8	Connell Mar 11	Lind Mar 14	Ritzville Mar 14	Horse Heaven Mar 17	Pullman Apr 6	Average
<b>Hard Red</b>										
Stand Index (1 = Low, 10 = High)										
WA7980	131.1	7.8	6.8	7.5	10.0	8.3	7.5	9.3	7.0	8.0
BZ9W96-788-E	118.0	6.3	7.0	6.8	7.3	7.8	7.0	9.0	6.3	7.2
W98-263	118.0	6.8	6.5	6.5	7.5	7.0	7.3	9.3	6.5	7.2
BAUERMEISTER	116.4	6.3	6.5	7.0	8.0	7.5	6.5	8.5	6.8	7.1
WESTON	116.4	6.5	6.3	6.5	8.0	7.5	7.3	8.5	6.3	7.1
WANSER	113.1	5.8	6.0	5.8	7.3	7.5	7.0	9.3	7.0	6.9
BUCHANAN	108.2	5.8	6.3	6.5	8.3	7.5	6.0	7.3	5.5	6.6
W96-355	106.6	6.3	6.0	6.0	7.3	7.0	6.3	7.3	5.8	6.5
Q. HYB 542	104.9	5.0	5.8	6.3	7.0	7.8	6.0	7.8	6.0	6.4
MORELAND	103.3	6.0	5.3	6.3	6.8	6.3	5.5	7.8	6.3	6.3
W98-157	103.3	5.5	5.8	6.3	6.5	6.8	6.0	8.0	6.0	6.3
RESIDENCE	101.6	5.3	5.5	5.8	6.5	6.8	6.0	8.0	5.8	6.2
BOUNDARY	100.0	5.0	5.5	6.3	6.3	6.8	6.0	8.3	5.0	6.1
DW	98.4	5.0	6.5	6.3	6.8	6.0	5.5	6.8	5.5	6.0
W98-344	95.1	5.0	5.8	5.3	6.5	6.3	5.0	7.3	5.8	5.8
HATTON	91.8	5.0	6.0	6.0	5.8	5.8	5.5	6.5	4.0	5.6
WA7976	88.5	4.8	6.0	5.3	6.0	5.5	5.8	5.0	5.3	5.4
WA7977	88.5	5.0	6.0	5.0	5.5	5.5	5.3	5.5	5.5	5.4
CDC FALCON	86.9	4.3	5.3	5.3	5.5	6.3	5.0	6.0	5.0	5.3
WA7975	86.9	4.3	5.8	5.3	6.3	6.0	4.8	5.8	4.8	5.3
WA7978	86.9	5.0	5.8	6.3	5.3	5.3	5.3	4.8	4.5	5.3
WA7979	80.3	4.3	6.0	5.0	4.8	4.8	5.3	4.8	4.8	4.9
<b>Hard White</b>										
WA7936	106.6	5.0	6.8	6.5	7.5	7.8	5.8	6.5	6.0	6.5
<b>Soft White</b>										
ELTAN	106.6	5.8	5.8	7.0	7.3	7.5	6.0	6.5	6.3	6.5
Average	102.5	5.5	6.0	6.1	6.8	6.7	6.0	7.2	5.7	6.25
CV %		8.5	7.9	12.9	0.7	13.2	10.0	13.2	8.9	11.0
LSD @ .10		0.6	0.6	0.9	0.8	1.0	0.7	1.1	0.6	0.3

TABLE 31YD.

## 2005 WSU HARD WINTER WHEAT TRIAL SUMMARY

VARIETY NAME	YIELD (BU/A)								VARIETY MEAN
	ALMIRA	CONNELL	HORSE HEAVEN	LIND	PULLMAN	RITZVILLE	ST. ANDREWS	WALLA WALLA	
Hard Red Common									
BAUERMEISTER	104.1	50.2	40.6	43.8	78.1	66.8	78.7	82.4	68.1
BOUNDARY	98.8	42.5	41.0	48.4	134.9	59.8	88.4	100.1	76.7
BUCHANAN	81.2	41.9	43.8	43.3	55.2	49.9	70.6	69.7	57.0
BZ9W96-788-E	93.5	46.9	42.0	42.9	111.2	54.4	87.4	103.4	72.7
CDC FALCON	67.2	40.8	39.0	43.4	67.4	43.3	74.2	88.9	58.0
DW	107.6	48.3	40.9	41.6	105.5	53.1	68.9	92.1	69.8
HATTON	56.8	23.3	29.1	33.3	21.2	37.7	61.5	38.3	37.6
MORELAND	73.6	40.9	31.4	39.7	12.1	36.9	71.4	68.7	46.8
PALADIN	94.6	47.5	41.4	48.1	115.7	54.6	62.3	100.5	70.6
Q. HYB 542	85.2	48.6	43.2	45.4	98.0	46.5	77.1	66.2	63.8
RESIDENCE	109.1	49.3	44.8	53.9	165.9	74.1	80.6	100.0	84.7
W98-157	99.3	47.7	37.5	37.7	134.7	42.9	55.7	91.3	68.4
W98-263	80.2	46.1	37.5	36.1	120.6	35.1	66.3	90.6	64.1
W98-344	91.2	51.7	40.7	40.2	135.9	41.2	74.4	84.1	69.9
WA7975	91.4	48.4	36.1	43.7	65.9	55.5	81.1	68.5	61.3
WA7976	123.4	64.7	44.5	52.8	106.2	74.5	98.6	77.3	80.2
WA7977	118.8	54.6	46.3	47.8	120.8	70.5	92.9	93.0	80.6
WA7978	91.3	47.8	39.4	39.0	120.3	57.0	62.4	81.8	67.4
WA7979	107.8	54.6	40.3	43.1	137.2	61.9	76.8	79.6	75.2
WA7980	100.7	50.2	34.0	36.9	91.2	58.3	80.7	97.8	68.7
WANSER	71.7	39.2	38.7	41.4	59.0	42.2	65.0	51.1	51.1
WESTON	96.4	43.4	38.0	41.5	61.9	40.8	73.9	65.2	57.7
Hard White Common									
MDM	95.2	42.2	43.6	41.8	106.3	54.9	91.5	73.8	68.7
Soft White Common									
ELTAN	89.7	54.3	39.3	41.6	99.5	50.4	87.7	77.1	66.7
MEAN									
	92.9	46.9	39.7	42.8	96.9	52.6	76.2	80.9	66.1
CV%									
	13.9	9.4	7.8	7.7	15.7	11.2	12.5	9.0	13.3
LSD @ .10									
	15.3	5.2	3.7	3.9	17.9	6.9	11.2	8.5	3.6

