

## GROWING WESTERN CANOLA IN the MEDIUM RAINFALL ZONE (<450MM >325MM) UPDATE 2005

*Prepared for growers by the Canola Industry WA based on 2004 trial results and industry wide experience*

### 2004: A BELOW AVERAGE SEASON FOR MEDIUM RAINFALL CANOLA

The medium rainfall zone (MRZ) is not renowned for consistently high yielding canola crops. The main reasons for growing canola in this zone are to extend rotations, improve long-term gross margins, help realise the full potential of high yielding cereals (through a disease break) and to reduce weed competition in following crops. In recent years the total area sown to canola in the MRZ has decreased. However, new mid and short season varieties could reverse this trend.

The zone we refer to covers an area that stretches from Kalbarri to Salmon Gums (Map 1 below). It is situated east of the Great Southern Highway in the south and the Midlands Road in the north.

#### The main challenges of the season were

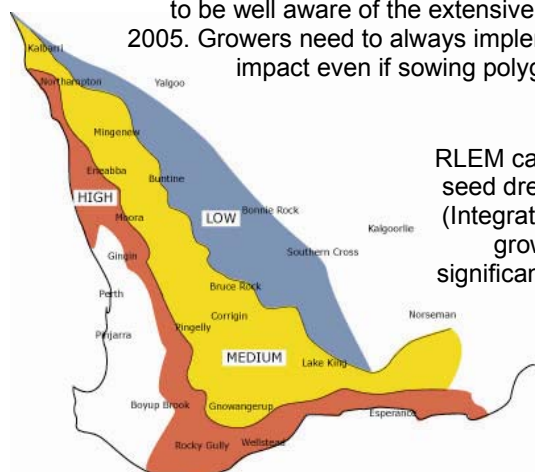
Opening rains occurred around mid to late May for most districts. Well below average September/ October rainfall resulted in a shorter growing season and generally lower yields.

New varieties ATR Stubby, Trigold, Tornado and Tranby, all suited to the MRZ, were reported as yielding well.

#### Warm Wet Start, Blackleg & Slugs

A warm wet start created fungal and slug problems in the more westerly districts, while frosts mid season and a dry finish assisted to significantly reduce yields. Concern over blackleg occurred during February and March. The concern was over varieties with single dominant gene-based resistance derived from *Brassica rapa* ssp. *sylvestris* as strains of blackleg fungus have overcome the resistance to blackleg previously afforded in these "sylvestris" based varieties. Oilseeds WA media releases and grower best practice workshops in March 2004 at Moora, Kojonup and Esperance informed growers of the heightened threat from blackleg and the management options available to them.

Some growers took the risk and planted these varieties with most obtaining reasonable yields. From field reports the incidence of blackleg cankering in varieties with *sylvestris*-derived resistance appears to have increased in medium to high rainfall areas especially in the Esperance District. The industry does not recommend complacency on this issue. The threat is expected to increase and growers need to be well aware of the extensive risk associated with sowing *sylvestris* resistance type varieties in 2005. Growers need to always implement all the recommended cultural practices that reduce blackleg impact even if sowing polygenic type resistance varieties (i.e. non *sylvestris* type resistance)



#### Red Legged Earth Mite (RLEM)

RLEM caused early problems requiring treatment. Gaucho® and Cosmos seed dressings appear to have done the job when used as part of an IPM (Integrated Pest Management) plan which included Timerite®. However if growers only used part of the package RLEM were still able to cause significant damage. Frost was a major problem throughout the central and southern wheatbelts.

#### Other issues from 2004

Seed bounce was reported as a problem. A solution to seed bounce is explained in Optimising Establishment. Sclerotinia was an issue in the North while slugs and Downy Mildew caused early season set backs in the south. Oilseeds WA is particularly interested to receive reports of these diseases in 2005.

**Map 1: Rainfall zones of the WA Wheatbelt**

## Implications of Growing Canola for your Business in 2005?

At this time of the year you need to decide if canola fits into your cropping plan for 2005. Considerations include longer term rotations, commodity prices, your level of risk and profitability. Canola is generally considered a higher risk (The lower the rainfall the greater the risk).than cereals but an excellent rotation option.

