

T293

Variety Information Sheet for T293

Spring Triticale



Description

T293 is an awned spring triticale, suitable for feed and forage uses. It out yielded Pronghorn and Brevis with 110% and 106% respectively. T293 has a good package of agronomic traits, excellent standability, early maturity and high test-weight.

T293 is resistant to common bunt, stem, stripe rusts and moderately resistant to leaf rust and FHB and has low ergot severity. The dry matter yield is 105% of Taza, similar to Pronghorn checks, with improved forage digestibility.

The line was developed at Field Crop Development Centre at Olds College of Agriculture and Technology (FCDC) from a cross made in 2009 between 08P182 (female) and Tyndal (male).

T293 was evaluated in yield trials (Y1- Y3) under multiple locations in western Canada for grain yield and forage quality during 2016-2018 and in the Spring Triticale Coop B level in 2019. Based on grain yield, agronomic, and forage quality data the line was advanced to the Western Triticale Coop test in 2020.

It is anticipated that up to 150 kg of Breeder Seed will be available in spring 2023.

Strengths

- High grain yield, 110% of Pronghorn and 106% of Brevis.
- Dry matter yield is 105% of Taza, similar to Pronghorn.
- Test weight is higher than Pronghorn and AC Ultima, similar to Brevis.
- Maturity is three days earlier than Brevis and one day earlier than Pronghorn.
- Lodging resistant, it is shorter than Pronghorn but taller than Brevis.
- High resistance to ergot, better than AC Ultima and Pronghorn checks.
- Intermediate resistance to FHB.

Table 1. Grain yield and agronomic traits performance of T293 compared to check cultivars based on the Western Triticale Coop Tests, 2020-2022

Name	Yield (kgha ⁻¹)				% Pronghorn	% Brevis	Agronomic Data					
	2020	2021	2022	Mean			Heading (days)	Maturity (days)	Height (cm)	Lodging (1-9)	TestWT (kg/hl)	KernWT (g/1000)
AC ULTIMA	6226	3089	5767	5027	100	97	56	96	96	1.5	71.2	46.7
BREVIS	6681	3407	5535	5208	103	100	57	99	87	1.0	74.4	44.1
PRONGHORN	6657	2765	5701	5041	100	97	56	97	100	1.7	69.6	44.7
AC ANDREW	6344	3596	5884	5275	105	101	61	96	80	1.3	77.4	37.5
T293	7004	3942	5629	5525	110	106	56	96	91	1.1	73.5	44.5
CV (%)	8.2	12.2	6.6	10.1	-	-	1.3	1.4	4.1	35.9	-	-
LSD _{0.05}	298	262	425	145	-	-	0.3	0.4	1.1	0.2	-	-
Site -Years	9	6	10	25	-	-	5	24	25	7	22	22

Table 2a. Leaf, stem and stripe rust reaction of T293 compared to check cultivars based on the Western Triticale Coop Tests 2020-2022

Name	Leaf Rust			Stem Rust			Stripe Rust		
	2020	2021	2022	2020	2021 ^y	2022	2020 ^z	2021 ^y	2022
AC ULTIMA	R	R	R	R	na	R	na	na	R
BREVIS	R	R	R	R	na	R	na	na	R
PRONGHORN	R	R	R	MS	na	S	na	na	R
AC ANDREW	S	MR	MS	MR	na	MR	na	na	MR
T293	MS	MR	I	R	na	R	na	na	R

Table 2b. Bunt, FHB and ergot reactions of T293 compared to check cultivars based on the Western Triticale Coop Tests 2020-2022

Name	Bunt			FHB Rating			Ergot (%)			
	2020 ^z	2021	2022	2020	2021	2022	2020	2021	2022	Mean
AC ULTIMA	na	R	R	MS	I	S	0.39	0.32	0.28	0.33
BREVIS	na	R	R	I	R	I	0.19	0.33	0.07	0.20
PRONGHORN	na	R	R	I	R	I	0.20	1.08	0.16	0.48
AC ANDREW	na	MS	R	MS	MS	MS	0.01	0.01	0.00	0.01
T293	na	R	R	I	MR	I	0.18	0.26	0.14	0.19

^z : Due to covid-19 restrictions at AAFC-Lethbridge, stripe rust and bunt nurseries were not planted

^y : Due to severe drought, stripe and stem rust nurseries were not successful

R= Resistant, MR= Moderate Resistant, I= Intermediate, MS= Moderate Susceptible and, S= Susceptible

Table 3. Dry matter yield and forage quality data of T293 compared to check cultivars based on Spring Triticale Forage Coop Tests 2021-2022

Name	DMY (kg ha^{-1})			% Pronghorn	% Taza	Forage Quality Data					
	2021	2022	Mean			ADF	NDF	TDN	INVTD	PROT	STRC
						(%)	(%)	(%)	(%)	(%)	(%)
AC ULTIMA	7287	13623	10455	98	104	30.8	50.3	60.0	70.5	9.1	11.2
BREVIS	9085	12998	11042	103	110	29.8	49.0	62.4	71.5	9.5	13.0
PRONGHORN	7997	13387	10692	100	106	30.5	48.6	60.4	71.4	9.7	11.7
BUNKER	5929	12163	9046	85	90	32.1	49.9	60.4	69.7	9.8	9.7
TAZA	6196	13939	10067	94	100	31.5	51.9	60.6	68.1	9.3	9.0
T293	7820	13352	10586	99	105	29.9	50.9	60.9	69.9	9.3	13.0
CV (%)	15.5	8.8	11.2	-	-	-	-	-	-	-	-
LSD _{0.05}	1287	1553	906.4	-	-	-	-	-	-	-	-
Site -Years	2	2	4	-	-	4	4	2	4	4	4

ADF= Acid Detergent Fiber

NDF= Neutral Detergent Fiber

TDN= Total Digestible Nutrients

INVTD= In Vitro True Digestibility

PROT= Crude Protein content

STRC= Starch content