

Mean	4.37	97.0	44.1	64.4	21.7	4.9
LSD 0.05	ns	ns	0.6	ns	1.3	ns
P Val	0.211	0.210	<0.001	0.399	0.001	0.732

Table 5. Start of flowering date of all cultivars in the spring screen trials.

Variety	Start of flowering date
45Y28 RR	19/07/2021
45Y93 CL	19/07/2021
45Y95 CL	18/07/2021
AGFCA014520	30/07/2021
AGFCA014720	18/07/2021
AN20RR002	1/08/2021
ATR Wahoo	31/07/2021
Hyola Blazer TT	20/07/2021
HyTTec Trifecta	19/07/2021
InVigor R4520P	20/07/2021
NCH20Q729	18/07/2021
PS-21CL211	18/07/2021
PS-21XC318	18/07/2021
Quartz	18/07/2021
SF Ignite TT	18/07/2021
Condor TF	18/07/2022

Table 6. Trial management details

Sowing date:	25 April	
Target plant density:		45 plants/m ²
Sowing Fertiliser:		150kg MAP & 125kg SOA
Nitrogen:	6 Leaf	113kg N/ha
	Bud Visible	113kg 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:

- There was no difference in the yield of Hyola Feast CL and Hyola 970CL in this trial and no impact of increasing crop inputs.
- Oil of Hyola Feast CL was higher than Hyola 970CL but Hyola Feast CL had smaller seed.
- Average protein was 17.4%, meaning only 27.4kg of nitrogen was removed with every tonne of grain.

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

Table 1. Influence of management strategy and variety on grain yield (t/ha).

	Management Level			
	Low input	Mid Input	High input	Mean
Cultivar	Yield t/ha	Yield t/ha	Yield t/ha	Yield t/ha
Hyola 970 CL	4.03 -	4.14 -	4.26 -	4.14 -
Hyola Feast CL	4.27 -	4.22 -	4.31 -	4.27 -
Mean	4.15 -	4.18 -	4.28 -	4.20
LSD Variety p = 0.05	ns	P val	0.382	
LSD Management p=0.05	ns	P val	0.692	
LSD Var.x Man. P=0.05	ns	P val	0.833	

Table 2. Influence of management strategy and variety on grain quality (protein (%), test weight (kg/hl) and oil (%)).

Input	Variety	Grain Quality			
		Oil	Protein	Test wt	TSW
		%	%	kg/HL	g
Low	Hyola 970 CL	45.7 -	17.0 -	63.2 -	4.7 -
Medium	Hyola 970 CL	45.0 -	18.0 -	63.9 -	4.7 -
High	Hyola 970 CL	44.9 -	17.7 -	63.6 -	4.9 -
	Mean	45.2 b	17.6 -	63.6 a	4.8 a
Low	Hyola Feast CL	47.6 -	15.8 -	62.3 -	4.3 -
Medium	Hyola Feast CL	46.7 -	19.0 -	62.4 -	4.3 -
High	Hyola Feast CL	46.8 -	17.1 -	62.9 -	4.4 -
e	Mean	47.0 a	17.3 -	62.6 b	4.4 b
	Grand Mean	46.1	17.4	63.1	4.6
LSD Management (p = 0.05)		ns	ns	ns	ns
LSD Variety		1.5	1.6	0.5	0.2
LSD Var x Management		ns	ns	ns	ns
P Val Management		0.454	0.097	0.170	0.119
P Val Variety		0.021	0.720	0.001	0.005
P Val Var x Management		0.983	0.481	0.328	0.966
CV		3.5	10.1	0.8	5.8

Table 3. Trial management details.

Sowing date:		9 April		
Varieties:		Hyola 970 CL & Hyola Feast CL		
Target plant density		45 plants/m ²		
Basal Fertiliser:		150kg MAP & 125kg SOA		
		Low Input	Mid Input	High Input
Nitrogen:	6-leaf	75kg N/ha	113kg N/ha	113kg N/ha
	Bud visible	75kg N/ha	113kg N/ha	113kg N/ha
Total N Applied:		150kg N/ha	226kg N/ha	226kg N/ha
Fungicide:	GS00	Maxim XL	Maxim XL	Saltro Duo

	6 Leaf	---	---	Prosaro 0.45L/ha
	20% Bloom	Aviator Xpro 0.80L/ha	Aviator Xpro 0.80L/ha	Aviator Xpro 0.80L/ha

Trial 4: HYC Spring G.E.M Trial series

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

Key Messages:

- 45Y28 RR was the standout variety in this trial, with yield close to 5t/ha with High Input Management. Overall, it was 0.6t/ha higher yielding than the next best cultivar, HyTTec Trifecta.
- There was an overall yield increase of 0.33t/ha with High Input management compared with Low Input management.
- 45Y28 RR had the highest biomass (at maturity) and the highest harvest index.
- Disease levels were low and there was no difference between treatments.
- Condor TF had the highest oil concentration, 2.1% higher than 45Y28 RR.
- There was no effect of management on any of the grain quality parameters.
- Protein averaged 21.8%, 4.4% higher than the Winter GEM trial. On average, an extra 7kg of N was removed in the Spring GEM per tonne of grain, compared with the winter GEM.

Treatments: Four spring varieties (two glyphosate tolerant and two triazine tolerant) under three different management levels.

Table 1. Influence of management strategy and variety on grain yield (t/ha).

	Management Level			
	Low input	Medium input	High Input	Mean
Cultivar	Yield t/ha	Yield t/ha	Yield t/ha	Yield t/ha
45Y28 RR	4.46 -	4.66 -	4.86 -	4.66 a
Condor TF	3.89 -	3.96 -	4.13 -	3.99 b
ATR Wahoo TT	3.50 -	3.64 -	3.82 -	3.65 c
HyTTec Trifecta	3.89 -	4.06 -	4.23 -	4.06 b
Mean	3.93 b	4.08 ab	4.26 a	4.09
LSD Cultivar p = 0.05	0.21	P val	<0.001	
LSD Management p=0.05	0.21	P val	0.025	
LSD Cultivar x Man. P=0.05	ns	P val	0.998	

Table 2: Plant Height (cm) assessed 17 November 2021.

	Management Level			Mean
	150N + Single SDHI Flower	225N + Intensive	225N + Single SDHI Flower	
Cultivar	Height (cm)	Height (cm)	Height (cm)	
45Y28 RR	152.9 -	157.6 -	153.0 -	154.5 a
Xseed Condor	155.0 -	158.6 -	154.0 -	155.9 a
ATR Wahoo	146.4 -	147.3 -	142.4 -	145.4 b