

Trial 2. HYC YieldMax trial (FAR VIC C22-02)

Objectives:

To determine the response to increased crop nutrition inputs in a range of high potential spring canola varieties.

Key findings:

- The high input management strategy yielded 0.54 t/ha more than low input management but there were no yield differences between varieties.
- There were oil differences observed between varieties with 45Y28 RR the highest at 45.8% and HyTTec Trifecta the lowest at 43.4%.
- Increasing crop inputs from low to high management decreased oil concentration by 1.5%.

Treatments: High and low nutrient Input strategies applied to six spring canola varieties.

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

	Management Level		
	Low Input	High Input	Mean
Cultivar	Yield t/ha	Yield t/ha	Yield t/ha
45Y28 RR	3.46 -	3.74 -	3.60 -
Condor TF	3.15 -	3.88 -	3.51 -
Hyola Blazer TT	3.35 -	4.00 -	3.68 -
HyTTec Trifecta	3.14 -	3.63 -	3.38 -
Mean	3.27 b	3.81 a	
LSD Cultivar p = 0.05	ns	P val	0.119
LSD Management p=0.05	0.29	P val	0.010
LSD Cultivar x Man. P=0.05	ns	P val	0.296

Table 2. Grain quality assessment- oil (%), test weight (kg/HL) & protein (%).

Cultivar	Grain quality assessments		
	Oil (%)	Test Weight (kg/hL)	Protein (%)
1. 45Y28 RR	45.8 a	65.2 b	17.1 b
2. Condor TF	44.9 ab	65.6 ab	18.5 a
3. Hyola Blazer TT	44.2 bc	66.7 a	19.6 a
4. HyTTec Trifecta	43.4 c	66.4 a	19.2 a
LSD = 0.05	1.42	1.06	1.13
Cultivar p-Value	0.016	0.039	0.001
Nutrition			
1. Low Input	45.3 a	65.6 -	18.1 -
2. High Input	43.8 b	66.4 -	19.2 -
LSD = 0.05	1.15	ns	ns
Nutrition p-Value	0.025	0.085	0.079

Table 3. Details of the management levels.

Sowing date:		26 April	
Plant population:		60 plants/m ²	
Basal Fertiliser:		145 kg/ha MAP (15 kg/ha N)	
		Low Input	High Input
Nitrogen:	Basal		5 t/ha Manure
	2-Leaf	84 kg/ha ammonium sulfate	84 kg/ha ammonium sulfate
	6-leaf	75 kg N/ha	112.5 kg N/ha
	Bud visible	75 kg N/ha	112.5 kg N/ha
Total N Applied:		150 kg N /ha	225 kg N/ha + Manure
Fungicide:	Seed trt:	Saltro Duo	
	6 - Leaf	Prosaro 450mL/ha	
	20% Bloom	Aviator Xpro 800mL/ha	

All inputs of insecticides and herbicides were standard across the trial