

	6-leaf	Prosaro 0.45 L/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) on two commercial winter canola cultivars.

Key Messages:

- Hyola Feast CL was 0.5t/ha higher yielding than Hyola 970CL (averaged across treatments).
- The high input management was higher yielding than both the Low and Medium management.
- The trial was badly lodged. Like the winter screen trial, lodging was worse in Hyola Feast CL than Hyola 970CL (data not shown).
- Lodging made the trial difficult to score for disease but there was infection of sclerotinia stem rot that was reduced by the late Prosaro in the High input management (more data available on fungicide response in winter disease management trial).

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

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

Cultivar	Low input	Medium input	High input	Mean
Grain yield (t/ha)				
Hyola 970CL	3.28	3.03	3.67	3.33
Hyola Feast CL	3.76	3.60	4.13	3.83
Mean	3.52	3.31	3.90	
LSD Management	0.33	p value	0.038	
LSD Cultivar	0.28	p value	<0.001	
LSD Management * Cultivar	n.s.	p value	n.s.	

Table 2. Influence of management strategy and variety on oil concentration (%).

Cultivar	Low input	Medium input	High input	Mean
Grain yield (t/ha)				
Hyola 970CL	44.4	44.3	44.4	44.3
Hyola Feast CL	43.8	44.6	45.1	44.5
Mean	44.1	44.4	44.7	
LSD Management	n.s.	p value	n.s.	
LSD Cultivar	n.s.	p value	n.s.	
LSD Management * Cultivar	n.s.	p value	n.s.	

Table 3. Trial management details.

Sowing date:	30 March	
Varieties:	Hyola 970 CL & Hyola Feast CL	
Target plant density	45 plants/m ²	
Basal Fertiliser:	130 kg/ha MAP (in-furrow) & 180 kg/ha Single Super (broadcast pre-sow).	

		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
	50% Bloom			0.45 L/ha Prosaro

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:

- 45Y95 CL was the standout variety in this trial with a mean yield (across treatments) of 6.43t/ha. This was 78% higher yielding than the open pollinated ATR Wahoo.
- 45Y95 CL grew very high biomass (18.65 t/ha) and had a high harvest index (0.36). It is rare to have such a high conversion of biomass to grain (HI) at such a high biomass level and is a fundamental driver of achieving hyper yields.
- 45Y95 CL had a high number of seeds per pod as well as a high number of pods/m². This compares to ATR Wahoo which had a high number of seeds/pod but a low number of pods/m²; and Condor TF which had a high number of pods/m², but a relatively low number of seeds/pod.
- The High Input Management was higher yielding than both the Low and Medium Input management. The yield increased compared to Medium Input which suggests that this was driven by disease control; however it was difficult to ascertain which disease was causing yield loss. Fungicide reduced disease levels, but most diseases were at a low level including sclerotinia.
- The RR/Truflex cultivars 45Y28 RR and Condor TF had the highest oil concentration with 48.8 and 48.3% respectively.
- Protein averaged 20.3%, meaning that 32.4kg/ha N was harvested per tonne of grain harvested.
- There was no effect of management on any of the grain quality parameters.

Treatments: Six spring varieties with three different management levels (combination of fungicide and N).

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

Cultivar	Low input	Medium input	High input	Mean
Grain yield (t/ha)				
45Y28 RR	4.64	4.81	5.15	4.87
Condor TF	5.26	5.27	4.96	5.16
45Y93 CL	5.48	5.55	5.78	5.60
45Y95 CL	6.44	6.17	6.69	6.43
ATR Wahoo	3.73	3.31	3.81	3.62