Department of Agriculture and Food
GOVERNMENT OF WESTERN AUSTRALIA

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Farmnote

Canola variety guide in WA 2010

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Canola production reached a peak 1.14 million tonnes in 2008 in Western Australia. The five-year average production is 726,000 tonnes from 486,000 hectares, with a value of over $300 million to the economy. With the recent introduction of genetically modified (GM) canola it is anticipated that canola production in WA could rise to a million tonnes again over the next five years, worth over $400 million.

The expansion of canola cropping will depend upon improved varieties, specifically ones with early maturity that give better yield and oil concentration in a range of environments.

The benefits of having canola in wheat-based farming systems include more flexibility in controlling both grass and broad-leaf weeds, combating herbicide resistance, controlling cereal root diseases and increased yields of the following cereal crop.

Variety selection

Canola growers are faced with a greater choice of new varieties, both non-herbicide tolerant (NT or conventional) and herbicide tolerant (HT), about which there is often little relevant information available in local environments (see Figure 1).

The NT varieties have no novel herbicide tolerance and could be the best choice in weed-free situations or where weed levels are low and can be controlled by conventional crop management. The HT varieties have specific herbicide tolerance and could be the best choice if weed problems exist and cannot be controlled in conventional canola.

The HT choice is between the conventionally-bred forms (triazine tolerant and imidazolinone tolerant or Clearfield) and genetically modified (Roundup Ready® or InVigor®). Advantages and disadvantages of different types are summarised in Table 1.

Table 1 **Comparison of canola varieties and herbicide tolerance**

Factor	Non-herbicide tolerant (NT)	Herbicide tolerant (HT)			
		Conventionally-bred HT		Genetically modified HT	
System	Conventional	Triazine tolerant	Clearfield or imidiazolinone tolerant	Roundup Ready—glyphosate tolerant	InVigor—glufosinate-ammonium tolerant***
		(Group C herbicide)	(Group B herbicide)	(Group M herbicide)	(Group N herbicide)
Yield	Higher under weed-free situations	5–10% penalty with TT	No penalty		
Brassica management	Not controlled effectively	Can be controlled and managed more effectively; however, an integrated weed management plan is needed to avoid further development of weed resistance to herbicides			

*** Not yet available in Western Australia

Table 2 **Characteristics of major new triazine tolerant (TT) and Clearfield System (CL) canola varieties**

