

Canola in 2007

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Take Home Messages

- Limited results are available from 2006 due to the dry season.
- Only limited seed is available for many of the new canola varieties.
- Review available data and always try new varieties in conjunction with proven varieties.
- Plant back residues may be an issue – check the labels!
- Match cultivar selection to available soil moisture and the break of the season.
- 14 new varieties are expected to be released in 2007 in Victoria.

Variety Selection

The main features to look at when selecting a canola variety are maturity, yield, oil content, blackleg resistance, agronomic characters (early vigour and height), economics and the weed spectrum of the paddock where you are aiming to grow the variety. The maturity of varieties relative to each other can vary between locations, years and sowing times.

Choosing a new variety:

- Match rainfall and growing season length to maturity of variety required (ie: early or mid)
- Determine weed spectrum to make a decision on conventional compared with TT or IT varieties.
- Determine the level of blackleg resistance required – a high level of resistance is preferred in mid to long season areas.
- Consider the economics of different packages

Try new varieties in conjunction with proven varieties on smaller areas!

New varieties for 2007

There is very limited independent data available on these varieties due to the drought conditions in 2006. Statements about the new varieties are based on seed company information. Data on varietal performance in trials can be viewed online at <http://www.acasvnt.com.au/ACAS/> as it becomes available.

Early maturing conventional varieties

^{AG}*Muster* (tested as AGC323) High yielding. Tested in NVT in 2005. Moderate oil and protein content, similar to ^{AG}*Outback*. Blackleg rating 6.0P. Bred by AgSeed Research, marketed by Crop Care Seed Technologies.

Hyola 50 (tested as CBI4403) High yielding hybrid. Tested in NVT in 2005 and 2006. High oil and moderate protein content. Blackleg rating 9.0P. Bred by Canola Breeders International, marketed by Pacific Seeds.

Tarcoola (tested as BLN2026*SL902) Tested in NVT in 2005 and 2006. High oil and moderate protein content. Blackleg rating 6.0P. Bred by NSW DPI and SARDI, marketed by Nuseed Pty Ltd.

Early maturing specialty varieties

NMC115 Moderate to high yielding. Tested in NVT in 2006. Very high oil content. No official blackleg rating available. Bred by Nutrihealth Ltd, grown under contract to Nutrihealth.

Early maturing TT varieties

^{ATR}*409* (Early-mid maturity). High yielding. Tested in NVT in 2006. High oil content. Blackleg rating 8.0P. Bred by DPI-Victoria and AgSeed Research, marketed by Nuseed Pty Ltd.

^{ATR}*Signal* (tested as NMT052) Good yield potential. Tested in NVT in 2006. Moderate oil and protein content. Blackleg rating 8.0P. Bred by Nutrihealth Ltd, marketed by Nuseed Pty Ltd.

CBTMTanami (tested as CBTT-061) High yielding. Tested in NVT in 2006. Moderate oil and protein content. Blackleg rating 6.5P. Bred by CBWA, marketed by Graintrust in Eastern Australia. An End Point Royalty (EPR) applies.

Mid maturing conventional varieties

RT125 High yielding. Tested in NVT in 2006. High oil content. Blackleg rating 7.0P. Bred by DPI Victoria, marketed by Nuseed Pty Ltd.

Mid maturing specialty varieties

Cargill 102 Mid – late maturing. Moderate yielding. Tested in NVT in 2006. High oil and moderate protein content. Blackleg rating 8.5P. Bred by DPI-Victoria and Cargill Specialty Canola Oils, marketed by Cargill Specialty Canola Oils.

Cargill 103 Mid – late maturing. Good yield potential. Tested in NVT in 2006. High oil and moderate protein content. Blackleg rating 8.0P. Bred by DPI-Victoria and Cargill Specialty Canola Oils, marketed by Cargill Specialty Canola Oils.

NMC131 High yielding. Tested in NVT in 2006. High oil content. No official blackleg rating available. Bred by Nutrihealth Ltd, grown under contract to Nutrihealth Ltd.

Mid maturing TT varieties

^{ATR}*Barra* (tested as TN4*207) High yielding. Tested in NVT in 2006. High oil content. Blackleg rating 7.0P. Bred by DPI-Victoria, AgSeed Research and SARDI, marketed by Nuseed Pty Ltd.