TABLE 31TW.

## 2005 WSU HARD WINTER WHEAT TRIAL SUMMARY

VARIETY NAME	TEST WEIGHT (LBS/BU)								VARIETY MEAN
	ALMIRA	CONNELL	HORSE HEAVEN	LIND	PULLMAN	RITZVILLE	ST. ANDREWS	WALLA WALLA	
Hard Red Common									
BAUERMEISTER	60.7	58.8	59.2	58.5	58.3	60.4	61.3	56.9	59.3
BOUNDARY	62.5	58.2	59.4	59.1	61.2	60.7	62.0	59.4	60.3
BUCHANAN	61.3	59.3	60.0	58.8	60.3	60.4	60.7	57.9	59.9
BZ9W96-788-E	62.7	59.2	60.7	60.3	61.9	62.0	62.7	60.7	61.3
CDC FALCON	60.7	58.6	59.4	58.9	56.6	60.9	62.8	59.3	59.7
DW	62.7	59.3	61.3	60.2	61.1	61.6	62.5	61.0	61.2
HATTON	60.8	60.2	62.6	61.6	56.9	62.4	62.3	57.2	60.5
MORELAND	60.0	56.7	58.8	57.7	47.8	59.5	62.1	56.6	58.1
PALADIN	62.5	59.7	60.9	60.7	60.4	61.9	63.1	60.6	61.2
Q. HYB 542	62.2	58.9	60.9	59.5	61.1	61.5	62.5	58.9	60.7
RESIDENCE	60.7	55.2	56.5	57.0	61.3	59.4	59.9	58.9	58.6
W98-157	61.8	58.1	59.9	59.1	60.8	60.5	62.0	58.8	60.1
W98-263	62.0	58.6	59.8	59.7	60.5	60.9	61.7	59.3	60.3
W98-344	61.9	59.0	60.6	59.9	61.3	61.6	63.5	59.1	60.9
WA7975	60.9	58.4	59.2	58.2	59.9	59.4	60.4	58.1	59.3
WA7976	62.4	58.5	59.7	59.2	61.9	60.7	60.9	58.5	60.2
WA7977	62.0	58.0	59.3	58.4	61.8	60.0	60.2	59.6	59.9
WA7978	61.2	55.6	56.4	55.9	58.6	57.5	59.7	58.9	58.0
WA7979	61.6	56.9	58.1	57.7	60.4	58.7	59.8	58.5	59.0
WA7980	61.1	58.3	58.9	58.5	56.9	60.6	62.0	58.4	59.4
WANSER	61.9	59.0	61.1	60.7	58.8	61.1	62.6	56.4	60.2
WESTON	62.7	60.0	61.8	60.6	60.4	61.5	63.3	59.9	61.3
Hard White Common									
MDM	61.5	58.2	59.1	58.2	59.3	59.3	60.9	57.2	59.2
Soft White Common									
ELTAN	60.1	58.7	58.6	58.9	58.6	59.1	60.3	56.7	58.8
MEAN	61.6	58.4	59.7	59.1	59.7	60.5	61.6	58.6	59.9
CV%	1.5	0.7	0.5	0.8	1.3	0.6	0.8	1.6	1.0
LSD @ .10	1.1	0.5	0.4	0.6	0.9	0.4	0.6	1.1	0.3



TABLE 31PR.

