

Canola set for growth in the Western Cape

Geographic Information System (GIS) technology has been used to determine the land potentially available for canola in the Swartland and the Southern Cape. **Kobus van Tonder** reports.



A land-use survey in the Western Cape has shown that there is more land available for canola production than was previously thought.

In 2013, the Western Cape had more hectares planted to canola than ever before. A study under the auspices of the Protein Research Foundation (PRF) was therefore conducted to determine the total area of land suited to canola production in the Western Cape.

RESEARCH METHODOLOGY

Dr Mark Hardy, a former specialist agricultural scientist at the Institute for Plant Production at the Western Cape's Department of Agriculture and currently an independent agricultural research consultant, and Mike Wallace, of the Institute for Resources Utilisation at Elsenburg, worked on the project.

Geographic Information System (GIS) technology was used to determine the total area of arable dryland suited to canola production, and to develop tables and maps showing places in the Western Cape suitable for canola production. Potential effects of

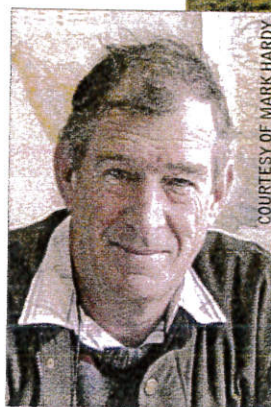


GERHARD SCHOLTEMEIJER

environmental variables such as seasonal water supply, growing degree days (heat accumulation) and photothermal units (PTUs) on the growth of canola in the Western Cape were considered.

AN ESTIMATED 743 500ha OF CULTIVATED LAND IN THE WESTERN CAPE IS SUITED TO DRYLAND CANOLA PRODUCTION

The study showed that, with a few exceptions, growing degree days and photothermal units would not limit the growth and development of medium maturity-type canola cultivars planted on 1 May in the Swartland and on 15 April in the Overberg/Southern Cape dryland



DR MARK HARDY

cultivated areas suited to winter cereal crop production systems.

However, most grain-producing regions of the Western Cape experience extended periods of dry, hot weather during the growing season. Often, these occur early (in May) and in August and September. While there were sufficient PTUs available, development and yield of canola could be limited by high temperatures and poor soil water availability.

Seasonal rainfall was therefore seen as the primary environmental factor influencing yield. Predicted yields, based on seasonal water supply (SWS) and water-use efficiency (WUE) (the SWS X WUE model), did not provide realistic estimates of yield potential in the study when compared with known

long-term potential yields. However, the range in predicted yields from 'low' to 'intermediate' and 'high' production potential gave a useful guideline towards allocating canola production potential areas.

ENVIRONMENTAL INFLUENCES

Hardy sees the soil as an important environmental variable, with a major influence on the production potential of all crops. Unfortunately, he could not use soil in his model, as sufficiently detailed information was not available. He therefore had to rely on the inputs of experienced field-crop advisors from the grain-producing regions for assistance. Together, they verified the SWS-based yield predictions, adjusting where necessary. Integration of local experience with the model resulted in a surprisingly large estimated area of 743 500ha of cultivated land



suited to dryland canola production in the traditional winter cereal production sub-regions of the Swartland and the Southern Cape.

Hardy estimates that about 37% of this area (273 000ha) has high production potential, about 56% (420 000ha) has intermediate production potential, and about 7% (50 300ha) has low production potential. New production areas with intermediate to high production potential of about 19 000ha have been identified.

INCREASED INTEREST

PRF chairperson Gerhard Scholtemeijer says the findings will boost the canola industry. Bigger role players who previously considered local canola too small to invest in, are now keen to get involved, and those

already involved want to expand. Soill (Southern Oil) a leader in the SA edible and bulk oil industry, upgraded their site recently to receive an expected bumper harvest of 100 000t canola. Further increases in canola production may result in other oil-crushers becoming interested. The resultant increase in canola meal will be welcomed by the manufacturers of animal feed.

SEED SUPPLY

Other changes that Scholtemeijer expects are new fertiliser blends that include more sulphur, critical for high yields in the crop, and the registration of herbicides and insecticides for canola.

Canola seed is usually purchased annually and little farm-retained seed is planted.

Increases in canola production will offer more opportunities for seed sales. Growers can be expected to demand the varieties that perform the best in national cultivar trials. Seed dealers will have to pay attention to the variety tests.

Scholtemeijer believes that yields are poised for an increase in the next few years now that canola hybrids are becoming more widely adopted by producers.

"We at the PRF are aware of the big step new canola growers have been taking in recent years towards ensuring the future economic stability of their farming operation. As with present producers, we'll continue working with them to become familiar with canola," he says.

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ABOVE: Canola stands such as these in the Overberg are proof that the crop is taking off in the traditional winter cereal production regions.
MARIUS SWART