

**2005 VARIETY TESTING  
WASHINGTON STATE UNIVERSITY  
DAYTON WINTER WHEAT NURSERY**

VARIETY NAME	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2005 YIELD (BU/A)	2005 TEST WT. (LBS/BU)	2005 PROTEIN (%)
CHUKAR	123.1 ( 1)	127.3 ( 2)	115.7 ( 5)	125.9 (10)	56.2	13.8
ROD	123.0 ( 2)	129.1 ( 1)	118.8 ( 1)	130.5 ( 4)	55.3	13.8
TUBBS	120.5 ( 3)	126.9 ( 3)	117.2 ( 3)	124.8 (12)	54.3	13.7
HILL 81	119.4 ( 4)	123.0 ( 4)	115.6 ( 6)	134.0 ( 3)	58.6	13.9
STEPHENS	116.9 ( 5)	121.7 ( 7)	111.3 ( 9)	128.0 ( 6)	55.4	14.5
BRUEHL	116.4 ( 6)	117.8 (18)	105.7 (22)	110.3 (36)	53.3	13.7
MOHLER	116.3 ( 7)	118.3 (14)	107.7 (15)	117.4 (21)	55.9	14.9
BRUNDAGE 96	116.2 ( 8)	120.1 (10)	112.7 ( 8)	121.9 (19)	55.3	14.3
MJ-9	116.0 ( 9)	122.5 ( 5)	106.2 (20)	115.0 (28)	52.1	14.0
FINCH	115.3 (10)	118.5 (13)	108.6 (12)	118.4 (20)	58.0	13.4
CODA	114.7 (11)	119.2 (11)	105.5 (23)	114.5 (29)	57.9	14.9
MADSEN	114.0 (12)	120.4 ( 9)	110.6 (11)	127.4 ( 8)	57.2	14.7
HILLER	113.3 (13)	111.4 (28)	101.5 (29)	106.7 (39)	53.7	13.5
ALBION	113.0 (14)	118.0 (17)	101.2 (30)	100.7 (43)	52.4	13.7
MJ-4	111.4 (15)	115.6 (21)	107.9 (14)	113.4 (30)	52.3	14.3
HUBBARD	110.9 (16)	118.9 (12)	105.3 (24)	117.4 (22)	56.6	13.9
CASHUP	110.1 (17)	111.6 (27)	105.1 (26)	123.8 (16)	56.9	13.6
RELY	108.9 (18)	108.7 (29)	95.2 (34)	96.3 (45)	55.4	13.7
LAMBERT	108.8 (19)	113.9 (24)	105.2 (25)	124.2 (14)	55.8	14.4
ELTAN	107.1 (20)	116.7 (20)	107.5 (17)	111.0 (33)	54.9	13.2
LEWJAIN	102.1 (21)	105.3 (30)	93.2 (36)	90.9 (46)	55.2	12.9
EDWIN	94.3 (22)	98.9 (31)	86.8 (37)	82.0 (48)	59.0	14.7
WB 528	---	122.4 ( 6)	113.2 ( 7)	142.2 ( 1)	59.5	13.9
MASAMI	---	121.5 ( 8)	108.4 (13)	116.7 (24)	55.3	13.7
IDAHO 587	---	118.2 (15)	105.9 (21)	123.7 (17)	55.5	14.3
SIMON	---	118.2 (16)	111.2 (10)	124.7 (13)	56.1	14.4
DUNE	---	117.4 (19)	106.7 (18)	111.5 (31)	54.9	14.5
ORCF-101	---	114.8 (22)	106.7 (19)	109.4 (37)	55.4	14.3
ARS00235	---	114.8 (23)	101.5 (28)	111.3 (32)	55.0	15.0
WA7935	---	113.0 (25)	100.8 (31)	102.6 (41)	55.6	13.5
WA7934	---	112.9 (26)	103.7 (27)	105.0 (40)	54.8	13.3
RJAMES	---	---	118.6 ( 2)	125.7 (11)	53.1	12.4
ARS97135-9	---	---	116.7 ( 4)	129.4 ( 5)	55.7	14.1
CONCEPT	---	---	107.6 (16)	127.9 ( 7)	57.0	13.5
F1182 M1-10	---	---	97.6 (32)	106.7 (38)	53.6	13.8
GEORGE	---	---	95.2 (33)	88.4 (47)	54.7	13.6
ARS97173-16	---	---	94.8 (35)	96.3 (44)	54.2	14.1
ORCF-102	---	---	---	138.6 ( 2)	57.9	13.6
ORSS-1757	---	---	---	127.3 ( 9)	56.2	13.3
WA7974	---	---	---	124.1 (15)	52.2	13.6
ARS00127	---	---	---	122.6 (18)	58.3	14.5
WA7971	---	---	---	117.2 (23)	50.8	14.1
WA7970	---	---	---	116.7 (25)	56.9	14.0
ARS96059-1	---	---	---	115.7 (26)	57.7	14.8
WA7973	---	---	---	115.6 (27)	54.4	13.9
ARS960411-2	---	---	---	110.9 (34)	57.8	14.9
WA7972	---	---	---	110.8 (35)	54.7	12.9
ID620	---	---	---	101.7 (42)	54.5	13.3
<b>Mean</b>	113.3	117.3	106.3	115.8	55.5	13.9
<b>CV%</b>	7.7	7.5	7.9	6.9	1.6	2.9
<b>LSD @ .10</b>	4.5	5.9	6.9	9.3	1.0	0.5