## 2005 WSU HARD WINTER WHEAT TRIAL SUMMARY

VARIETY NAME	PROTEIN (%)								VARIETY MEAN
	ALMIRA	CONNELL	HORSE HEAVEN	LIND	PULLMAN	RITZVILLE	ST. ANDREWS	WALLA WALLA	
Hard Red Common									
BAUERMEISTER	10.7	12.6	9.9	13.0	12.2	10.6	8.4	9.0	10.8
BOUNDARY	10.7	12.7	9.9	13.3	11.9	11.4	9.1	9.0	11.0
BUCHANAN	11.0	13.2	9.2	13.5	11.3	10.5	8.5	8.2	10.7
BZ9W96-788-E	11.9	12.9	11.0	13.3	11.9	11.1	10.0	8.7	11.4
CDC FALCON	10.7	12.8	11.1	13.9	12.3	10.8	11.1	8.5	11.4
DW	11.0	13.8	10.7	13.7	12.1	12.1	9.3	8.6	11.4
HATTON	10.4	12.6	10.4	13.0	12.5	11.0	8.4	8.1	10.8
MORELAND	11.3	12.8	10.8	13.6	13.3	12.0	9.1	7.9	11.4
PALADIN	11.8	13.4	11.5	13.6	12.2	13.2	11.2	9.1	12.0
Q. HYB 542	12.0	13.7	11.4	13.9	13.3	12.5	10.5	9.6	12.1
RESIDENCE	10.5	12.9	11.2	12.5	12.1	10.6	8.4	9.1	10.9
W98-157	11.4	12.6	10.8	13.1	12.6	13.2	10.1	8.6	11.6
W98-263	11.2	13.4	12.0	13.4	12.0	13.1	10.0	8.7	11.8
W98-344	11.6	12.6	11.3	13.0	12.4	13.7	10.5	8.4	11.7
WA7975	11.3	13.4	10.4	14.0	13.2	11.0	10.3	9.8	11.7
WA7976	10.6	12.6	10.4	12.7	12.2	10.5	8.3	9.2	10.8
WA7977	10.9	12.3	10.0	13.2	12.0	10.5	8.3	8.6	10.7
WA7978	11.7	13.0	11.3	13.8	12.9	11.4	9.3	10.0	11.7
WA7979	10.9	12.6	10.6	12.7	12.3	11.3	8.3	9.1	11.0
WA7980	11.8	14.0	11.7	13.4	12.1	11.6	9.5	9.2	11.7
WANSER	10.5	12.9	10.7	12.9	11.6	12.5	9.7	8.7	11.2
WESTON	11.5	13.3	11.3	13.5	12.5	12.8	9.9	9.8	11.8
Hard White Common									
MDM	10.7	12.9	9.4	12.7	11.6	11.0	7.9	8.3	10.6
Soft White Common									
ELTAN	10.1	12.6	10.2	13.0	11.4	10.8	8.5	8.7	10.7
MEAN	11.1	13.0	10.7	13.3	12.3	11.6	9.4	8.9	11.3
CV%	6.4	4.9	6.9	3.2	2.3	5.2	7.6	4.1	5.2
LSD @ .10	0.9	0.8	0.9	0.5	0.3	0.7	0.8	0.4	0.2

TABLE WA3162. 2005 WSU EXTENSION HARD WINTER WHEAT NURSERY AT ALMIRA, WA.

VARIETY NAME	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2005					
				YIELD (BU/A)	TEST WT. (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE	LODGING %
<b>HARD RED</b>									
BAUERMEISTER	---	---	100.9 (3)	104.1 (6)	60.7	10.7	44	28-May	18
BOUNDARY	---	---	97.9 (4)	98.8 (9)	62.5	10.7	39	26-May	0
WESTON	---	---	96.5 (5)	96.4 (10)	62.7	11.5	51	25-May	6
DW	---	---	96.1 (6)	107.6 (5)	62.7	11.0	41	28-May	0
BUCHANAN	---	---	91.4 (7)	81.2 (19)	61.3	11.0	50	28-May	11
Q. HYB 542	---	---	89.4 (8)	85.2 (18)	62.2	12.0	47	28-May	0
EDDY	---	---	89.0 (9)	93.5 (13)	62.7	11.9	41	26-May	0
PALADIN	---	---	88.7 (10)	94.6 (12)	62.5	11.8	38	28-May	0
RESIDENCE	---	---	88.3 (11)	109.1 (3)	60.7	10.5	42	28-May	0
MORELAND	---	---	82.7 (12)	73.6 (21)	60.0	11.3	38	28-May	0
CDC FALCON	---	---	76.9 (13)	67.2 (23)	60.7	10.7	39	28-May	0
WANSER	---	---	74.8 (14)	71.7 (22)	61.9	10.5	50	26-May	0
HATTON	---	---	72.5 (15)	56.8 (24)	60.8	10.4	46	28-May	0
WA7976	---	---	---	123.4 (1)	62.4	10.6	44	28-May	0
WA7977	---	---	---	118.8 (2)	62.0	10.9	45	28-May	0
WA7979	---	---	---	107.8 (4)	61.6	10.9	43	28-May	0
WA7980	---	---	---	100.7 (7)	61.1	11.8	38	26-May	0
W98-157	---	---	---	99.3 (8)	61.8	11.4	43	26-May	0
WA7975	---	---	---	91.4 (14)	60.9	11.3	49	26-May	11
WA7978	---	---	---	91.3 (15)	61.2	11.7	48	28-May	0
W98-344	---	---	---	91.2 (16)	61.9	11.6	38	25-May	0
W98-263	---	---	---	80.2 (20)	62.0	11.2	40	25-May	0
<b>HARD WHITE</b>									
MDM	---	---	102.7 (2)	95.2 (11)	61.5	10.7	42	28-May	0
<b>SOFT WHITE COMMON</b>									
ELTAN (check)	---	---	103.7 (1)	89.7 (17)	60.1	10.1	41	28-May	0
NURSERY MEAN	---	---	90.0	92.9	61.6	11.1	43	27-May	2
CV %	---	---	13.0	13.9	1.5	6.4	---	---	---
LSD @ .10	---	---	9.8	15.3	1.1	0.9	---	---	---

