3. VARIETY TRIALS

3.1 CANOLA

3.1.1 CANOLA VARIETY TRIAL 2005 (INVERLEIGH VIC)

Authors: Colin Hacking and Rohan Wardle

Contact: SFS Ltd Office: 03 5229 0566 or Rohan Wardle: 0438-343079

Researchers: Wes Arnott, Rohan Wardle, Gary Sheppard, Colin Hacking, Stacey Alexander, SFS Ltd.

Location: SFS Inverleigh Research site

Acknowledgements:
Thanks must go to all members and sponsors for their support of this trial. Special thanks go to Langdon Produce from Lismore who kindly conducted the grain quality analysis at no cost.

Rainfall (2005): 500.8 mm
GSR: (Apr – Nov) 350.3 mm

Summary:
There are a number of excellent canola varieties available for producers in south west Victoria. It is important to consider many aspects of a variety such as disease resistance, maturity, standability, as well as yield and oil content before making the final selection. The choice of conventional, triazine tolerant or Clearfield types will depend upon the weed spectrum at planting. It would appear that the Conventional and Clearfield varieties are outyielding the Triazine Tolerant varieties as a group and should be considered where the weed spectrum can be controlled with appropriate herbicides.

Background:
There are many canola varieties on the market which are suitable for producers to grow. This trial aims to provide further data for producers to evaluate when making their varietal selection.

Objectives:
To evaluate different canola varieties for yield and grain quality.

Methodology:
The trial was a randomised block design, with each variety being replicated 4 times. The plot length was 12 metres. The varieties were grown on 2 metre raised beds.

Sowing Date:
8th June 2005 with an establishment target of 25 plants/sq metre

Fertiliser:
Sowing 100 kg/ha Granulock CuZn plus 100 kg/ha Nitrogen

Seed Treatment:
All lines were treated with Jockey® before planting

Harvest:
The trial was windrowed and then harvested on 1st Dec 2005.

Results

Table 3-1: Varietal Yield And Agronomic Data (in descending yield order)

Variety	Company	Type	Height cm	Lodging %	Shatter %	Maturity	Yield kg/ha	Yield % site mean
[1]Hyola 75	Pac Seeds	C	120	0	0	3	3,189	132.9
45Y77	Pioneer	Cl	120	0	1	4	2,788	116.2
44C11	Pioneer	C	102	2	1	2	2,682	111.8
Hyola 60	Pac Seeds	C	130	4	0	4	2,673	111.4
46C76	Pioneer	Cl	115	4	0	5	2,644	110.2
44Y06	Pioneer	C	105	2	2	2	2,629	109.5
RQ011	Dovuro	C	111	0	0	3	2,529	105.4
Thunder TT	Pac Seeds	TT	104	0	1	3	2,490	103.8
Rocket CL	Pac Seeds	Cl	120	2	1	5	2,486	103.6
Hyola 61	Pac Seeds	C	102	2	0	4	2,471	103.0
TP004	Dovuro	TT	118	2	1	4	2,471	103.0
RR013	Dovuro	C	110	0	0	2	2,385	99.4
Sapphire	Dovuro	C	115	4	0	2	2,299	95.8
Bravo	Plant Tech	TT	114	2	1	2	2,241	93.4
Tornado 555	Pac Seeds	TT	114	0	1	5	2,213	92.2
Spectrum	Dovuro	C	100	2	0	1	2,203	91.8
45C75	Pioneer	Cl	119	4	1	3	2,184	91.0
Drover	Dovuro	C	109	10	0	2	2,069	86.2
Grace TT	Dovuro	TT	112	10	0	4	1,696	70.7
Beacon TT	Dovuro	TT	110	10	0	3	1,667	69.5
Average							**2,400**	
LSD 5%							**289.74**	
CV							**16.28**	

[1] Only 2 reps due to seed shortage

Key: C = Conventional, TT = Triazine Tolerant, Cl = Clearfield
Maturity*:* 1 = early to flower, 5 = late to flower

Table 3-2: Varietal Grain Quality Data

Variety	Type	Oil %	Test Wt	Protein %
[2]Hyola 75	C	45.2	65.4	18.0
45Y77	Cl	44.6	64.0	19.1
44C11	C	43.1	64.2	19.5
Hyola 60	C	45.2	60.6	18.0
46C76	Cl	44.7	65.0	16.7
44Y06	C	44.1	56.0	17.7
RQ011	C	46.4	63.8	17.1
Thunder TT	TT	43.9	68.8	20.1
Rocket CL	Cl	46.4	59.8	19.2
Hyola 61	C	43.2	62.0	18.7
TP004	TT	44.5	67.2	17.5
RR013	C	46.4	62.0	17.2
Sapphire	C	46.1	64.4	17.4
Bravo	TT	42.5	68.6	19.0
Tornado 555	TT	45.3	66.4	18.9
Spectrum	C	42.7	65.2	18.4
45C75	Cl	43.7	65.4	19.0
Drover	C	45.3	62.0	16.4
Grace TT	TT	42.9	67.0	19.1
Beacon TT	TT	42.5	67.8	20.1
Average		**44.4**	**64.3**	**18.4**

[2] Only 2 reps due to seed shortage

Key: C = Conventional, TT = Triazine Tolerant, Cl = Clearfield
Maturity*:* 1 = early to flower, 5 = late to flower

Table 3-3: Canola Grouping Summary Data

Type	Yield kg/ha	Yield % Site Mean	Oil %	Test Wt	Protein %
Conventional	2,512	104.7	44.8	62.6	17.8
Clearfield	2,525	105.3	44.9	63.6	18.5
TT	2,130	88.8	43.6	67.6	19.1

Discussion

There was nothing associated with the trial which would cast doubt on the validity of the results, apart from that outlined below. All varieties established and grew well, with windrowing and harvesting being correctly timed and conducted without any problems.

The line Hyola 75 from Pacific Seeds significantly outyielded all other varieties. A word of caution however is there were only 2 replicates of this variety due to a seed shortage, hence further testing will be required before a recommendation can be made.

There are a number of exciting new lines which should be considered. When making a comparison it is important that you take account of the LSD figure of 289.74 kg/ha.

For any variety to be significantly higher yielding than any other then it must be at least 289.74 kg/ha higher yielding.

From Table 3-3 the Conventional and Clearfield lines yielded higher than the Triazine Tolerant lines. It would appear that the oil percentage was higher for the Conventional and Clearfield lines, although test weight was better for the TT lines.

The three lowest yielding varieties Drover, Grace TT and Beacon TT all had the highest lodging percentage. A significant amount of lodging was caused by the disease blackleg.