Variety*	Maturity (guide only)	Blackleg disease rating**	Recommended rainfall zones mm	Origin and marketing
Triazine tolerant (TT) canola				
CB Telfer	Very early	MS	250–400	Bred by Canola Breeders WA. Released in 2009.
ATR-Cobbler	Early	MS	250–500	Bred by Nugrain. Released in 2007 and marketed by Nuseed.
CB Mallee (hybrid)	Early	N/A	250–400	Bred by Canola Breeders WA. Released in 2009.
CB Tanami	Early	MS–S	250–500	Bred by Canola Breeders WA. Released in 2006.
CB Trigold	Early	S–VS	250–400	Bred by Canola Breeders WA. Released in 2004.
CB Boomer	Early–Mid	MS–S	300+	Bred by Canola Breeders WA. Released in 2005.
BravoTT	Early–Mid	MS	300+	Bred by the Canola Alliance (NSW DPI/ Nugrain). Released in 2005 and marketed by Nuseed.
CB Tumby (hybrid)	Early–Mid	N/A	300+	Bred by Canola Breeders WA. Released in 2009.
Hurricane TT	Early–Mid	MR (P)	300+	Comparable to Tornado TT. Bred and marketed by Pacific Seeds in 2008.
Tawriffic TT	Early–Mid	MR–MS	350+	Comparable to BravoTT. Developed by Canola Alliance (NSW DPI/Nugrain). Released in 2008 and marketed by Nuseed.
Tornado TT	Early–Mid	MR	300+	Bred and marketed by Pacific Seeds in 2004.
ATR-409	Mid	R–MR	350+	Bred by Nuseed/Vic DPI. Released in 2008, marketed by Nuseed.
ATR-Barra	Mid	MR–MS	400+	Comparable to ATR-Beacon but higher yield. Bred by AgSeed/Vic DPI/SARDI. Released in 2007 and marketed by Nuseed.
CB Argyle	Mid	MR (P)	350+	Bred by Canola Breeders WA. Released in 2008 and marketed by COGGO Seeds.
CB Jardee (hybrid)	Mid	MR (P)	350+	Bred by Canola Breeders WA. Released in 2009.
CB Scaddan	Mid	MR	350+	Bred by Canola Breeders WA. Released in 2008.
Rottnest-TTC	Mid	MR	350+	Bred by Ag-Seed Research/Vic DPI. Released in 2007 and marketed by Nuseed.
ATR-Marlin	Mid–Late	MR	500+	Bred by Ag-Seed Research/Vic DPI. Released in 2006 and marketed by Nuseed.
Storm TT	Mid–Late	MR–MS (P)	400+	Bred and marketed by Pacific Seeds in 2008.
Thunder TT	Mid–Late	MR–MS	400+	Bred and marketed by Pacific Seeds in 2005.
Monola (specialty canola oil)				
Monola 76TT	Mid	R–MR	400+	Highly stable oil with high oleic and linolenic acid content. Suitable for deep frying. Released in 2008 and marketed by Nuseed.
Clearfield System (imidazolinone tolerant)				
44C73	Early	S	250–400	Bred and marketed by Pioneer Hi-Bred. Released in 2001.
45C75	Early–Mid	MS	300+	Bred and marketed by Pioneer Hi-Bred. Released in 2003.
45Y77 (hybrid)	Early–Mid	MR	300+	Bred and marketed by Pioneer Hi-Bred Australia. Released in 2007.
Warrior CL	Early–Mid	MS	300+	Bred by the Canola Alliance in 2005 and marketed by PlantTech.
46Y81 (hybrid)	Mid	MS	350+	Bred and marketed by Pioneer Hi-Bred. Released in 2008.
46C76	Mid–Late	MS	350+	Bred and marketed by Pioneer Hi-Bred. Released in 2003.
46Y78 (hybrid)	Mid–Late	MR	400+	Bred and marketed by Pioneer Hi-Bred. Released in 2007.
Rocket CL	Late	MR	400+	Bred and marketed by Pacific Seeds. Released in 2004

Table 2 **Characteristics of major new triazine tolerant (TT) and Clearfield System (CL) canola varieties (continued)**

Variety*	Maturity (guide only)	Blackleg disease rating**	Recommended rainfall zones mm	Origin and marketing
Juncea canola				
Oasis CL	Early–Mid	R (P)	250–350	More drought and heat tolerance than canola. Marketed by Pacific Seeds. Under field testing in WA.
Sahara CL	Early	R (P)	200–350	More drought and heat tolerance than canola. Marketed by Pacific Seeds. Under field testing in WA.
Roundup Ready (RR)				
NGO195	Early	N/A	250–400	Bred by Monsanto in association with DPI Vic and Nugrain. Potential release in 2010 by Nuseed.
CHYB-166 RR (hybrid)	Early–Mid	MR (P)	350	Bred by Canola Breeders WA. Released in 2009.
GT61	Early–Mid	MR (P)	350–500	Bred by Monsanto in association with DPI Vic and Nugrain. Released in 2009 and marketed by Nuseed.
Hyola 502RR (hybrid)	Early–Mid	R (P)	350+	Bred and marketed by Pacific Seeds. Released in 2008.
NGO021	Early–Mid	N/A	350–500	Bred Monsanto in association with DPI Vic and Nugrain. Potential release in 2010 by Nuseed.
NGO028	Mid	N/A	350+	Bred by Monsanto in association with DPI Vic and Nugrain. Potential release in 2010 by Nuseed.
NGO157	Mid	N/A	400+	Bred by Monsanto in association with DPI Vic and Nugrain. Potential release in 2010 by Nuseed.
46Y20 (hybrid)	Mid–Late	R (P)	400+	Bred and marketed by Pioneer Hi-Bred. Released in 2008.
Hyola 601RR (hybrid)	Mid–Late	R (P)	400+	Bred and marketed by Pacific Seeds. Released in 2008.