Planted: 9 Sep 04

Harvested: 4 Aug 05

TABLE WA3147. 2005 WSU EXTENSION HARD WINTER WHEAT NURSERY AT CONNELL, WA.

VARIETY NAME	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	YIELD (BU/A)	TEST WT. (LBS/BU)	2005 PROTEIN (%)	PLANT HT	HEAD DATE
HARD RED								
WA7976	---	---	---	64.7 ( 1)	58.5	12.6	25	14-May
WA7977	---	---	---	54.6 ( 2)	58.0	12.3	25	15-May
WA7979	---	---	---	54.6 ( 3)	56.9	12.6	25	17-May
W98-344	---	---	---	51.7 ( 5)	59.0	12.6	30	11-May
WA7980	---	---	---	50.2 ( 6)	58.3	14.0	28	11-May
BAUERMEISTER	---	---	---	50.2 ( 7)	58.8	12.6	28	16-May
RESIDENCE	---	---	---	49.3 ( 8)	55.2	12.9	28	13-May
Q. HYB 542	---	---	---	48.6 ( 9)	58.9	13.7	33	10-May
WA7975	---	---	---	48.4 (10)	58.4	13.4	29	17-May
DW	---	---	---	48.3 (11)	59.3	13.8	28	12-May
WA7978	---	---	---	47.8 (12)	55.6	13.0	29	17-May
W98-157	---	---	---	47.7 (13)	58.1	12.6	30	10-May
PALADIN	---	---	---	47.5 (14)	59.7	13.4	32	11-May
EDDY	---	---	---	46.9 (15)	59.2	12.9	30	11-May
W98-263	---	---	---	46.1 (16)	58.6	13.4	31	11-May
WESTON	---	---	---	43.4 (17)	60.0	13.3	32	11-May
BOUNDARY	---	---	---	42.5 (18)	58.2	12.7	28	13-May
BUCHANAN	---	---	---	41.9 (20)	59.3	13.2	28	15-May
MORELAND	---	---	---	40.9 (21)	56.7	12.8	27	11-May
CDC FALCON	---	---	---	40.8 (22)	58.6	12.8	28	13-May
WANSER	---	---	---	39.2 (23)	59.0	12.9	32	11-May
HATTON	---	---	---	23.3 (24)	60.2	12.6	27	12-May
HARD WHITE								
MDM	---	---	---	42.2 (19)	58.2	12.9	30	16-May
SOFT WHITE COMMON								
ELTAN (check)	---	---	---	54.3 ( 4)	58.7	12.6	28	15-May
NURSERY MEAN	---	---	---	46.9	58.4	13.0	29	13-May
CV %	---	---	---	9.4	0.7	4.9	---	---
LSD @ .10	---	---	---	5.2	0.5	0.8	---	---

Planted: 1 Sep 04  
Harvested: 19 Jul 05

TABLE WA3120. 2005 WSU EXTENSION HARD WINTER WHEAT NURSERY AT HORSE HEAVEN, WA.

VARIETY NAME	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	YIELD (BU/A)	TEST WT. (LBS/BU)	2005 PROTEIN (%)	PLANT HT	HEAD DATE
HARD RED								
WA7977	---	---	---	46.3 ( 1)	59.3	10.0	27	12-May
RESIDENCE	---	---	---	44.8 ( 2)	56.5	11.2	27	11-May
WA7976	---	---	---	44.5 ( 3)	59.7	10.4	25	12-May
BUCHANAN	---	---	---	43.8 ( 4)	60.0	9.2	30	11-May
Q. HYB 542	---	---	---	43.2 ( 6)	60.9	11.4	32	8-May
EDDY	---	---	---	42.0 ( 7)	60.7	11.0	27	9-May
PALADIN	---	---	---	41.4 ( 8)	60.9	11.5	28	10-May
BOUNDARY	---	---	---	41.0 ( 9)	59.4	9.9	28	10-May
DW	---	---	---	40.9 (10)	61.3	10.7	25	10-May
W98-344	---	---	---	40.7 (11)	60.6	11.3	28	7-May
BAUERMEISTER	---	---	---	40.6 (12)	59.2	9.9	28	12-May
WA7979	---	---	---	40.3 (13)	58.1	10.6	24	12-May
WA7978	---	---	---	39.4 (14)	56.4	11.3	30	13-May
CDC FALCON	---	---	---	39.0 (16)	59.4	11.1	27	11-May
WANSER	---	---	---	38.7 (17)	61.1	10.7	32	10-May
WESTON	---	---	---	38.0 (18)	61.8	11.3	31	9-May
W98-263	---	---	---	37.5 (19)	59.8	12.0	30	8-May
W98-157	---	---	---	37.5 (20)	59.9	10.8	29	8-May
WA7975	---	---	---	36.1 (21)	59.2	10.4	30	13-May
WA7980	---	---	---	34.0 (22)	58.9	11.7	27	9-May
MORELAND	---	---	---	31.4 (23)	58.8	10.8	26	8-May
HATTON	---	---	---	29.1 (24)	62.6	10.4	29	12-May
HARD WHITE								
MDM	---	---	---	43.6 ( 5)	59.1	9.4	28	13-May
SOFT WHITE COMMON								
ELTAN (check)	---	---	---	39.3 (15)	58.6	10.2	27	13-May
NURSERY MEAN	---	---	---	39.7	59.7	10.7	28	10-May
CV %	---	---	---	7.8	0.5	6.9	---	---
LSD @ .10	---	---	---	3.7	0.4	0.9	---	---

