

2021 Tasmania Crop Technology Centre Hagley, Tasmania

Time of Sowing – 29th April 2021

Unless otherwise stated the following details apply to the results presented in this section. For other details please go to the appendix.

Sown: 29 April 2021

Harvested: 20 January 2022 – 4 February 2022

Rotation position: 1st cereal following Poppies

Soil Type: Chromosol

Trial 1: HYC 1st Stage Screen

Objectives: To examine the phenology, disease resistance and standing power of new wheat germplasm established in the traditional late April sowing window.

Key Messages:

- Using RGT Accroc and Trojan (not coloured) as controls and comparisons to Trial 2 cultivars of interest were LPB16-0598 (which has potential quality) but was stiff strawed and moderately affected by Septoria tritici blotch (STB).
- Big Red and its sister AGF lines also looked interesting, particularly AGFWH004618 (see trial 2), however Big Red was probably still the pick of the four.
- AGTW005 has looked interesting for the second year with intermediate maturity, good standing power and good resistance to STB.
- The more northern European wheat cultivars Reflection, Graham, Savello, Shabras displayed much later maturity than the cultivars of greater interest Big Red, RGT Cesario and RGT Accroc.
- Rockstar was slower through stem elongation and slightly later to develop than Scepter, stiff strawed with intermediate disease resistance.
- Looking at lodging and straw stiffness Manning was the weakest strawed variety tested.

Treatments: 38 varieties and lines were sown in small plots (5m in length) with standard nitrogen management but **NO FUNGICIDE or PGR input** to this trial. **Plots were not taken to yield.**

Table 1. Phenology evaluation, Zadoks growth stage recorded at key points in the season (Zadoks GS00-99) – lighter background denotes slower development relative to calendar date.

Variety	18 Aug	30 Sep	21 Oct	22 Dec
	Z GS	Z GS	Z GS	Maturity
Scepter	31.0	49.0	61.0	9.0
Trojan	31.0	50.0	59.0	9.0
Anapurna	30.0	38.0	59.0	5.5
RGT Accroc	25.0	37.0	58.0	7.0

Nighthawk	30.5	39.0	57.0	6.5
Reflection	25.0	31.0	55.0	1.5
Graham	25.0	31.0	55.0	3.0
Savello	25.0	31.5	55.0	2.5
Shabras	25.0	32.0	55.0	2.5
LPB17-5691	31.0	40.0	59.0	4.0
LRPB16-0582	27.5	35.0	59.0	4.5
L13070-027	25.0	37.0	59.0	6.5
SFR 86-090 (RGT Cesario)	25.0	37.0	59.0	4.5
V12167-048	31.0	41.0	59.0	10.0
SUN10871	31.0	43.0	59.0	6.5
SF Adagio	25.0	33.0	63.0	3.5
V10006-026	30.0	37.0	65.0	3.5
BX7932-039	30.0	33.0	65.0	3.5
AGTW005	25.0	33.0	57.0	5.5
Coota	30.5	47.0	61.0	9.5
V11068-085-047	30.0	41.0	63.0	6.5
Manning	25.0	32.0	59.0	3.0
AGFWH004418	25.0	33.0	59.0	4.5
AGFWH004618	25.0	39.0	59.0	3.5
AGFWH004718 (Big Red)	25.0	33.0	60.0	5.5
AGFWH004818	25.0	39.0	59.0	3.5
Rockstar	30.5	46.0	63.0	9.0
Catapult	31.0	41.0	63.0	7.5
Genius	25.0	32.0	61.0	2.5
BA26.35	25.0	31.0	61.0	2.0
Oakley	25.0	39.0	62.0	2.5
Xi19	25.0	31.0	55.0	3.0
Apache	25.0	32.5	58.0	2.5
CS170	25.0	32.0	55.0	2.5
Hereford	25.0	39.0	59.0	2.5
JB Asano	25.0	32.0	61.0	2.5
Tabasco	25.0	31.0	59.0	2.5
LPB16-0598	25.0	33.0	61.0	6.5