For growers in the medium rainfall zone two factors have recently increased the opportunity to grow canola. These are:

1. No-tillage cropping which permits sowing into less soil moisture although this practice can also increase risk if follow up rainfall is not received.
2. Newer, shorter season varieties such as CBWA's Trilogy and Trigold, Dovuro's ATR Stubby and Pacific Seeds Tornado TT. Beacon is still performing well in this zone.

### Varieties

Oilseeds WA (table 1) variety demonstration / trials in 2004 and Department of Agriculture (DAWA) trials from 2000 to 2004 (table 2) show that ATR-Stubby, Tornado, Trigold and Beacon all performed well. Bravo TT, which has only recently been released, also yielded well in DAWA trials. It will be further trialled in 2005.

Table 1 - Oilseeds WA Demonstration Trials (Mingenew & Scadden)

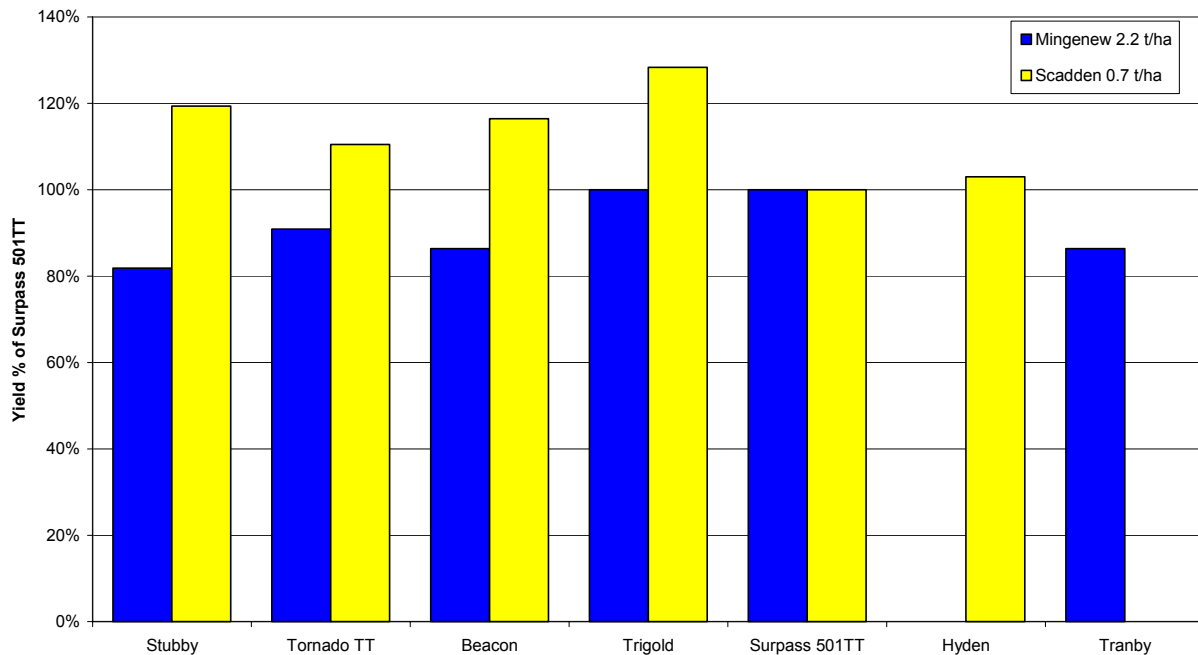
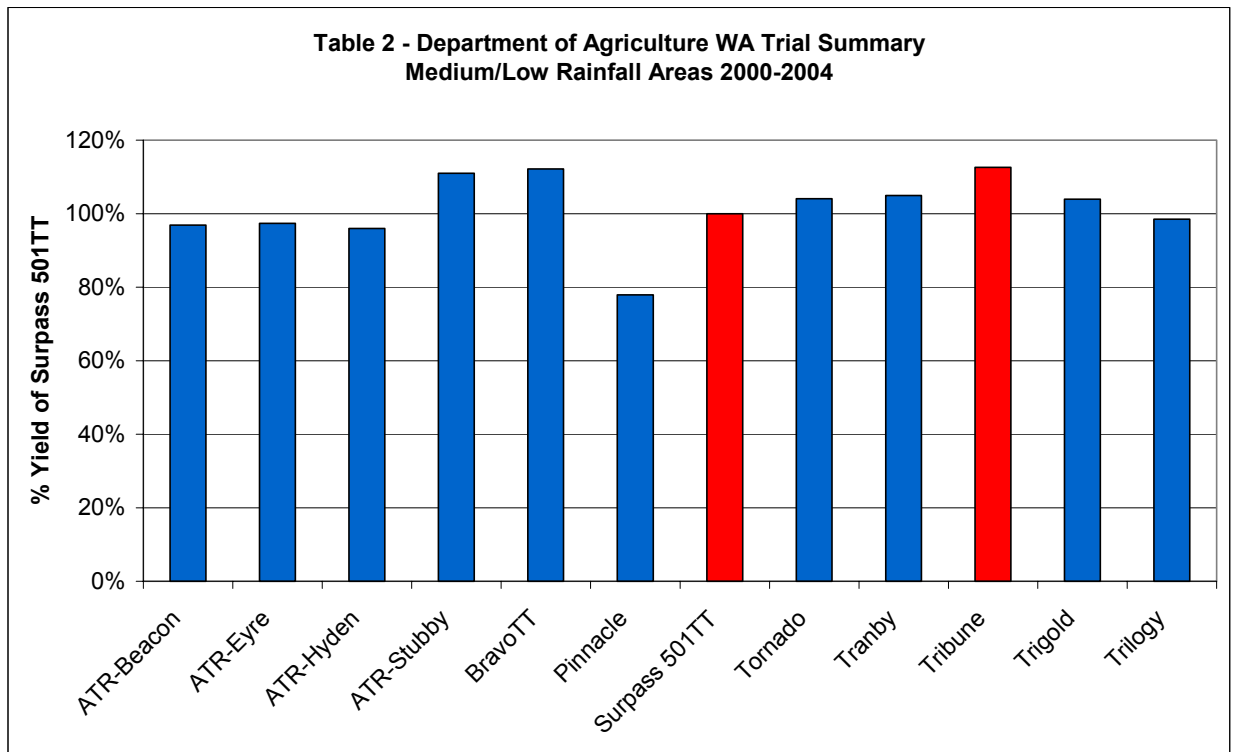