Planted: 22 Sep 04  
Harvested: 18 Jul 05

TABLE WA3105. 2005 WSU EXTENSION HARD WINTER WHEAT NURSERY AT LIND, WA.

VARIETY NAME	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	YIELD (BU/A)	TEST WT. (LBS/BU)	2005 PROTEIN (%)	PLANT HT	HEAD DATE
<b>HARD RED</b>								
RESIDENCE	43.0 ( 1)	46.1 ( 1)	51.2 ( 1)	53.9 ( 1)	57.0	12.5	25	12-May
BUCHANAN	40.2 ( 3)	44.1 ( 4)	44.4 ( 8)	43.3 (10)	58.8	13.5	26	12-May
Q. HYB 542	39.9 ( 4)	40.7 ( 7)	46.8 ( 5)	45.4 ( 6)	59.5	13.9	27	10-May
BOUNDARY	39.1 ( 5)	42.4 ( 6)	47.7 ( 4)	48.4 ( 3)	59.1	13.3	26	11-May
WESTON	34.6 ( 6)	36.9 (10)	40.4 (13)	41.5 (16)	60.6	13.5	27	10-May
WANSER	33.9 ( 7)	37.4 ( 9)	40.4 (12)	41.4 (17)	60.7	12.9	29	11-May
MORELAND	33.5 ( 8)	35.6 (11)	39.1 (14)	39.7 (19)	57.7	13.6	24	10-May
BAUERMEISTER	---	43.2 ( 5)	43.9 ( 9)	43.8 ( 7)	58.5	13.0	25	13-May
DW	---	39.5 ( 8)	41.8 (10)	41.6 (14)	60.2	13.7	26	12-May
CDC FALCON	---	---	45.0 ( 6)	43.4 ( 9)	58.9	13.9	24	12-May
EDDY	---	---	44.5 ( 7)	42.9 (12)	60.3	13.3	26	9-May
HATTON	---	---	41.2 (11)	33.3 (24)	61.6	13.0	27	12-May
WA7976	---	---	---	52.8 ( 2)	59.2	12.7	23	12-May
PALADIN	---	---	---	48.1 ( 4)	60.7	13.6	27	11-May
WA7977	---	---	---	47.8 ( 5)	58.4	13.2	23	13-May
WA7975	---	---	---	43.7 ( 8)	58.2	14.0	26	13-May
WA7979	---	---	---	43.1 (11)	57.7	12.7	20	13-May
W98-344	---	---	---	40.2 (18)	59.9	13.0	28	8-May
WA7978	---	---	---	39.0 (20)	55.9	13.8	27	12-May
W98-157	---	---	---	37.7 (21)	59.1	13.1	29	9-May
WA7980	---	---	---	36.9 (22)	58.5	13.4	25	8-May
W98-263	---	---	---	36.1 (23)	59.7	13.4	28	7-May
<b>HARD WHITE</b>								
MDM	---	45.9 ( 3)	47.8 ( 3)	41.8 (13)	58.2	12.7	28	12-May
<b>SOFT WHITE COMMON</b>								
ELTAN (check)	42.4 ( 2)	45.9 ( 2)	48.4 ( 2)	41.6 (15)	58.9	13.0	26	13-May
NURSERY MEAN	38.3	41.6	44.5	42.8	59.1	13.3	26	11-May
CV %	11.6	11.1	10.2	7.7	0.8	3.2	---	---
LSD @ .10	2.3	3.1	3.8	3.9	0.6	0.5	---	---

Planted: 2 Sep 04

Harvested: 20 Jul 05

TABLE WA3102. 2005 WSU EXTENSION HARD WINTER WHEAT NURSERY AT PULLMAN, WA.