Mid maturing TT specialty varieties

NMT370 Mid-late maturing. Good potential yield. Tested in NVT in 2006. High oil and protein content. No official blackleg rating available. Bred by Nutrihealth Ltd, grown under contract to Nutrihealth Ltd.

Mid maturing IMI varieties

46Y78 (tested as 03N733I) Very high yielding. Tested in NVT in 2005 and 2006. Very high oil and moderate protein content. Blackleg rating 8.0P. Bred and marketed by Pioneer HiBred.

Juncea Canola Update (Mustard)

Canola quality *Brassica juncea* has been developed for growers in low rainfall areas of Australia through the National *Brassica* Improvement Program (NBIP), in association with the Saskatchewan Wheat Pool. This crop is different to condiment mustard in quality, end-use and agronomy, and the term “juncea canola” is being used to recognise these differences. Juncea canola has low erucic acid and low glucosinolates, with oleic acid levels similar to *B. napus*. It can therefore be considered to produce a product equivalent to conventional *B. napus* canola.

The advantages of *B. juncea* over *B. napus* include more vigorous seedling growth, quicker ground covering ability, greater tolerance to heat and drought and enhanced resistance to the blackleg fungus, *Leptosphaeria maculans*. *B. juncea* seed pods shatter less readily and seeds potentially contain a higher percentage of oil plus protein because the yellow seed coat is thinner. These advantages make it the preferred species for low rainfall areas of Australia and for late sowing in higher rainfall environments.

The benefits of canola quality *B. juncea* have likewise been recognised in Canada, where there are major breeding programs focused on its development. The first juncea canola cultivars were released in Canada in 2002. They yielded around 6% more than the best *B. napus* types in the short growing season areas of Alberta and Saskatchewan. In 2003, there were almost 4000 ha of juncea canola in the prairie provinces of Canada.

There has been steady progress in both the yield and the quality of juncea canola. Lines with all required agronomic and quality characteristics have now been identified. This includes ‘zero’ erucic acid in the oil, meal glucosinolate levels below the current required canola quality standard, ‘zero’ allyl glucosinolates (<2/micromoles/g oil-free meal), oleic acid levels comparable to *B. napus* lines such as AG-Outback and Hyola43 and mean yields and oil contents similar to *B. napus*. Based on the performance of juncea canola reported here, growers will have access to a profitable and reliable non-cereal crop in low rainfall areas, in particular where *B. napus* canola yields are less than 1.5 t/ha.

While the initial juncea canola cultivars are likely to have similar yields to early *B. napus* cultivars, production costs are expected to be significantly less. Further yield improvements are anticipated with additional breeding. The initial juncea canola cultivars will be conventional, with TT and Clearfield cultivars expected in 3-4 years.

Plans for 2007 include limited commercial production of ‘JR055’ and large scale seed increase of one new line ‘JC06019’ in Victoria (for commercial production in 2008). A series of demonstration trials using these lines and new Clearfield lines will be sown to highlight the benefits of juncea canola, and provide further agronomic information. The support of all players in the canola supply chain for release in 2007 is currently being sought through the Australian Oilseeds Federation.