Photo 1 Oilseeds WA Demonstration / Trial Site Field Day October 2003



**Table 3 Blackleg Resistance Ratings for varieties suited to the Medium Rainfall Zone**

Variety	DAWA 2004 Rating	CAA 2005 Rating
<b>TT</b>		
ATR Beacon	6	6
Bravo TT	-	7.5P
ATR Hyden	6	6.5
ATR-Stubby	4P	5.5
Tornado TT	7P	7.5
Tranby	3P	4.5
Trigold	-	4.5
<b>Clearfield</b>		
Pioneer 44C73	-	5
P = Provisional	Highly Resistant <b>8+</b> Resistant <b>7 - 8</b> Moderately Resistant <b>5 - 6</b> Moderately susceptible <b>3 - 4</b> Highly susceptible <b>1 - 3</b>	Highly Resistant <b>8 - 9</b> Resistant <b>6 - 7</b> Moderately Resistant <b>4 - 5</b> Moderately susceptible <b>3 - 4</b> Susceptible <b>1 - 3</b>

### Managing Blackleg

Blackleg is again a major consideration in 2005. It is not advised to sow varieties with single dominant gene-based resistance derived from *Brassica rapa* ssp. *sylvestris*. Oilseeds WA recommendation is to sow varieties with strong polygenic resistance in medium to high blackleg risk situations. Check your chosen varieties blackleg rating against the CAA and DAWA rating scales published annually and extracted above. Use all cultural practices recommended to combat blackleg. Do not rely solely on one action such as resistant varieties or seed dressings etc.

If you are sowing retained seed have it tested for germination and check its current blackleg rating as it may have changed. All current and future varieties are covered under Plant Breeders Rights (PBR). Choose varieties that suit your district and season expectations. Sowing two different varieties can spread seasonal risk such as frost.

## Optimising Establishment

A critical issue in the medium rainfall zone is time of sowing. In the northern part of the zone it can be advantageous to sow by the end of the first week of May. Generally sowing is not recommended beyond the 20<sup>th</sup> of May. Seeding rates of 4-5kg/ha are suggested.