VARIETY NAME	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2005					
				YIELD (BU/A)	TEST WT. (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE	LODGING %
<b>HARD RED</b>									
RESIDENCE	133.1 (1)	145.5 (1)	150.3 (1)	165.9 (1)	61.3	12.1	47	10-Jun	40
BOUNDARY	113.8 (2)	128.3 (2)	136.5 (2)	134.9 (4)	61.2	11.9	42	9-Jun	25
Q. HYB 542	110.3 (4)	124.2 (4)	125.9 (4)	98.0 (15)	61.1	13.3	50	6-Jun	86
WESTON	96.4 (5)	104.7 (9)	97.8 (11)	61.9 (20)	60.4	12.5	50	6-Jun	80
MORELAND	88.4 (6)	85.8 (12)	71.7 (14)	12.1 (24)	47.8	13.3	39	7-Jun	0
BUCHANAN	86.1 (7)	93.0 (11)	77.0 (13)	55.2 (22)	60.3	11.3	48	10-Jun	96
WANSER	84.2 (8)	96.7 (10)	94.5 (12)	59.0 (21)	58.8	11.6	53	6-Jun	90
DW	---	120.7 (6)	121.3 (8)	105.5 (13)	61.1	12.1	43	9-Jun	75
PALADIN	---	119.8 (7)	129.3 (3)	115.7 (9)	60.4	12.2	39	9-Jun	0
BAUERMEISTER	---	111.8 (8)	107.4 (9)	78.1 (17)	58.3	12.2	42	10-Jun	90
EDDY	---	---	124.5 (6)	111.2 (10)	61.9	11.9	43	8-Jun	48
CDC FALCON	---	---	103.9 (10)	67.4 (18)	56.6	12.3	42	9-Jun	38
HATTON	---	---	52.3 (15)	21.2 (23)	56.9	12.5	49	9-Jun	84
WA7979	---	---	---	137.2 (2)	60.4	12.3	48	10-Jun	65
W98-344	---	---	---	135.9 (3)	61.3	12.4	41	7-Jun	0
W98-157	---	---	---	134.7 (5)	60.8	12.6	44	7-Jun	58
WA7977	---	---	---	120.8 (6)	61.8	12.0	49	9-Jun	83
W98-263	---	---	---	120.6 (7)	60.5	12.0	42	7-Jun	0
WA7978	---	---	---	120.3 (8)	58.6	12.9	51	10-Jun	85
WA7976	---	---	---	106.2 (12)	61.9	12.2	47	9-Jun	86
WA7980	---	---	---	91.2 (16)	56.9	12.1	41	9-Jun	40
WA7975	---	---	---	65.9 (19)	59.9	13.2	47	10-Jun	95
<b>HARD WHITE</b>									
MDM	---	123.4 (5)	123.6 (7)	106.3 (11)	59.3	11.6	44	10-Jun	82
<b>SOFT WHITE COMMON</b>									
ELTAN (check)	112.8 (3)	125.5 (3)	125.5 (5)	99.5 (14)	58.6	11.4	44	10-Jun	92
NURSERY MEAN	103.1	115.0	109.4	96.9	59.7	12.3	45	8-Jun	60
CV %	9.4	10.7	11.5	15.7	1.3	2.3	---	---	---
LSD @ .10	5.1	8.3	10.5	17.9	0.9	0.3	---	---	---

Planted: 1 Oct 04

Harvested: 11 Aug 05

TABLE WA3117. 2005 WSU EXTENSION HARD WINTER WHEAT NURSERY AT RITZVILLE, WA.

VARIETY NAME	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	YIELD (BU/A)	TEST WT. (LBS/BU)	2005 PROTEIN (%)	PLANT HT	HEAD DATE
<b>HARD RED</b>								
RESIDENCE	---	---	66.8 ( 1)	74.1 ( 2)	59.4	10.6	32	25-May
BAUERMEISTER	---	---	63.9 ( 2)	66.8 ( 4)	60.4	10.6	34	27-May
BOUNDARY	---	---	58.5 ( 3)	59.8 ( 6)	60.7	11.4	32	24-May
EDDY	---	---	57.9 ( 4)	54.4 (12)	62.0	11.1	32	21-May
BUCHANAN	---	---	57.6 ( 5)	49.9 (15)	60.4	10.5	37	28-May
Q. HYB 542	---	---	54.0 ( 8)	46.5 (16)	61.5	12.5	36	20-May
PALADIN	---	---	52.3 ( 9)	54.6 (11)	61.9	13.2	32	22-May
CDC FALCON	---	---	51.7 (10)	43.3 (17)	60.9	10.8	30	23-May
DW	---	---	50.2 (11)	53.1 (13)	61.6	12.1	31	23-May
MORELAND	---	---	49.4 (12)	36.9 (23)	59.5	12.0	31	22-May
HATTON	---	---	48.5 (13)	37.7 (22)	62.4	11.0	33	27-May
WANSER	---	---	47.7 (14)	42.2 (19)	61.1	12.5	39	22-May
WESTON	---	---	46.2 (15)	40.8 (21)	61.5	12.8	39	20-May
WA7976	---	---	---	74.5 ( 1)	60.7	10.5	34	26-May
WA7977	---	---	---	70.5 ( 3)	60.0	10.5	33	26-May
WA7979	---	---	---	61.9 ( 5)	58.7	11.3	31	28-May
WA7980	---	---	---	58.3 ( 7)	60.6	11.6	34	22-May
WA7978	---	---	---	57.0 ( 8)	57.5	11.4	38	28-May
WA7975	---	---	---	55.5 ( 9)	59.4	11.0	37	28-May
W98-157	---	---	---	42.9 (18)	60.5	13.2	33	20-May
W98-344	---	---	---	41.2 (20)	61.6	13.7	31	20-May
W98-263	---	---	---	35.1 (24)	60.9	13.1	33	19-May
<b>HARD WHITE</b>								
MDM	---	---	57.1 ( 7)	54.9 (10)	59.3	11.0	32	27-May
<b>SOFT WHITE COMMON</b>								
ELTAN (check)	---	---	57.4 ( 6)	50.4 (14)	59.1	10.8	31	28-May
NURSERY MEAN	---	---	54.6	52.6	60.5	11.6	34	24-May
CV %	---	---	8.9	11.2	0.6	5.2	---	---
LSD @ .10	---	---	4.0	6.9	0.4	0.7	---	---

