

WB9717

Tested as XA9861

1. Breeding History
 XA9861 was selected from the cross 'VOLT*2/07651-27'.

*Generation	*Year	*Description
Cross	2008	The cross was made near Bozeman, MT.
Backcross	2009	The cross was made near Bozeman, MT using VOLT as the recurrent parent.
BC ₁ F ₁	2009	Plants were grown near Yuma, AZ and advanced using bulk.
BC ₁ F ₂	2010	Plants were grown near Bozeman, MT and advanced using bulk.
BC ₁ F ₃	2010	Plants were grown near Yuma, AZ and advanced using bulk.
BC ₁ F ₄	2011	BC ₁ F ₄ 2011 plants were grown near Yuma, AZ and advanced using single head selection.
BC ₁ F ₅	2012	Plants were grown near Bozeman, MT and the variety 01071780 was identified and selected based on yield, agronomics and disease resistance.

Yield Testing

Generation	Year	Advancement/Selection Criteria
BC ₁ F ₆	2013	Yield, Agronomics, Test Weight, Protein, Disease, Quality
BC ₁ F ₇	2014	Yield, Agronomics, Test Weight, Protein, Disease, Quality
BC ₁ F ₈	2015	Yield, Agronomics, Test Weight, Protein, Disease, Quality
BC ₁ F ₉	2016	Yield, Agronomics, Test Weight, Protein, Disease, Quality

2. Phenotypic description

1. Kind:	Hard Red		
	If common, provide appropriate kernel characteristic: (Hard Red, Soft Red, Hard White, Soft White)		
2. Seasonal Growth Habit:	Spring	16. Awn Type:	Awned
3. Coleoptile Color:	White	17. Awn Color:	White
4. Juvenile Growth Habit:	Semi-erect	18. Glume Color:	White
5. Leaf Color at Boot:	Green	19. Glume Length:	Long
6. Flag Leaf at Boot:	Erect, Twisted, Wax Present	20. Shoulder Shape:	Elevated
7. Auricle Color:	White	21. Shoulder Width:	Narrow
8. Days to 50% Heading:	129	22. Beak Shape:	Acuminate
9. Anther Color:	Yellow	23. Beak Length (S.M.L.VL):	No Data
10. Anthocyanin:	Absent	24. Glume Pubescence:	Not Present
11. Plant Height (cm):	86	25. Seed Color:	Red
12. Internodes:	Hollow	26. Seed Shape:	Oval
13. Spike Shape:	Tapering	27. Cheeks:	Rounded
14. Spike Density:	Lax	28. Brush Size (S,M,L.):	Medium
15. Spike Curvature:	Inclined	29. Avg 1,000 Kernel Wt (g):	48.5

30. Physiological/biochemical Traits:

Variants and frequency:

A variant that is similar to XA9861 but has white seed occurs at a frequency of up to .50% (50 out 10,000 seeds). A variant that is similar to XA9861 but is 10cm to 15cm taller occurs at a frequency of up to .2% (20/10,000). A bronze head variant may occur at a frequency of .1% (10/10,000). An awnless variant may occur at a frequency of .1% (10/10,000). Otherwise, this variety has been uniform and stable in appearance and performance across several generations and environments.

3. TABLE 2 DESCRIPTION PARAGRAPH

In Table 2, yield, quality, and agronomic characteristics collected in 2014-2016 in the Northwest region of the United States, including Washington, Idaho, and Montana, or wheat cultivar XA9861 are compared to check cultivars. Table 2 shows protein and SDS on a 12% moisture basis. Plant height is measured in inches. Lodging and disease ratings were measured on a 1-9 scale with 1 being the most resistant and 9 being the most susceptible.