**Seed Bounce** On several paddocks and trials seed bounce was reported. The seed injected into the furrow by an air seeders was literally bouncing out into the inter furrow and chances of germinations and successful establishment were greatly reduced. It is suggested that growers consider the D-Cup device (or similar equipment), particularly for single chute seeders, to diffuse the energy of the seed and allow it to drop gently to the ground eliminating seed bounce.



**Photo 2** D-Cup diffuser  
Harvestaire 93447433

## Nutrition

The strategic use of fertilisers is a major consideration in 2005 due to an increase in fertiliser prices and a reduced profit outlook (if the grain price remains at current levels). Fertiliser is generally a large proportion of input cost. Therefore in order to maximise profit nutrition rates should be closely matched to your paddock requirement (to reach recommended nutrient status as determined by soil testing), rotations and realistic yield potential.

Particular attention should be paid to soil acidity. pH levels above 5 are desirable for maximum utilisation of nutrients. Because canola grows well at higher pH levels then some other crops in the rotation canola is a suitable phase in the rotation to apply Lime.

Nitrogen plays an important role in determining canola yield; however a recent 30% price increase means N levels should be keenly matched to realistic yield potentials. Yield potentials are determined by rainfall, time of sowing, soil types and rotation. In 2005 a flexible nitrogen strategy could be to apply part of the amount determined by soil test at seeding and the remainder within 6-8 weeks of seeding, tailored to suit anticipated yields at that stage of crop development.

## Key Points

- Apply N, P, K and S according to yield potential, soil test results and rotation.
- Always apply Sulfur (Gypsum or Ammonium Sulfate) if soil tests indicate it is low.
- Develop a flexible fertiliser strategy to attain maximum profit in response to seasonal conditions.

## Insects

No new insects raised their heads during 2004. The main insect problems in the Medium rainfall zone continue to be Red Legged Earth Mite (RLEM), Lucerne Flea, Vegetable Weevil, Bryobia Mite, Aphids, False Wire-worm, Heliothos and Diamond Back Moth.

Best control for RLEM is a bare earth spray with Talstar® (bifenthrin) applied immediately post-seeding, Gaucho® (registered for RLEM control) or Cosmos can be applied to canola seed; with or without fungicide; for example, Canola Cote™.

In 2004 RLEM some sprays/seed treatments failed under high insect pressure. To ensure effective control from these strategies they should be used as part of an IPM program which includes Timerite® to determine the time of spraying in the pasture phase (prior to canola) to reduce insect pressure the canola crop planted in the following year. Be aware that a number of cereal crops in 2004 were reported have had high levels of RLEM late in the season. Canola crops sown into cereal stubble should be monitored for RLEM damage, even if bare earth sprays or seed treatments are used.

## Key points

- It is **critical** to monitor for insects every two days during emergence; record any changes in plant numbers.
- Control mites early.
- Use the "Canola Ute Guide" to identify insects.
- Report any new insects not seen before to the Department of Agriculture.

**Photo 3** Red Legged Earth Mite



## Weeds

In 2004 ryegrass problems occurred. Medium to high populations of ryegrass are rarely adequately controlled by triazines. The use of grass selective herbicides is often needed to control ryegrass (Be aware that some commonly used grass selective herbicides have long withholding periods in canola). Under dry and stressful conditions the use of a triazine followed by a grass selective herbicide proves to be more effective than mixing the two together. For grasses surviving a grass selective herbicide the use of a spray boom on the swather is proving a very effective means of crop topping ryegrass in canola. At present this operation is not registered and may need to be registered to satisfy QA requirements.



**Photo 4** Spray boom attached to swather

The APVMA (Australian Pest and Veterinary Medicines Authority) recently released its Atrazine Review Draft report. The comment period has now closed. The report provides a finding that active constituent (registrations) are to be affirmed, however, existing labels instructions are deemed inadequate and are to be amended. Growers should watch for the resultant label changes in 2005.

## Disease

Strains of blackleg fungus have overcome the resistance to blackleg previously afforded in "sylvestris" based varieties. These varieties included Surpass 501TT, Surpass 402CL, Surpass 603CL, Surpass 404CL and Tribune. The incidence of blackleg appeared to increase in 2004 in these varieties with several cases of breakdown in resistance being reported.