Planted: 28 Sep 04  
Harvested: 21 Jul 05

TABLE WA3154. 2005 WSU EXTENSION HARD WINTER WHEAT NURSERY AT ST. ANDREWS, WA. (DOUGLAS COUNTY)

VARIETY NAME	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2005					
				YIELD (BU/A)	TEST WT. (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE	LODGING %
<b>HARD RED</b>									
BOUNDARY	66.0 (2)	73.5 (2)	73.3 (4)	88.4 (4)	62.0	9.1	39	26-May	0
Q. HYB 542	62.6 (3)	68.2 (5)	68.9 (6)	77.1 (11)	62.5	10.5	47	26-May	24
MORELAND	59.7 (4)	66.4 (7)	62.2 (10)	71.4 (16)	62.1	9.1	38	26-May	0
BUCHANAN	58.6 (5)	58.4 (9)	59.8 (12)	70.6 (17)	60.7	8.5	48	28-May	28
WESTON	56.0 (6)	61.3 (8)	64.1 (9)	73.9 (15)	63.3	9.9	46	24-May	0
RESIDENCE	52.4 (7)	54.0 (11)	54.0 (14)	80.6 (9)	59.9	8.4	39	27-May	0
WANSER	51.9 (8)	57.4 (10)	58.1 (13)	65.0 (20)	62.6	9.7	49	26-May	3
BAUERMEISTER	---	70.4 (3)	73.9 (3)	78.7 (10)	61.3	8.4	42	28-May	5
DW	---	66.9 (6)	65.3 (8)	68.9 (18)	62.5	9.3	39	27-May	0
PALADIN	---	52.7 (12)	52.9 (15)	62.3 (22)	63.1	11.2	37	26-May	0
EDDY	---	---	75.7 (2)	87.4 (6)	62.7	10.0	39	24-May	0
CDC FALCON	---	---	65.6 (7)	74.2 (14)	62.8	11.1	37	28-May	0
HATTON	---	---	62.0 (11)	61.5 (23)	62.3	8.4	49	28-May	0
WA7976	---	---	---	98.6 (1)	60.9	8.3	42	28-May	0
WA7977	---	---	---	92.9 (2)	60.2	8.3	42	27-May	0
WA7975	---	---	---	81.1 (7)	60.4	10.3	47	28-May	46
WA7980	---	---	---	80.7 (8)	62.0	9.5	39	25-May	0
WA7979	---	---	---	76.8 (12)	59.8	8.3	40	28-May	0
W98-344	---	---	---	74.4 (13)	63.5	10.5	39	23-May	0
W98-263	---	---	---	66.3 (19)	61.7	10.0	39	23-May	0
WA7978	---	---	---	62.4 (21)	59.7	9.3	46	28-May	0
W98-157	---	---	---	55.7 (24)	62.0	10.1	39	24-May	0
<b>HARD WHITE</b>									
MDM	---	75.1 (1)	77.0 (1)	91.5 (3)	60.9	7.9	42	28-May	13
<b>SOFT WHITE COMMON</b>									
ELTAN (check)	66.4 (1)	69.8 (4)	72.8 (5)	87.7 (5)	60.3	8.5	41	28-May	31
NURSERY MEAN	59.2	64.5	65.7	76.2	61.6	9.4	42	26-May	6
CV %	15.3	15.5	16.7	12.5	0.8	7.6	---	---	---
LSD @ .10	4.7	6.8	9.1	11.2	0.6	0.8	---	---	---

Planted: 31 Aug 04  
Harvested: 3 Aug 05



TABLE WA3115. 2005 WSU EXTENSION HARD WINTER WHEAT NURSERY AT WALLA WALLA, WA.

