

2.8 Triticale Frost Tolerance Trial

Researchers

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Method

Sown on the 1/6/99 at 100 kg/ha with 100 kg/ha of DAP

Aims

- 1) To identify triticale varieties which have superior frost tolerance at flowering.
- 2) To compare dry matter yield and growth characteristics of a range of triticale genotypes.
- 3) To compare grain yield and performance of a range of different varieties and compare them with varieties currently grown.

VARIETY INFORMATION

Abacus

Late to mid season grain variety, which can also be grazed. It is useful for early sowing in areas prone to waterlogging as well spreading risk in frost prone areas.

Credit

Widely adapted medium season variety that is viewed as a replacement for Currency. Anecdotal evidence from WA suggests that Credit is very tolerant of waterlogging.

Currency

Long maturing type with a that is longer season than Tahara. Should only be sown in early to mid May.

Madonna

Dual-purpose winter variety that allows heavy grazing during winter prior to being locked for grain production. Long season variety that can be sown early.

Muir

Medium season variety that has a stiff straw that is resistant to lodging. Yields similar to Tahara except on highly fertile soils or wetter areas where it out performs Tahara

Samson

Long maturing type better suited for sowing in early to mid May.

Tahara

Very common triticale that is of a medium maturity. Generally performs better in areas where the annual rainfall is less than 500mm. Is prone to lodging under high rainfall or high yield conditions.

Treat

A new variety, which matures a few days earlier than Tahara. It has superior seed quality and smoother appearance than Tahara and it is hoped that it may be suitable for milling.

VC Trit

A dwarf variety that has been developed to hopefully suffer less from the affects of frost. It should also have superior lodging resistance.

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RESULTS

	Streatham	Hamilton	Overall	% Overall	% Currency
	Average	Average	Average	Average	
CREDIT 1	3.35	5.42	4.39	142	150
EVEREST	3.56	4.79	4.17	135	143
P429	3.44	4.49	3.96	129	136
W47	3.17	4.40	3.79	123	130
ABACUS 1	3.09	4.40	3.75	122	128
TX93191	2.13	4.52	3.32	108	114
P458	2.15	4.46	3.31	107	113
P452	2.65	3.96	3.30	107	113
P508	2.22	4.14	3.18	103	109
AT43	2.77	3.57	3.17	103	109
W17	1.44	4.64	3.04	99	104
SAMSON	2.20	3.85	3.02	98	104
PT513	3.08	2.81	2.94	95	101
TREAT	1.69	4.17	2.93	95	100
CURRENCY	2.28	3.56	2.92	95	100
TX93194	1.44	4.27	2.86	93	98
P502	1.28	4.21	2.75	89	94
TX93192	0.69	4.78	2.74	89	94
CREDIT 2	1.07	4.38	2.72	88	93
MADONNA	2.37	3.06	2.71	88	93
TAHARA	1.03	3.94	2.48	81	85
VC	0.51	3.88	2.19	71	75
PT515	2.26	2.08	2.17	70	74
MUIR	1.11	3.22	2.16	70	74
Average	2.12	4.04	3.08		
LSD T/Ha	1.77	1.23			

DISCUSSION

At Streatham, no variety was significantly higher yielding than Currency, however at Hamilton, both Credit 1 and Everist were superior in yield.

It would appear that no Triticale variety has any better frost tolerance than any other variety and that susceptibility or otherwise to frost is mainly governed by when flowering occurs relative to the timing of the frost. Any variety which flowers when there is a frost will be badly affected. Many varieties with poor yield were badly frosted.