

Trial 2. HYC Spring canola screen

Objectives: To examine the suitability of elite commercial and unreleased spring cultivars for Hyper-yielding regions

Key points:

- Diamond was the fastest cultivar to flowering, nine days faster than ADV Galaxy and 38 days faster than the slowest cultivar ADV Magnificent.
- The optimum flowering date for this environment is late August/early September, which suited high yielding mid-season cultivars such as Nuseed Quartz, HyTTec Trifecta, 45Y93 CL, 45Y28 RR, NCH18Q551 and AN20RR002.
- The highest yield was from the unreleased Nuseed cultivar NCH18Q551 with 5.61 t/ha, 0.93 t/ha higher yielding than the highest winter variety.
- The average yield of each herbicide tolerance group was:
 - Conventional – 4.70 t/ha
 - Triazine tolerant (including CLF + TT) – 4.46 t/ha
 - Clearfield (including Truflex + Clearfield) – 4.60 t/ha
 - RR/Truflex – 5.20 t/ha.
- This highlights the very-high yield potential of the RR/Truflex group and suitability for HYC environments. NCH18Q551 also had the highest oil concentration, the only cultivar >50%.
- The overall oil yield of the highest yielding treatment NCH18Q551 was 2.82 t/ha, 34% more than the lowest yielding cultivar, Nuseed Diamond. This highlights the importance of cultivar choice for Hyperyielding environments.

Treatments: 24 cultivars sown in small plots (half of normal plot length) with ‘High input’ management as per Trial 3.

Table 1. Yield of the variety evaluation trial (t/ha, % site mean) and grain quality results.

Variety	Phenology	Yield		Grain Quality			
	Flowering Date	Yield (t/ha)		Oil (%)	TSW (grams)		
Nuseed Diamond (Conv.)	31 July	4.08	h	45.7	ijk	4.27	cde
Nuseed Quartz (Conv.)	27 August	5.32	ab	48.6	bcd	4.20	ef
SF Ignite (TT)	2 September	4.36	e-h	46.1	hij	4.04	fgh
HyTTec Trifecta (TT)	28 August	5.03	bc	48.4	bcd	4.07	e-h
HyTTec Trophy (TT)	19 August	4.51	d-g	48.0	b-f	3.55	j
ATR Wahoo (TT)	5 September	4.30	gh	47.4	c-h	4.41	bcd
CHYB3668TT (TT)	4 September	4.66	c-g	46.6	e-j	3.90	hi
ADV Remarkable (TT)	16 August	4.68	c-g	47.0	d-i	4.54	ab
ADV Magnificent (TT)	7 September	4.46	d-h	49.0	ab	4.10	efg
ADV Spectacular (TT)	4 September	4.65	c-g	47.3	c-i	4.23	c-f
ADV Exhilarate (CLF + TT)	18 August	4.52	d-g	47.8	b-g	4.53	ab
45Y93 CL (CLF)	30 August	5.30	ab	48.2	b-e	3.94	ghi
ADV Equinox (CLF)	24 August	4.80	cd	47.8	b-g	4.68	a
ADV Galaxy (CLF)	9 August	4.73	cde	48.0	b-f	4.68	a
45Y91 CL (CLF)	1 September	4.51	d-g	48.0	b-f	3.87	hi
SF65-050CL (CLF)	27 August	4.43	d-h	46.1	g-j	4.27	cde
43Y92 CL (CLF)	17 August	4.58	d-g	44.4	k	4.21	def
45Y28 (RR)	30 August	5.47	a	46.9	d-i	3.94	ghi
45Y25 RR (RR)	31 August	5.01	bc	48.2	b-e	4.42	bc
NCH18Q421 (Truflex)	24 August	5.38	ab	48.9	abc	4.22	c-f

NCH18Q551 (Truflex)	3 September	5.61	a	50.3	a	4.24	c-f
Hyola 540XC (Truflex + CLF)	20 August	4.33	fgh	46.4	f-j	4.04	fgh
InVigor R5520P (RR)	22 August	4.70	c-f	47.5	b-h	3.48	j
AN20RR002 (Truflex)	2 September	5.30	ab	48.0	b-f	3.78	i
Mean		4.78		47.4		4.15	
LSD 0.05		0.39		1.65		0.20	
P Val		<0.001		<0.001		<0.001	

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

Sowing date:	17 April	
Seed Rate:		60 seeds/m ²
Sowing Fertiliser:		130 kg/ha MAP
Seed Treatment:		Jockey + Poncho
Nitrogen:	17 April	150 kg/ha SOA (30 kg/ha N)
	11 June	196 kg/ha Urea (90 kg/ha N)
	4 August	70 kg/ha Urea (32 kg/ha N)
Fungicide:	30 May	Prosaro 450ml/ha
	26 August	Aviator Xpro 800 mL/ha
	24 September	Prosaro 450 mL/ha