VARIETY NAME	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2005					
				YIELD (BU/A)	TEST WT. (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE	LODGING %
<b>HARD RED</b>									
RESIDENCE	---	---	128.4 ( 1)	100.0 ( 4)	58.9	9.1	45	21-May	75
EDDY	---	---	127.4 ( 2)	103.4 ( 1)	60.7	8.7	42	18-May	30
BOUNDARY	---	---	125.7 ( 3)	100.1 ( 3)	59.4	9.0	43	19-May	28
PALADIN	---	---	119.3 ( 5)	100.5 ( 2)	60.6	9.1	41	18-May	19
BAUERMEISTER	---	---	114.4 ( 6)	82.4 (12)	56.9	9.0	42	22-May	84
MORELAND	---	---	113.4 ( 7)	68.7 (19)	56.6	7.9	44	17-May	0
CDC FALCON	---	---	113.0 ( 8)	88.9 (10)	59.3	8.5	41	18-May	41
DW	---	---	112.2 ( 9)	92.1 ( 7)	61.0	8.6	43	20-May	76
Q. HYB 542	---	---	107.8 (10)	66.2 (21)	58.9	9.6	49	15-May	92
WESTON	---	---	97.0 (12)	65.2 (22)	59.9	9.8	49	17-May	92
BUCHANAN	---	---	87.4 (13)	69.7 (18)	57.9	8.2	49	22-May	90
WANSER	---	---	75.1 (14)	51.1 (23)	56.4	8.7	52	16-May	83
HATTON	---	---	67.2 (15)	38.3 (24)	57.2	8.1	50	21-May	44
WA7980	---	---	---	97.8 ( 5)	58.4	9.2	40	18-May	28
WA7977	---	---	---	93.0 ( 6)	59.6	8.6	46	21-May	87
W98-157	---	---	---	91.3 ( 8)	58.8	8.6	45	15-May	64
W98-263	---	---	---	90.6 ( 9)	59.3	8.7	43	16-May	46
W98-344	---	---	---	84.1 (11)	59.1	8.4	40	15-May	50
WA7978	---	---	---	81.8 (13)	58.9	10.0	51	23-May	56
WA7979	---	---	---	79.6 (14)	58.5	9.1	42	23-May	84
WA7976	---	---	---	77.3 (15)	58.5	9.2	45	21-May	97
WA7975	---	---	---	68.5 (20)	58.1	9.8	50	24-May	80
<b>HARD WHITE</b>									
MDM	---	---	106.9 (11)	73.8 (17)	57.2	8.3	44	23-May	73
<b>SOFT WHITE COMMON</b>									
ELTAN (check)	---	---	121.7 ( 4)	77.1 (16)	56.7	8.7	41	22-May	81
NURSERY MEAN	---	---	107.7	80.9	58.6	8.9	45	19-May	63
CV %	---	---	8.2	9.0	1.6	4.1	---	---	---
LSD @ .10	---	---	7.3	8.5	1.1	0.4	---	---	---

Planted: 23 Sep 04  
Harvested: 25 Jul 05

TABLE WA9761. 2005 WSU EXTENSION IRRIGATED HARD WINTER WHEAT NURSERY AT MOSES LAKE, WA.

VARIETY NAME	YIELD BU/A	TEST WT	% PROTEIN	HEAD DATE	PLANT HT	LODGE %
<b>HARD RED</b>						
RESIDENCE	194.6	63.4	12.6	22-May	46	52
ORN96B604	191.4	58.6	12.1	23-May	35	0
ORN99-0619	188.6	59.3	12.0	22-May	39	17
ORN98-0995	180.1	60.3	12.4	24-May	38	0
ORN00B553	180.0	62.8	12.6	20-May	37	8
ORN00B507	176.6	60.0	13.0	21-May	36	0
BOUNDARY	166.4	62.2	12.8	22-May	42	45
W98-263	163.4	62.5	12.9	19-May	43	35
BC97ROM-35	163.0	63.4	13.0	20-May	42	58
DECLO	161.1	61.7	12.7	21-May	40	0
CDC FALCON	159.2	63.4	12.4	20-May	41	25
MAYFAIR	155.1	53.3	13.1	26-May	34	0
EDDY	153.5	63.6	12.4	19-May	42	32
PALADIN	151.7	62.4	12.7	21-May	41	3
ID621	150.9	62.3	12.1	19-May	41	55
W98-157	150.8	62.6	13.4	19-May	43	60
JSDM127	143.4	61.9	12.5	22-May	39	13
BC97ROM-48	140.6	62.4	13.8	20-May	40	67
MORELAND	137.8	60.8	12.8	19-May	42	0
W98-344	136.4	62.3	13.6	19-May	41	38
D56-9	130.1	62.0	13.4	18-May	40	78
BAUERMEISTER	128.8	61.1	12.6	25-May	42	87
ID640	121.4	59.5	12.4	23-May	40	42
DW	120.1	61.9	13.0	21-May	42	80
<b>HARD WHITE</b>						
W96-359W	164.4	61.6	12.9	20-May	40	8
JSDM124	162.0	60.6	11.9	20-May	40	55
TAMARACK	131.3	58.6	11.6	27-May	35	33
MDM	128.8	60.7	11.6	25-May	43	93
ID641	125.2	62.5	12.2	20-May	43	80
<b>SOFT WHITE COMMON</b>						
STEPHENS (check)	153.9	59.3	12.1	21-May	38	47
NURSERY MEAN	153.7	61.2	12.6	21-May	40	37
CV %	9.9	0.9	3.9	---	---	---
LSD @ .10	20.8	0.7	0.7	---	---	---

Planted: 6 Oct 04  
Harvested: 2 Aug 05