2021 WA Crop Hyper Yielding Canola Trials
Kojonup, WA

Sown: April 20
Harvested: December 3 (spring canola) and 19 December (winter canola)
2020 Crop: Barley
Soil type & management: Sandy loam duplex
Available Nitrogen (kg/ha) 0-40 cm: 55 kg/ha
Colwell P 0-10 cm: 50 mg/kg
pH (CaCl2) 0-10 cm: 5.5
Organic Carbon 0-10 cm: 3.57%

Trial 2. HYC Spring canola screen

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

Key Messages:

- The screen trials were conducted to identify new commercial cultivars with suitability for high yielding environments.
- 45Y93 CL was the highest yielding cultivar in the CLF trial but there were no statistical differences in yield in the RR/Truflex and TT trials.
- Trial mean yield was 3.82, 3.75 and 3.35t/ha in the CLF, RR/Truflex and TT trials respectively.
- Significant difference in oil content between the varieties in the CLF, RR/Truflex and TT groups.

Table 1. Yield of spring canola screen trial for CLF, RR/Truflex and TT canola. Yield is reported at 42% oil content and 8% moisture.

CLF		RR/Truflex		TT	
45Y93 CL	4.08 a	NCH20Q729	4.23 a	HyTTec Trifecta	4.12 a
45Y95 CL	3.96 ab	PS-21XC318	4.06 a	InVigor T6010	3.54 a
PS-21CL211	3.94 ab	45Y28 RR	3.86 a	Hyola Blazer TT	3.27 a
AGFCA014520	3.30 b	Condor TF	3.56 a	SF Ignite TT	3.20 a
		InVigor R4520P	3.55 a	ATR Wahoo	3.07 a
		AN20RR002	3.24 a	HyTTec Trophy	2.90 a
Mean	3.82		*3.75*		3.35
l.s.d.	0.77		1.13		1.49
p value	0.05		ns		ns

Table 2. Grain oil concentration of spring canola screen trial for CLF, RR/Truflex and TT canola.

CLF		RR/Truflex		TT	
45Y93 CL	47.5 b	NCH20Q729	49.0 b	HyTTec Trifecta	48.5 a
45Y95 CL	47.0 b	PS-21XC318	50.2 a	InVigor T6010	48.2 ab
PS-21CL211	49.8 a	45Y28 RR	49.2 b	Hyola Blazer TT	48.2 ab
AGFCA014520	48.8 a	Xseed Condor	48.6 b	SF Ignite TT	47.5 bc

		InVigor R4520P	46.6 c	ATR Wahoo	47.2 c
		AN20RR002	47.1 c	HyTTec Trophy	46.8 c
Mean	48.5		*48.4*		47.7
l.s.d.	1.07		0.61		0.95
p value	0.05		0.05		0.05

Table 3. Trial management details.

Sowing date:		**20 April**
Target plant density:		45 plants/m^2
Sowing Fertiliser:		200 kg/ha Agras (32 kg N/ha, 18 kg P/ha, 28 kg S/ha)
Nitrogen:	6 Leaf	50kg N/ha
	Bud Visible	118kg N/ha
Fungicide:	Seed	Saltro Duo
	6 Leaf	Prosaro 0.45L/ha
	20% Bloom	Aviator Xpro 0.80L/ha

Trial 3. HYC Winter G.E.M Trial series

Objectives: To determine the response to increased crop inputs (fungicide and nitrogen) of a range of winter canola variety types.

Key Messages:

- Hyola Feast CL yielded more than Hyola 970 CL and had higher oil content, likely because it flowered 10 days earlier than Hyola 970 CL.
- No yield difference between the fungicide management schemes.
- No interaction between variety and fungicide management and nitrogen rate.
- Neither blackleg nor sclerotinia disease infection was observed in this trial.

Treatments: Three management levels (combination of nitrogen and fungicide) applied to 2 winter canola varieties (Hyola 970 CL & Hyola Feast CL).

Table 1: Yield, harvest index (HI) and oil concentration (%) of winter GEM trial.

Treatment	Yield (t/ha)	HI	Oil (%)
Management			
225N + Intensive	3.59 a	0.296	45.8 a
225N + Single SDHI Flower	3.50 a	0.298	46.8 a
150N + Single SDHI Flower	3.39 a	0.300	46.3 a
Mean	3.50	0.298	46.2
LSD 0.05	0.39	0.017	1.01
P Val	ns	ns	ns
Variety			
Hyola 970 CL	3.27 a	0.295	45.8 b