Table 1: Canola varieties being marketed in Victoria 2007

Variety	Year of release	Type	Maturity	Blackleg resistance		Oil ³	Protein
				Type ¹	Rating ²		
^{AG} Emblem	1999	Conventional	Early	Poly	7.0	Moderate	Moderate
^{AG} Muster	2007	Conventional	Early	Poly	6.0P	Moderate	Moderate
^{AG} Outback	2001	Conventional	Early	Poly	5.5	Moderate	Moderate
^{AV} Opal	2006	Conventional	Early	Poly	7.5	High	Moderate
Hyola50	2007	Conventional Hybrid	Early	Poly	9.0P	High	Moderate
Pioneer® 44C11	2004	Conventional	Early	Poly	6.5	Moderate	High
Pioneer® 44Y06	2006	Conventional Hybrid	Early	Poly	8.0	High	High
Tarcoola	2007	Conventional	Early	Poly	6.0P	High	Moderate
^{AG} Spectrum	2004	Conventional	Early-mid	Poly	6.5	High	Moderate
^{AV} Jade	2006	Conventional	Early-mid	Poly	7.5	Very High	Moderate
Pioneer® 45C05	2003	Conventional	Early-mid	Poly	7.0	High	Moderate
Rivette	2002	Conventional	Early-mid	Poly	5.5	High	High
^{AG} Drover	2004	Conventional	Mid	Poly	6.5	Very High	High
^{AV} Ruby	2006	Conventional	Mid	Poly	7.5	Very High	High
^{AV} Sapphire	2003	Conventional	Mid	Poly	7.0	Very High	High
Hyola 61	2004	Conventional Hybrid	Mid	Poly	7.0	High	High
Pioneer® 46C04	2003	Conventional	Mid	Poly	7.0	High	Moderate
Rainbow	1993	Conventional	Mid	Poly	5.5	High	Moderate
RT125	2007	Conventional	Mid	Poly	7.0P	High	Moderate
Skipton	2004	Conventional	Mid	Poly	7.0	Very High	High
Hyola75	2006	Conventional Hybrid	Mid-late	Poly	8.0	High	Moderate
Variety	Year of release	Type	Maturity	Blackleg resistance		Oil ³	Protein
Pioneer® 45Y77	2006	Clearfield	Early	Poly	8.0	High	High
Pioneer® 44C73	2001	Clearfield	Early-mid	Poly	5.0	Moderate	Moderate
Pioneer® 45C75	2001	Clearfield	Early-mid	Poly	6.0	High	High
Pioneer® 46Y78	2007	Clearfield Hybrid	Mid	Poly	8.0P	Very High	Moderate
Warrior CL	2006	Clearfield	Mid	Poly	6.5	Very High	Moderate
Pioneer® 46C76	2004	Clearfield	Mid-late	Poly	6.5	High	Moderate
Rocket-CL	2005	Clearfield	Mid-late	Poly/Sy	8.0	High	High

Table 1 continued: Canola varieties being marketed in Victoria 2007

Variety	Year of release	Type	Maturity	Blackleg resistance		Oil ³	Protein
^{ATR} Banjo	2006	Triazine Tolerant	Early	Poly	7.0	Moderate	High
^{ATR} Stubby	2004	Triazine Tolerant	Early	Poly	5.0	Moderate	Moderate
CB TM Boomer	2006	Triazine Tolerant	Early	Poly	6.5	High	Moderate
CB TM Tanami	2007	Triazine Tolerant	Early	Poly	6.5P	Moderate	Moderate
^{ATR} Barra	2007	Triazine Tolerant	Early-mid	Poly	7.0P	High	Moderate
^{ATR} 409	2007	Triazine Tolerant	Early-mid	Poly	8.0P	High	Moderate
^{ATR} Beacon	2002	Triazine Tolerant	Early-mid	Poly	5.5	Moderate	High
^{ATR} Signal	2007	Triazine Tolerant	Early-mid	Poly	8.0P	Moderate	Moderate
Bravo TT	2005	Triazine Tolerant	Early-mid	Poly	7.0	Moderate	High
^{ATR} Summitt	2006	Triazine Tolerant	Mid	Poly	6.5	High	High
Tornado TT	2004	Triazine Tolerant	Mid	Poly	8.0	Very High	High
Thunder TT	2005	Triazine Tolerant	Mid-late	Poly	7.5	Very High	Moderate
NMC115	2007	Specialty	Early	Poly	Not available	Very High	Not available
NMC130	2006	Specialty	Mid	Poly	8.0P	Very High	Moderate
NMC131	2007	Specialty	Mid	Poly	Not available	High	Not available
NMT311	2006	Triazine tolerant Specialty	Mid	Poly	6.5P	Very High	Moderate
Cargill 102	2007	Specialty	Mid-late	Poly	8.5P	High	Moderate
Cargill 103	2007	Specialty	Mid-late	Poly	8.0P	High	Moderate
NMT370	2007	Triazine Tolerant Specialty	Mid-late	Poly	Not available	High	High

1. Poly = polygenic resistance, Syl = has major gene resistance derived from *Brassica sylvestris*

2. 2006 blackleg ratings. The official ratings for 2007 will be published by the Canola Association of Australia (CAA), and can be viewed on the CAA website <http://www.canolaaustralia.com> The ratings are determined from nurseries conducted around Australia by Departments of Agriculture and private breeding companies. Results statistically analysed. Varieties with insufficient data are marked P for provisional.

3. Oil content of varieties can vary considerably due to environmental conditions, from year to year and from site to site within a year.