While blackleg in the MRZ is possibly a lower risk than in the high rainfall zone (HRZ) growers must always use the best blackleg prevention and management practices. The risk maybe further reduced for growers in the north (compared to southern districts) if they are able to sow very early to avoid heavy ascospore showers landing on young seedlings. Growers should sow non-sylvestris resistant varieties and further reduce the threat by not sowing within 500m of old stubble or sowing the crop early to escape early infection. Seed dressing or Impact In Furrow® treatments are recommended in moderate to high risk situations. Seed dressing with Jockey® or Impact in Furrow appears to have worked well in 2004.

Growers should refer to Managing Blackleg Bulletin No. 4571 to determine their degree of risk.

Also see Pest Fax for an Update on predictions of when blackleg spore maturity will occur in your district.

## Profitability

With the price outlook for canola in 2005 below the 10 year average growers should carefully consider the profitability of canola in their rotation. At the current price and assuming a cost of production of \$280/ha profitability below 1 t/ha is unlikely (table 4). If expected average yields are below 1 t/ha then growers should consider reducing areas sown to canola unless it is a critical tool in the rotation.

Time of sowing, soil types, varieties, weeds, nutrition, rainfall and insects are all important factors in ensuring profitable canola crops. Growers need to be flexible when growing canola in the medium rainfall zone and be prepared to alter rotations as their circumstances change. Making optimal decisions, using best practice, an increase in price and time of sowing/rainfall will all assist to increase profitable canola crops in 2005.

**Table 4 - Sensitivity Analysis for Canola – Price(Pool) x Yield)**

	<b>\$320</b>	<b>\$340</b>	<b>\$360</b>	<b>\$380</b>	<b>\$400</b>	<b>\$420</b>
<b>0.4 t/ha</b>	-141	-133	-125	-117	-109	-101
<b>0.6 t/ha</b>	-86	-74	-62	-50	-38	-26
<b>0.8 t/ha</b>	-30	-14	1	17	33	49
<b>1.0 t/ha</b>	25	45	65	84	104	124
<b>1.2 t/ha</b>	80	104	128	152	176	199
<b>1.4 t/ha</b>	135	163	191	219	247	274
<b>1.6 t/ha</b>	191	222	254	286	318	350
<b>1.8 t/ha</b>	246	282	318	318	389	425

\$386/t 10 year Canola price (Pool) average

## Further reading

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|--|---|
| 1. Canola: The Ute Guide                     | TOPCROP Australia/GRDC (Stanley & Marcroft) |
| 2. Managing Blackleg                         | Department of Agriculture WA Bulletin 4571  |
| 3. Managing Blackleg & Sclerotinia in Canola | TOPCROP Australia/GRDC                      |
| 4. Diseases: The Back Pocket Guide           | TOPCROP Australia/GRDC                      |
| 5. Pulse & Canola-Frost Identification       | Department of Agriculture WA /GRDC          |
| 6. Canola Growers' Manual                    | Canola Council of Canada                    |
| 7. Growing Western Canola Booklet (In Prep)  | Oilseeds WA                                 |

## KEY CONTACTS

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**Australian Oilseeds Federation** [www.australianoilseeds.com](http://www.australianoilseeds.com)  
**Canola Association of Australia Inc** [www.canolaaustralia.com](http://www.canolaaustralia.com)  
**Department of Agriculture WA** [www.agric.wa.gov.au](http://www.agric.wa.gov.au)

### Seed Companies in WA (for more details on varieties refer to seed company websites)

Heather Cosgriff	Pacific Seeds	9295 6055
Milton Sanders	Canola Breeders WA	9285 8087
Neil Harris	DOVURO	9335 4245
Tim O'Dea	PlantTech	9258 6722

### Input Suppliers

Bevan Addison	Elders Pty Ltd.	9422 2391
Stuart Witham	AWB Landmark	9273 5217

### Agronomists (who specialise in Canola Agronomy)

David Sermon	ConsultAg – Belmont	9475 0311
David Eksteen	United Farmers – Esperance	9072 1155
Ashley Herbert	Agrarian Management	9821 5553
Peter Norris	Agronomy for Profit	9964 2476
Chris Wilkins	Vision Agribusiness Services	9347 0550

### Crushers

Joe Young	Kojonup Oils	9833 6267
Jon Slee	Riverland Oilseed Processors	9531 2022

### Exporters

Rob Proud	Grain Pool of WA	9216 6080
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### Processors

Ashley Palmer	Alba Industries	9431 7255
Brian Evans	Goodman-Fielder	9722 3402

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