

CHOOSE CANOLA!

A new survey of crop rotation systems in the battered Cape wheat industry demonstrates the advantages of canola as a financially viable cash crop. **Kobus van Tonder** reports.

South Africa's wheat industry is in trouble. According to the National Crop Estimates Committee, 2 million tons of wheat was produced last year, more than a million tons short of the country's needs.

South Africa has become dependent on imported wheat when there are clear signs of world wheat stocks becoming scarcer and more expensive.

According to Grain SA CEO Jannie de Villiers, the country has the potential to produce at least 80% of its wheat needs, yet produces less and less each year. Wheat farmers have already indicated that they intend reducing production of the crop by 10% this year.

De Villiers blames low producer prices and rising production costs, and says that many growers are responding by adopting crop rotation systems. Bearing in mind that an ill-considered choice will

only worsen the situation, what is the best crop to rotate with wheat?

In the Western Cape, at least, the answer is canola, says the Protein Research Foundation (PRF), a privately-funded organisation that funds research into oilseed crops such as canola and soya beans, which are increasingly fulfilling the protein needs for animal nutrition in South Africa.

'REPLACING A WHEAT MONOCULTURE WITH ROTATION EMPLOYING A CASH CROP ENHANCES LONG-TERM PROFITABILITY.'

Certainly, in the Western Cape last year, canola emerged as a true cash crop. While wheat proved a disappointment, the yellow-flowered oilseed withstood virtually everything the weather and man threw at it, and 60 000t of the crop was produced,

a 50% improvement on the previous record.

CROP ROTATION

PRF's enthusiasm for canola was boosted by a financial comparison by Dr Willem Hoffmann of various crop rotation systems used in the province.

Hoffmann, who teaches farm management at Stellenbosch University, investigated crop rotation trials conducted between 2001 and 2009 at Langgewens experimental farm near Moorreesburg in the Swartland. These sought to determine the economic and biological feasibility of various rotation systems for wheat farms, and compared cash crop as well as cash crop/pasture systems (*see graphs*).

After his analysis, Dr Hoffmann evaluated the financial performance of each system at farm level. He found that although some alternative crops

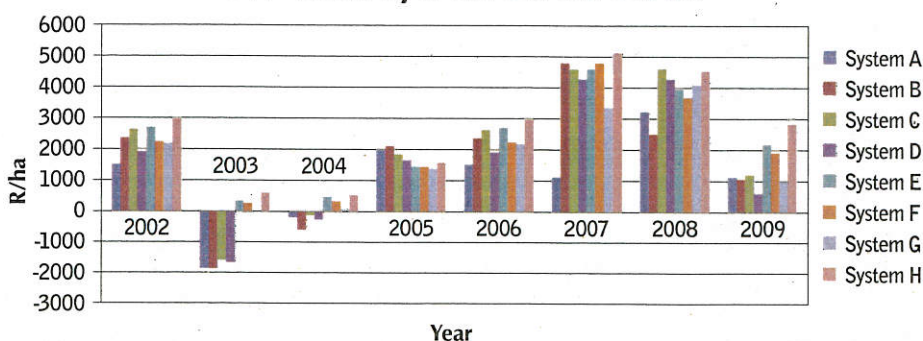
returned lower profit margins at the time than wheat, they improved the yield of the follow-up crop, which tended to make the profitability of the total system higher than that of wheat monoculture. Here was scientific confirmation of what many astute farmers had known all along.

"Replacing a wheat monoculture system, even if only on parts of a farm, with an appropriate system of rotation employing a cash crop is a great strategy to enhance long-term profitability on many grain farms of the Western Cape," says Dr Hoffmann.

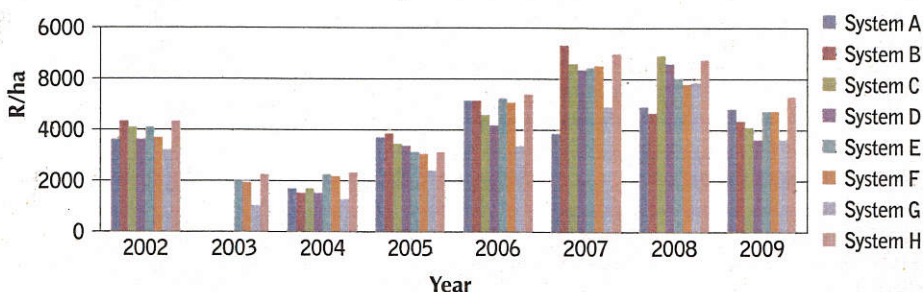
By contrast, adopting a pasture system would mean that "half the grain income would be forfeited, as pastures need to be established and livestock needs to be bought". It is also highly unlikely that cash-strapped producers would be able to adopt a pasture system. The research moreover showed

BELOW:
Canola crops in the Overberg. COURTESY OF THE PROTEIN RESEARCH FOUNDATION

Gross margin per hectare for each system 2002-2009



Gross production value per hectare for each system 2002-2009



KEY: The rotation trials conducted at Langgewens experimental farm near Moorreesburg from 2001 to 2009 consisted of the following eight systems:

- **Cash crop systems (continual cropping)**

System A: wheat, wheat, wheat, wheat; System B: wheat, wheat, wheat, canola; System C: wheat, lupins, wheat, canola; System D: wheat, wheat, lupins, canola

- **Cash crop / pasture systems**

System E: wheat, medics, wheat, medics; System F: wheat, medics/clover, wheat, medics/clover; System G: wheat, medics, canola, medics; System H: wheat, medics/clover, wheat, medics/clover (with part saltbush)

that a cash crop rotation system of wheat and canola was optimal.

GROSS MARGIN

According to Hardus van Vuuren, technical advisor at Wenkem South Africa, the fact that canola did so well last year can largely be attributed to new, higher-yielding cultivars and more effective production practices. The crop's potential to generate an acceptable gross margin makes it even more attractive and encourages farmers to invest in input costs.

Canola is particularly well-suited to the higher rainfall areas

of the Swartland, and average yield has grown significantly. Four years ago, the norm was between 0,8t/ha and 1,2t/ha; today some farmers are achieving 1,5t/ha and more.

Van Vuuren estimates that the cost of producing a stand of high-yielding canola is roughly similar to that of wheat. With its increasing yields, this is a cash crop that's hard to beat.

Finally, research in the Swartland has confirmed that canola helps to make wheat significantly more productive, thanks to its efficacy

at providing a disease break and maintaining soil condition. Data from study groups in Eendekuil, Porterville and Malmesbury demonstrated an increase in wheat yield of 23,7%, 18,14% and 11,42% respectively the year after canola was planted, compared with wheat-on-wheat rotation systems.

These results helped to confirm Dr Hoffman's findings on canola's contribution to overall, long-term profitability on grain farms.

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