

3. VARIETY TESTING

3.1 NON-RANDOMISED DEMONSTRATION TRIALS

3.1.1 Canola

Location: "South Roxby" Gnarwarre

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Background:

The demonstration blocks are designed to view both commercial and near commercial varieties on a relatively large scale. They are used to complement the work undertaken by DNRE with their variety testing programme.

Aim:

To determine the yield, oil quality and economic return of 6 TT and 6 non TT canola varieties.

Herbicides: TT Canola

1.5L/ha Roundup Max + 100 ml/ha
Goal + 100 ml/ha Dimethoate on
4/5/01
2 L/ha Simazine + 2 L/ha Atrazine +
75 ml/ha Telstar applied on 24/5/01
250ml/ha Select + Hasten spray oil
@ 1% applied on 13/7/01

Trial Design:

Each variety is represented by 6 beds (1.7m in width). Harvest length was 36 metres. Replication was achieved by harvesting 3 of the 6 beds separately.

Sowing Date: 23rd May for both TT and non TT canola

Sowing Rate: 6 kg/ha (treated with MesuroI)

Fertiliser: 100 kg/ha MAP, 100kg/ha Urea at late rosette stage

Harvest Date: 13th December 2001

Herbicides: Non TT

1.5L/ha Roundup Max + 100 ml/ha
Goal + 100 ml/ha Dimethoate on
4/5/01
250ml/ha Select + Hasten spray oil @
1% applied on 13/7/01

Results:

TT Varieties

Variety	Yield kg/ha	Oil %	Protein %	Total Return \$/Ha
Surpass 501TT	1796	49.40	17.28	\$819.69
ATR Grace	1723	46.50	18.77	\$756.40
ATR Hyden	1543	46.10	18.43	\$673.67
Beacon	1393	47.10	18.49	\$616.54
Surpass 600TT	1290	46.10	18.34	\$563.21
Pinnacle	1090	45.00	19.36	\$468.70
Average	1473	46.70	18.45	\$649.70

LSD = 228 kg/ha

For a variety to be significantly better than another, it needs to be 228 kg/ha higher yielding. Hence Surpass 501TT is significantly higher yielding than ATR Hyden but not ATR Grace.

Non TT Varieties

Variety	Yield kg/ha	Oil %	Protein %	Total Return \$/Ha
Hyola 60	2221	49.30	18.77	\$1,012.33
Surpass 603CL	1734	51.00	18.77	\$808.04
Dunkeld	1108	47.30	18.77	\$491.73
Pioneer 46CO3	1130	44.40	17.18	\$481.83
Insignia	944	48.90	18.03	\$428.01
Oscar	973	45.80	17.06	\$423.06
Average	1352	47.78	18.10	\$607.50

LSD = 239 kg/ha

For a variety to be significantly better than another, it needs to be 239 kg/ha higher yielding. Hyola 60 is significantly higher yielding than all other varieties.

Discussion:

There was a significant difference in varietal performance, in both yield and oil percentage. Generally speaking the grain yield was disappointing, however there were some exceptions including that of Hyola 60 (Non TT) and Surpass 501TT. There was a high level of the Blackleg in the trial, which could have accounted for the poor yield of some varieties.

The oil percentage was extremely high, with Surpass 603CL giving the top oil% of 51.0%, reflecting the good growing conditions and cool grain fill period.

The total return \$/Ha takes account of the oil bonus (1.5% for every 1% above 40%) and works on a grain price of \$400 per tonne. The variety Hyola 60 came out on top, with a total return in excess of \$1,000 per hectare.



There was no significant lodging (apart from blackleg diseased plants) in the trial this year compared to severe lodging in some varieties last year. Growing conditions were generally favourable for good yields. The year would have benefited the longer maturity types. Some shattering (max 5%) occurred in the earlier maturity varieties at windrowing.

It may be fair to say that the standard varieties such as Dunkeld and Pinnacle are perhaps becoming outclassed by some of the newer varieties, however one must be careful not to base a judgement purely on the results of this year's trial. There have been reported exceptional yields of these varieties in paddock sized blocks this last season.

For this season, it would be sound however to test a couple of the newer varieties alongside your normally grown check varieties. It would also be prudent to take account of the Blackleg rating of the varieties before making your choice.

Photo taken at the site on 20th Nov 2001 - Hyola 60.

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