TECHNICAL BULLETIN

Taza (T198)

Spring Triticale

Field Crop Development Centre, March 2010

Taza is derived from the cross 93P200/88L012 produced at the Field Crop Development Centre, Lacombe in 1994. 93P200 is a CIMMYT germplasm introduction (Stier-5-2/ASAD//Nimir-3). 88L012 is a reduced awn (awnletted) spring triticale population from a complex cross related to the spring triticale varieties Bunker and Tyndal as well as the winter triticale varieties Bobcat, Luoma and Metzger. The awnletted characteristic in 88L012 came from a triticale x spring wheat cross (RL4137) back crossed several times to spring triticale. The F_2-F_3 was grown in the field as modified bulks in 1995-1996 and subjected to selection for degree of awn reduction and agronomic type. The F_4-F_5 generation was handled in a classical pedigree (ear to row) fashion using plant type, degree of awn reduction as the primary selection criteria and Taza was selected for advancement. During 1999 (F_6) through 2004 (F_{11}), T198 was evaluated in the yield trial (Lacombe, Stettler and Trochu) system as well as various disease and forage trials. In 2005 (F_{12}) Taza was evaluated in the Spring Triticale B test. Taza was finally entered in the Western Spring Triticale Co-op in 2006 (F_{13}) and has been in the registration trial for 4 years (F_{16}).

The awnletted characteristic in Taza comes from the same source as the winter triticale varieties Bobcat, Luoma and Metzger as well as the spring triticale varieties Bunker and Tyndal.

End Use	• Taza is an awnletted (reduced awn expression) standard height triticale line intended for use as a feed grain conserved forage, swath grazing crop and potentially for industrial use. Taza is adapted to the Canadian prairie provinces.
Strengths	• Taza yields similar to Pronghorn but is equal to or higher than AC Ultima and AC Certa. Taza has a reduction in awn expression similar to Bunker and Tyndal. • This line has good lodging resistance, good test weight, and high kernel weight. • Taza is MS to MR for FHB resistance; it is resistant to leaf rust and stem rust.
Weaknesses	• Lower resistance to FHB than Pronghorn and 2 days later maturing than AC Ultima. Taza has a lower falling number than AC Ultima.

Summary of Agronomic Data from Field Crop Development Centre Trials for T198 (94L044009) 2005-2009

Name	Yield (kg/ha)	Heading (days)	Anthesis (days)	Maturity (days)	Test Wt. (kg/hl)	Kernel Wt. (gm)	Height (cm)	Lodge	WUE	WUE Biomass
Taza	**5802.8**	**47.6**	**64.5**	**117**	**72.5**	**50.4**	**105.2**	**2.7**	**6.77**	**27.28**
Pronghorn	6098.8	47.6	64.9	118.4	71.2	47.9	106.5	2.3	5.32	25.74
Bunker	5466.1	47.7	65.2	119.1	72.7	53.5	111.2	3.0	4.37	23.47
Tyndal	5906.1	47.1	63.9	116.6	73.5	48.3	98.4	0.3	6.23	25.51
Station Yrs.	**21**	**6**	**11**	**16**	**21**	**21**	**16**	**1**	**4**	**4**

Note: Water Use Efficiency (WUE) is measured in kg/m squared for every millimetre of moisture.

Western Spring Triticale Co-operative 3 year averages for yield and agronomic traits 2007-2009										
	Yield kg/ha^{-1}				Basic agronomic traits					
	Z1	Z2	Z3	Ave	Mat. (d)	kg/hl^{-1}	Kwt (mg)	Hgt (cm)	Ldg	FNo
Taza	**4214**	**4515**	**7515**	**4714**	**108**	**70.2**	**46.4**	**103**	**2**	**82**
Pronghorn	4408	4448	7850	4808	109	70.4	45.2	105	3	65
AC Certa	4228	4169	7396	4554	109	73.6	43.5	106	2	70
AC Ultima	4274	4144	7894	4618	106	70.2	45.5	98	3	132
CV	8.4	13.3	9.6	11.1	1.2	1.4	2.6	4.6	29.5	0.9
LSD (0.05)	543	467	1065	373	1.2	0.9	1.5	2.2	1	22.6
Stn Yrs.	**12**	**12**	**3**	**27**	**21**	**27**	**27**	**27**	**7**	**27**

Z1(Zone 1) was Winnipeg, Morden, Indian head and the University of Saskatoon. Z2 (Zone 2) was Swift Current, Stuart Valley Regina and Lethbridge. Z3 (Zone 3) was Lacombe

Western Spring Triticale Co-operative 3 year averages for LR, SR, FHB and Bunt resistance 2007 - 2009									
		LR	SR	FHB Glenlea			FHB Carman		Bunt
				Rank	Class	DON	Rank	Class	
Taza	**2007**	**R**	**vr**	**12**	**I**		**14**	**MS**	**VR**
	2008	**R**	**R**		**MR**	**21.8**	**9**	**MS**	**-**
	2009	**R**	**R**		**MR**		**6**	**I**	**-**
Pronghorn	2007	R	-	6	MR		3	I	VR
	2008	R	MS		R	12.3	1	MR	VR
	2009	R	I		MR		1	MR	R
AC Certa	2007	R	-	4	MR		4	I	VR
	2008	R	R		MR	13.6	8	MS	VR
	2009	R	R		MR		5	I	R
AC Ultima	2007	R	-	11	I		13	MS	VR
	2008	R	R		MS	27	15	S	VR
	2009	R	R		I		14	MS	R

Silage yield potential in FCDC tests at Lacombe (2005-2009) at mid dough												
	2005		2006		2007		2008		2009		Mean	
	t/ha	%	t/ha	%	t/ha	%	t/ha	%	t/ha	%	t/ha	%
Taza	**22.1**	**92**	**14.7**	**91**	**13.5**	**98**	**22.8**	**101**	**14.6**	**103**	**17.6**	**97**
Pronghorn	23.9	100	16.2	100	13.8	100	22.6	100	14.2	100	18.2	100
Bunker	23	96	15.8	98	13.4	97	21.3	94	14.5	102	17.6	97
Tyndal	21.2	88	15.1	93	12.7	92	20.6	91	14.8	104	16.9	93

Parkland Lab Quality data for Forage trials 2006, 2007, 2008								
	% protein		% ADF		% NDF		RFV	
	mean	range	mean	range	mean	range	mean	range
Taza	**9.37**	**7.8-10.7**	**30.03**	**28.6-32.3**	**47.33**	**44.2-51.3**	**129.33**	**116-140**
Pronghorn	8.80	6.4-11.3	30.33	25.1-36.5	47.47	41.5-56.0	130.33	100-155
Bunker	9.43	7.1-11.6	31.53	29.5-35.1	48.43	45.1-54.5	124.67	105-136
Tyndal	9.73	7.9-11.6	30.00	26.9-34.2	47.13	42.7-55.0	131.33	105-148