**DAYTON SOFT WHITE WINTER WHEAT – 2005 WSU VARIETY TESTING DATA**

1. 2005 Soft Winter Wheat data from the WSU Variety Testing nursery at the Dayton location averaged 115.8 bu/ac and were comparable to 3-year average yields (117.3 bu/ac). *NOTE: The 2005 nursery was located approximately 3 miles east of Dayton (D. Ingram farm) – the previous nursery location was approximately 10 miles NW of Dayton (R. James farm). The 2005 location is located on a highly productive, sub-irrigated flat piece of ground. In addition, the 2005 location had a high fertility level with 100#N applied as commercial fertilizer in addition to the use of asparagus butts worked into the ground at a 6-inch depth to provide an additional source of nitrogen.*

2. YIELD values generally ranked (high to low) similar to 3-year average yields among varieties. As you will see, a few varieties performed better/worse than previous years with no guess at this point in time as to why the differences other than a function of the environmental conditions in 2005.
3. MOST PRONOUNCED were low test weight, high protein, tall plant heights and extreme lodging in the 2005 nursery. This is a function of high fertility, excellent growing conditions and the seasonal environmental patterns in 2005.
  - Plant Height: Average plant height in this location was 41.6 inches compared to an average plant height in the 2004 nursery of 33.4 inches (over 6-8-inches taller plants on average in 2005). Even realizing that the winter wheat nursery locations were different in 2004 and 2005 examples of plant heights: Madsen (43 inches in 2005, 33 inches in 2004); Rod (40 inches in 2005, 32 inches in 2004); Eltan (40 inches in 2005, 34 inches in 2004).
  - GRAIN PROTEIN: Protein percentages were extremely high in 2005 and were slightly associated with lodging of varieties. It appears that most of the varieties had accumulated a high percentage of nitrogen into the developing wheat kernels early in the kernel development phase and probably ahead of lodging. Considerable LODGING came at a time in early July when the kernels were beginning to fill – it is speculated that lodging, coupled with dry soil conditions during kernel fill basically shut the plants down and also reduced TEST WEIGHT. Thus we have a situation of extremely high grain protein percentages. Not all varieties responded the same to the lodging, protein, and test weight scenarios indicating physiological differences among varieties in terms of nitrogen accumulation and carbohydrate accumulation during grain development.
4. STRIPE RUST infection percentages were fairly high at the Dayton location; however, in most cases, high temperature – adult plant resistance was sufficient to limit the impact of stripe rust on most varieties. There was also such a high level of plant growth that stripe rust was probably a secondary issue to lodging and dry soil conditions during grain fill.
5. Average HEADING DATE averaged about a week LATER (2 Jun) than in 2005 – a function of nursery location and high fertility levels (delayed maturity).