TABLE 2: COMPARATIVE DATA FOR CULTIVAR XA9861 and SELECTED CULTIVARS

Head	XA9861	XA9861	XA9861	XA9861	XA9861
Other	WB9668	WB9411	WB9200	BULLSEYE	DAYN
NA Standardized Regions	Wheat_NA:GREATER NORTHWEST	Wheat_NA:GREATER NORTHWEST	Wheat_NA:GREATER NORTHWEST	Wheat_NA:GREATER NORTHWEST	Wheat_NA:GREATER NORTHWEST
YLD_BE Years	3	3	3	3	2
YLD_BE # Obs	27	27	27	22	17
YLD_BE Wins Total	20	14	16	15	7
YLD_BE Wins %	74	52	59	68	41
H YLD_BE	84.1	84.1	84.1	93.4	91.4
O YLD_BE	80	83.4	78.8	88.3	95
YLD_BE Dev	4.091471	0.6434071	5.23979	5.0882796	-3.6374668
YLD_BE p-Val	0.0030076	0.7540427	0.0609035	0.0149894	0.150024
YLD_BE Signif	**		+	*	
TWT_BE Years	3	3	3	3	2
TWT_BE # Obs	22	22	22	19	15
TWT_BE Wins Total	15	15	12	13	10
TWT_BE Wins %	68	68	55	68	67
H TWT_BE	61.3	61.3	61.3	61.5	62
O TWT_BE	60.8	60.7	61.1	60.5	61.1
TWT_BE Dev	0.5137662	0.5875771	0.1260281	0.9171095	0.8481862
TWT_BE p-Val	0.060982	0.0757369	0.7021115	0.0122483	0.0450413
TWT_BE Signif	+	+		*	*
PRO_BE Years	3	3	3	3	2
PRO_BE # Obs	6	5	5	5	3
PRO_BE Wins Total	0	0	1	1	0
PRO_BE Wins %	0	0	20	20	0
H PRO_BE	14.5	14.5	14.5	14.3	14.3
O PRO_BE	16	15.6	15	14.9	14.7
PRO_BE Dev	-1.5042431	-1.10174	-0.5469	-0.5433662	-0.4191
PRO_BE p-Val	0.0027677	0.0201405	0.0866422	0.0250574	0.2565013
PRO_BE Signif	**	*	+	*	
LG3 Years	2	1	1	2	1
LG3 # Obs	3	1	1	3	1
LG3 Wins Total	2	1	0	3	0
LG3 Wins %	100	100 --		100 --	
H LG3	1	1	1	1	1
O LG3	1.3	1.3	1	4.2	1
LG3 Dev	-0.2579539	-0.3333	0	-3.1513251	0
LG3 p-Val	0.3129762			0.2456795	
LG3 Signif					
PHT Years	2	2	2	2	1
PHT # Obs	4	3	3	4	1
PHT Wins Total	0	1	0	1	1
PHT Wins %	0	33	0	25	100
H PHT	34	33	33	34	35
O PHT	31	32	31	33	37
PHT Dev	2.4091289	1.6000052	2.0555643	0.3469249	-2
PHT p-Val	0.018862	0.3226633	0.1451779	0.6146804	
PHT Signif	*				
HED Years	3	2	2	3	1
HED # Obs	7	4	4	6	1
HED Wins Total	0	0	0	0	1
HED Wins %	0	0	0	0	100
H HED	129	169	169	124	161
O HED	125	166	164	121	161
HED Dev	3.9369912	2.8069425	5.1875	3.1874402	-0.3333
HED p-Val	0.0032899	0.0703732	0.0205433	0.0042738	
HED Signif	**	+	*	**	

** , * , *Significant at P<0.01, 0.05, or 0.10, respectively

4.

XA9861 HARD RED SPRING

XA9861 is a common Hard Red Spring wheat adapted to the Pacific Northwest region of the United States. XA9861 was developed by WestBred, from the cross 'VOLT*2/07651-27'.

XA9861 is a semi-tall hard red spring wheat. The head is tapering, lax, and inclined at maturity. The glume shoulders are elevated with an acuminate beak. The seed is hard, red, and oval with rounded cheeks. The brush is medium with a collar.

A variant similar to XA9861 but is 10-15 cm taller occurs at a frequency of .2% (20 plants per 10,000). A white seed variant may occur at a frequency of up to .50% (50 seeds per 10,000). An awnless variant may occur at a frequency of .1% (10 plants per 10,000). A bronze chaff variant may occur at a frequency of .1% (10/10,000). Otherwise, this variety has been uniform and stable in appearance and performance across several generations and environments.

5. Recognized classes of this variety will be breeder, foundation, registered, and certified. Monsanto will maintain the variety by the head-row purification and bulk seed methods to produce breeder seed as needed and foundation seed will be produced from breeder or foundation class of seed.