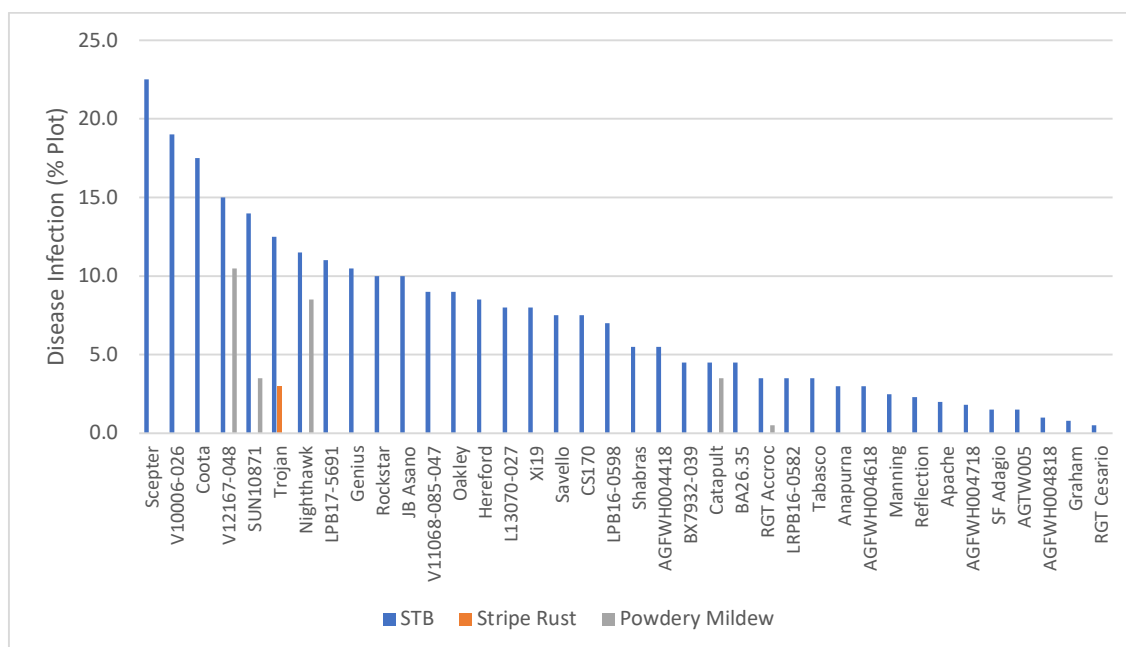


Figure 1. Plot disease scores (% Plot infected) for Septoria tritici blotch (STB), stripe rust and powdery mildew (GS31-51).

