

Canola in the rotation broadens herbicide options

This farmer case study has been compiled by John Duff, Oilseeds WA as part of the national Better Oilseeds project

Why grow canola?

Triazine tolerant canola is the best financial return of the break crop options we have available (particularly recently and looking forward to 2008). It gives us the ability to use different herbicide groups other than those we would use in the cereal phase. This means we can rotate for resistance purposes. As an enterprise, it spreads our risk as part of the cropping program and also spreads the workload with other crops (hay etc) and livestock. In terms of tonnages, it is also a crop which is easily stored on-farm.

Negative aspects of growing canola

Management of canola at seeding and early post emergent is more demanding than cereals particularly with respect to insect control such as bryobia mite and veggie weevil.

Seeding system

We use a Gason 32' bar with knife points on 8" row spacing and a dragging boot configuration with a Gason 1830 triple box.

Canola seeding commences at the earliest, around April 20, and the latest June 25. Canola is seeded at about four kg per hectare.

Harvesting equipment

New Holland CX 780, with Rollerdown Phillips Pick-up front.

Management of canola residue

Stubbles are grazed over summer and then the remaining residue is rolled with a chain during summer to break it up and improve seeder trafficability.

Soil amelioration

Much of WA is acidic and canola par-

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better OILSEEDS

The case study farmer this issue is Brett Fowler from Williams in WA's southern corner.

ENTERPRISES

Cropping: Export hay, canola, barley.
Sheep: Merino/Dohne cross.

AVERAGE ANNUAL RAINFALL

550 mm.

SOIL TYPE

Gravelly loam.

SOIL pH

4.8-5.2.

Better Oilseeds is an exciting initiative funded by the Grains Research and Development Corporation and the Australian Oilseeds Federation.

The Better Oilseeds project is addressing the urgent and critical need to lift the productivity of oilseed crops within Australia, specifically canola, sunflower and soybean, to ensure critical mass and consistency of production and to improve the quality of grain produced. The project began in 2006 and aims to increase the value of the Australian oilseeds industry through enhancing productivity and value.

A number of activities are encompassed within the project which includes practical on-farm demonstrations of pertinent agronomic issues for all three crops, field days and forums and grower case studies to share knowledge within the industry.

Watch for a booklet which will include technical information and case studies of canola growers from around Australia to be released this spring. *Australian Grain* will be running a number of case studies on canola, soybean and sunflowers.



Brett Fowler, values canola in the rotation for its role in herbicide resistance management and spreading the cropping work load.

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ticularly is sensitive to lower pH. So our paddocks are lined to achieve a target pH of over 5.0 (CaCl_2).

Nutrition

We use 100–110 kg per hectare of Macro Pro Boost at seeding which is a compound N, P, K, S product. Macro Pro Boost has only been used in the last two years in an attempt to improve potassium (K) uptake early, particularly when drier starts to the season may mean top-dressed K isn't immediately available.

Canola responds well to high sulphur (S) rates particularly on the lighter WA soils.

The standard regime is about 60 kg per hectare of Sulphate of Ammonia (SOA), which combined with the S supplied in Macro Pro Boost, provides around 20 kg per hectare of S.

Total N application including that supplied from Macro Pro Boost and SOA is around 70–90 kg per hectare when aiming for two tonnes per hectare yield potential.

Nutrition following canola for the following cereal crop is also important with cereals generally more P and K responsive following canola.

Weed control and resistance

The weed control aspect of growing canola is certainly a significant benefit. But non-wetting gravels provide issues with several germinations of ryegrass and radish and tend to produce more inconsistent results with triazines.

The ability to use Group C and Group A in that part of the rotation assists in slowing the onset of resistance to any one group. SpraySeed is generally used as the knockdown where possible in the canola phase as an alternative option to glyphosate which is used in the remainder of the cropping program.

Canola is generally one in every three years hence there is good rotation of chemistry groups. Triazines and clethodim is used in canola, followed by metalochlor in export hay, trifluralin in barley and then back to canola.

- Year 1 Canola;
- Year 2 Export hay (K) cutting;
- Year 3 Barley; and,
- Year 4 Canola.

Pest management

Canola receives a blanket Talstar and chlorpyrifos spray post seeding pre emergent for RLEM, bryobia and veggie weevil. If required the first atrazine top-up will

have omethoate (Le-mat) added. Aphids, budworm and diamond back moth are rarely an issue.

Disease management

As canola rotations have become tighter, Jockey has been introduced into the program and more recently, Maxim XL. Our varieties generally have a minimum rating of 6.5 for blackleg (such as Bravo and Tanami).

Gross margin

Equivalent to cereals in the rotation.

Cost of production

Similar to other crops in the rotation as the price of selectives and insecticides particularly, have come back in recent times.

Economic benefit from growing canola

Financially, in the year of production, canola's gross margin is equivalent to other cereals in the rotation.

Following canola some of the best hay and barley yields are grown as the paddocks are generally weed and disease free paddocks.

Reliability and robustness of canola

The 2006 season gave a good indication of the reliability of canola in the rotation. In one of the poorest seasons in the history of the area, it still yielded 1.2 tonnes per hectare. Hence many growers now have the confidence to plant canola later into the year assuming the prices are there to justify lower yields.

Canola compared to other break crops

Canola is by far the most profitable break crop currently available in the rotation. Newer varieties of lupins and better radish control options for field peas may change that into the future. But with current pricing, canola is well in front.

Fertiliser use efficiency

Canola itself is a good scavenger for phosphorus on high phosphorus binding soil types such as the forest gravels on the property.

Cereal nutrition post canola needs to be treated differently to post cereals. Trials have indicated strong responses to both phosphorus and potassium post canola.

Canola yield

Average canola yield over the past 10 years has been 1.9 tonnes per hectare, with a low of 1.2 and high of 2.3 tonnes per hectare. ■



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