

Growing Western Canola Case Study (High Rainfall) 2005

Brad Wood - Kendenup

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Location

Kendenup is in the Plantagenet Shire, slightly south west of the Stirling Ranges. We also lease two other farms; one at South Stirlings, 60km from our Kendenup base and the other 26km south of Kojonup.

Rainfall: **500-550mm** - Relatively mild climate with favourable soft spring finishes.

Area sown to Canola in 2005: **900 hectares**

Average yield last 5 years: **2t/ha**

Target ave yield: **3.5t/ha**



Brad Wood investigates his canola crops

History of Growing Canola

Our first attempt at growing canola was in 1993. We planted Barossa, a non TT variety at 5-6kg/ha. The crop was successful and yielded 1.9t. The initial area sown was 40ha, Today we grow 900-1000ha of TT canola.

Yield and Rotations

Growing canola out of long term clover dominant pastures is very easy. The challenge is to grow high yielding canola in a multi-cropping system through heavy residues. Yields targeted with nutrients applied are 2.5t/ha. Our 5 year average is currently sitting at 2t/ha

A typical rotation over the last 5-8yrs has been canola:wheat:canola:barley:canola:wheat (peas, pasture or lupins):canola:cereal. Experience has proven that the highest yielding canola crops are grown from a good legume base. Unfortunately a legume crop such as lupins/peas in our system tends to be less profitable and has given rise to a tight rotation with canola, as this is our most profitable crop.

2005 Program:

Soil tests are carried out by an independent soil testing laboratory. Top soil & sub soil Ph are noted and lime/dolomite is applied at required rates. Gypsum has always been applied at 300-500kg/ha (robust rates are always better; unfortunately cutting corners can cost you money).

In 2005 we sowed Thunder, Tornado and Beacon. We also tested varieties for Oilseeds WA as part of their annual variety testing program.

In 2005 our major problem was WATER, WATER EVERYWHERE!! From 30th March to 1st April 185.5mm of rainfall fell. To 24th October 2005 we had around 578mm. Luckily a dry July saved us from total disaster, only 39mm fell.

Seeding of Thunder canola commenced on Anzac Day. We were regularly getting bogged and consequently seeding dragged out for 2 months, with Kojonup only finished on 18th June. Approximately 60% of our seeding program was carried out using a 10m Daybreak Disc Seeder.

Conditions at Kojonup were extremely wet and boggy in 2005, so some “outside the square” thinking was required to complete our program. The decision was made to top-dress the seed and fertiliser onto pasture paddocks, and using a prickle chain we double harrowed the canola seed in. This proved extremely successful although we probably have too many plants/m².



Getting bogged in a 10m Daybreak Disc Seeder

Slugs in 2004 caused extreme damage outside “normal” slug areas, however this year only a few small areas of damage were identified and treated. Better understanding and treatment options need to be found.

We face potential harvest problems; crop lodging due to shallow root systems, windrows blowing due to low plant densities. To date approx 10-15% of canola is average and/or water damaged. 10% of our original program was sprayed out and seeded to barley.

Nutrients applied include:

- MAP trace @ 80kg/ha Impact IF at 300mL/ha.
- Muriate of Potash 20kg/ha banded below seed.
- 100kg SOA top dressed around seeding time.
- Split applications of Urea:
 1. Urea 50kgs & 20kg MOP.
 2. Urea/SOA @ 50:50 ratio at 100kg/ha.
- Foliar spray applied:
 1. 2 applications Mn Sulph @ 2kg/ha.
 2. Boron was also applied at 200-400g/ha.
 3. Copper sulphate @ 250g/ha.

Chemicals

Atrazine application timing has changed. Typically we would apply Atrazine (550g) and pre sowing Simazine (550g). 3-6 weeks later we would apply Atrazine (1.1kg) and grass selective if needed. Occasional mixing problems were encountered.

However we are keen not to retard early canola vigour. Therefore we now wait till the crop has emerged and apply 2.2kg Atrazine in a single application. A grass selective herbicide is applied later if required.

Cost of Production

Fertiliser \$130/ha.

Chemical \$60/ha.

Operations \$100/ha (Seeding, spraying, spreading, swathing and harvesting).

Total cost \$290/ha ~ approximates to around 0.8t/ha of canola (at \$360/t).



Jeremy Wood, enthusiastic about canola

How do we do it?

- Managing RLEM in paddocks prior to year of growing crop is essential. Cosmos is applied to canola seed in untreated/unmanaged paddocks, such as newly leased country.
- Spray topping of grassy pastures.
- Applying fungicide to fertiliser.
- Being vigilant, watching crops closely for insect & slug damage.
- Acting quickly when problem identified.
- Being flexible with Nitrogen application. Feeding small amounts several times on waterlogged areas has proven most beneficial every year. Canola has a remarkable ability to recover if fed nutrients to sustain it through a particular setback, such as slugs, waterlogging and insect attack. Growing canola out of heavy cereal residues was challenging until we realised nutrition held the key. Nitrogen was being tied up with residue breakdown, so application of SOA at seedling emergence became crucial.
- TT canola is grown in our system so as to control waterweeds and other “under canopy” weeds.
- Having a better understanding of plant densities: too thick they lodge, fewer plants means bigger/stronger plants.
- Full stubble retention is maintained on our long term cropping paddocks.
- All crops are sown with no-till equipment

Getting all the above right means that unusual insect/nematode issues seemed to disappear.



Harvesting Demonstration Trial Site November 2005

Where are we headed?

- Yields are nowhere near what our water use efficiencies state they should be. Realistically we would like to have long term averages of 3.5t/ha which we believe is an achievable goal.
- GM canola is probably where our next biggest gain will be made. Along with travelling on designated 30m tramlines to avoid compaction and crop damage.
- We would also like to achieve earlier crop establishment times: beating the cold and insects and get maximum available sunshine onto plants early.
- We want to continue to build our soils, creating a more hospitable environment for plants.