* Varieties are available as open-pollinated and hybrid. Open-pollinated canola produces self-fertilised seed. Growers can retain seed from a normal canola crop to sow the following season. However, proper storage is necessary to maintain viability. Hybrids are the progeny of a cross of two distinctly different parents. Hybrids are not self-fertilised and can only be duplicated by crossing the same parents, which is why growers cannot retain seed but need to buy new seed every year. Growers may not retain seed of open-pollinated RR varieties under the Technology User Agreement.

** 2008 Blackleg ratings: R = resistant, MR = moderately resistant, MS = Moderately susceptible, S = Susceptible, (P) indicates the provisional rating until sufficient blackleg resistance data are available. Blackleg ratings are available at www.australianoilseeds.com.au

This variety guide is to assist growers in deciding which varieties to grow in their regions or agzones (see Figure 2). It summarises varietal characteristics and agronomic information including seed yield and oil content. Comparative performance data for 2008 are presented for selected varieties which are considered to be the most promising for WA conditions from the National Variety Testing program (www.nvtonline.com.au) and department agronomy trials.

If possible, growers should use variety performance data from NVT trials, small-scale agronomy trials and large-scale commercial trials as their results add value to each other.

The identity of weed species present or expected may determine the need for specific production systems e.g. triazine tolerant, (TT), Clearfield (CL) or Roundup Ready (RR). Weed control and herbicide options for RR, TT and CL canola are presented in Farmnotes 407 and 408—*Roundup Ready® canola in WA* and *Weed control in non-GM canola*.

Profitable canola results from correct variety selection and sound management decisions on time of sowing, paddock selection, crop nutrition, and disease and pest control.

Figure 1 Field day at canola variety trial

Varietal characteristics

All canola varieties grown in WA belong to the species *Brassica napus* which has good blackleg resistance. Varieties differ in their degree of resistance (www.australianoilseeds.com.au). When choosing a variety, the critical factors to consider are maturity (relative to the length of the growing season), blackleg resistance rating, seed yield and oil content. For further information see the NVT website (www.nvtonline.com.au). The relevant features of the newly released varieties are presented in Table 2.

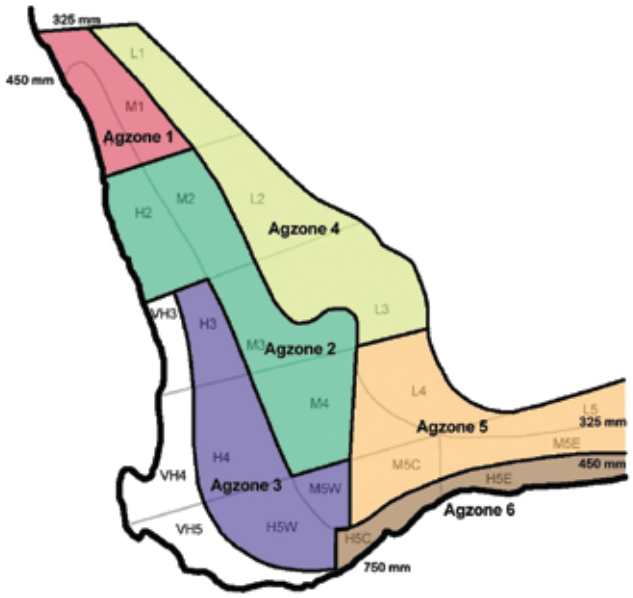

Figure 2 Agzones in Western Australia

Yield comparisons

Comparison data on the performance of Roundup Ready, Clearfield and triazine tolerant varieties within the herbicide systems tested in National Variety Trials are available (www.nvtonline.com.au). The 2008 results indicated that all RR varieties produced yields not significantly different to the site mean (1.0 t/ha).

Further reading

Roundup Ready® canola in WA, Farmnote 407, Department of Agriculture and Food website (www.agric.wa.gov.au under publications)

Weed control in non-GM canola, Farmnote 408

On-farm segregation of GM and non-GM canola, Farmnote 409

Growing western canola: an overview of canola production in Western Australia (2006) Oilseeds Industry Association of Western Australia, Belmont

GM canola – performance and experience in 2008 (2009) Grains Research and Development Corporation

National Variety Testing website www.nvtonline.com.au

Blackleg ratings www.australianoilseeds.com

Other commercial websites

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