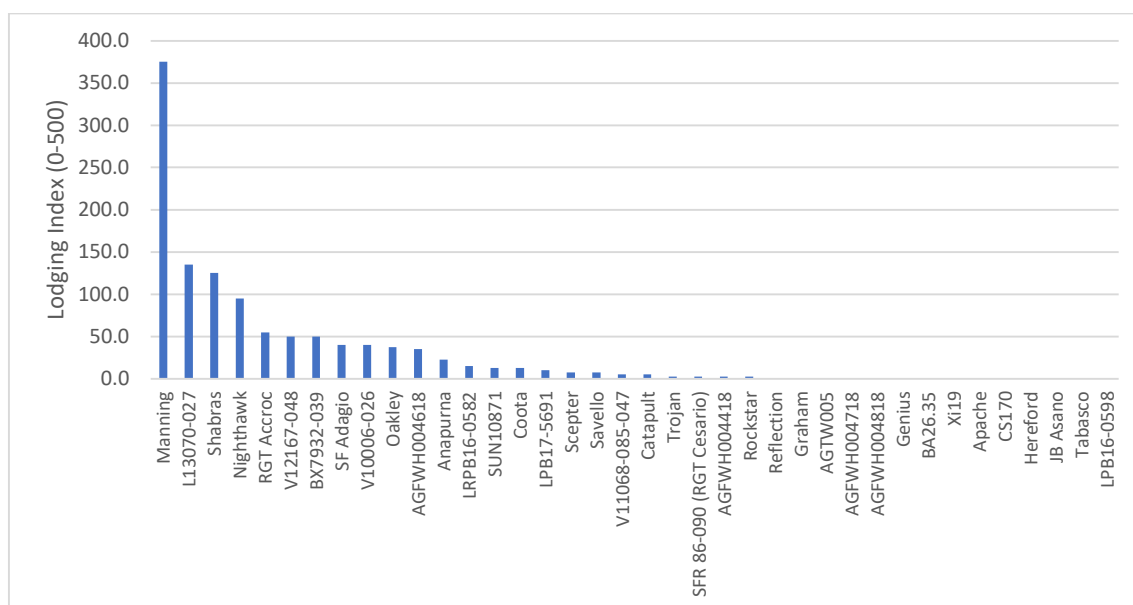


Figure 2. Lodging index (0-500) of screening varieties at crop maturity (GS90).

Table 2. Details of the management levels (kg, g, ml/ha).

Sowing date:	29 April	
Seed Rate:		180 seeds/m ²
Sowing Fertiliser:		100kg MAP
Seed Treatment:		Vibrance & Goucho
Grazing:		Nil

Nitrogen:	10 Aug	46kg N/ha
	1 Oct	160kg N/ha
PGR:		Nil
Fungicide:		Nil

Trial 2: HYC Elite Screen

Objectives: To examine the yield potential of winter and spring germplasm (cultivars/lines) grown under a HYC high input management package against spring and winter controls in the traditional late April (ANZAC day) sowing window.

Key Messages:

- RGT Accroc (13.4t/ha) continues to be the high yielding feed wheat to beat being statistically higher yielding than all other wheats except Beaufort (spring feed), GS-18-105-W, AGFWH004618 and Big Red.
- Amongst white wheats with potential quality LPB16-0598 is the standout cultivar going forward. Rockstar did not feature at this HYC location but was in Trial 1 for the first year and will feature in HYC Elite trials in 2022.
- SFR86-085 is the other variety worthy of note as a high yielding winter white wheat which progressed from HYC 1st stage screening last season to the Elite Screen in 2022. It has good disease resistance and standing power (see 2020 HYC wheat).

Treatments: (20 elite lines tested under HYC High input management (full foliar fungicide program (3 foliar fungicides – GS31, GS39 & GS61 following Systiva seed treatment) and PGR management – split application Moddus 0.1 + Cycocel 0.65 – (GS30 & GS32).

Table 1. Yield (t/ha), % Site Mean and grain quality, protein (%), test weight (kg/HL) & screenings (%).

	Yield			Quality					
	Yield (t/ha)		% of Mean	Protein (%)		Test Weight (kg/ha)		Screenings (%)	
Scepter	6.87	g	59.1	14.9	a	79.7	bcd	0.6	de
Trojan	7.27	g	62.5	14.8	a	77.0	efg	0.6	cde
Anapurna	12.62	b-e	108.5	12.7	bc	80.1	abc	0.8	cde
RGT Accroc	13.40	a	115.2	11.3	ef	77.4	ef	0.5	e
Catapult	7.48	g	64.3	14.7	a	79.1	d	0.7	cde
Reflection	12.37	de	106.4	10.6	f	76.1	gh	2.0	a
Beaufort	12.92	a-d	111.1	12.8	bc	74.6	i	1.6	b
Shabras	12.61	b-e	108.4	10.6	f	75.4	hi	1.3	b
Tabasco	12.50	cde	107.5	10.9	f	74.5	i	1.5	b
SF Adagio	12.42	de	106.8	12.1	b-e	77.4	ef	0.8	cd
Nighthawk	10.35	f	89.0	13.1	b	79.3	cd	0.6	cde
LPB16-0598	12.28	de	105.6	10.9	f	80.7	a	0.9	c
LRPB16-0582	10.90	f	93.7	12.5	bcd	77.8	e	0.7	cde
SFR86-092	11.99	e	103.1	12.7	bc	80.0	a-d	0.8	cde
SFR86-085	12.54	b-e	107.8	11.5	def	79.1	cd	0.8	cde
GS-18-105-W	12.74	a-d	109.5	10.5	f	80.6	ab	0.8	cde