Choosing the right canola cultivars

It is a common mistake to select inappropriate canola cultivars, says award-winning farmer Boet le Roux. He bases his choices primarily on weed control and yield. Denene Erasmus reports.

Canola plantings in the Swartland and the Western Cape have been increasing steadily over the past few years, as more farmers recognise the benefits of including canola as a viable cash crop in rotation with wheat and other grain crops. Over the past year alone, the area planted to canola in this region has increased from 16 000ha to 20 000ha.

Canola farmer Boet (Andries) le Roux, who won the awards for the highest yield and gross profit margin respectively in the Swartland region at the 2013 Canola Block Competition, is quick to extol these benefits. He says that canola not only offers better returns over traditional grain crops in this area, such as barley and oats, but also improves weed management and soil health.

Boet operates on the farm Vlakkenheuwel (1 200ha), situated along the Berg River in the Porseleinberg area near Hermon.

Diversification and Rotation

“One of our core farming values is to conserve our natural resources for future generations,” says Boet, a fourth-generation farmer, who, apart from cash crops, also grows wine grapes on 75ha and runs an 800-ewe SA Mutton Merino flock.

“We have to conserve and build on our assets, not squander them with no regard for those who’ll come after us.”

To ensure the long-term financial sustainability of the business, Boet relies on diversification. This is one of the reasons he decided to include canola as an alternative cash crop. The basic premise of rotation is to ensure sustainability within a minimum tillage system.

“When I started farming in 1977, we achieved a wheat yield of between 1.5t/ha and 2t/ha. Since then, thanks to modern technology and a better crop rotation cycle, this has increased to between 3.5t/ha and 4t/ha.”

Boet follows an eight-year rotation cycle: medics-wheat-medics-wheat-canola-wheat-canola-wheat-medics. This year he will harvest 400ha wheat, 200ha medics and 200ha canola. In addition, he will plant 100ha—mainly oats—for grazing.

Selecting the Optimal Cultivar

Incorporating canola in the rotation system can reduce the severity of certain plant diseases that affect grain crops. Boet explains that because canola is not a grain crop, but an oil seed crop and a member of the family Brassicaceae, it does not serve as a host for pathogens affecting among others, wheat and oats.

Canola is Not a Host for Pathogens that Affect Wheat and Oats

Canola breaks the disease chain and this reduces disease pressure in wheat and other grain crops. It also enables a more sustainable and effective weed management programme. Different types of herbicides can be used on canola, which is a broadleaf crop, and cereal crops. This variation helps to prevent herbicide resistance in weeds.

It is here where cultivar choice becomes important. “We select canola cultivars that best aid our weed management objectives,” says Boet.
He plants a Triazine-tolerant cultivar such as Hyola 555TT where he needs to control broadleaf weeds and grasses. On lands where there are few or no broadleaf weeds, he plants conventional varieties such as Agamax and Garnet.

He claims that one of the most common mistakes farmers make when planting canola is to select the wrong cultivar. "To learn about the newest cultivars farmers need to attend farmer information days," he advises, adding that they should also carry out trial plantings of new cultivars. He does so himself every year.

Boet adds that yield is not the only factor to consider. "Some cultivars that offer higher yield also require more inputs, so rather look at overall profitability."

PEST AND WEED CONTROL
Boet employs the help of technical specialists who advise him on the best options for production management. Working with them, he has designed a comprehensive weed and pest management programme.

Approximately 10 days prior to planting, Boet sprays a glyphosate-based, broad-spectrum systemic herbicide such as Roundup on all the canola lands. This eliminates most weeds, including annual broadleaf weeds and grasses. He then sprays Ecopart and glyphosate to control post-emergent broadleaf weed.

For conventional cultivars, he uses a selective pre-emergence herbicide such as Trifluralin at planting to control annual grasses and broadleaf weeds. With Triazine-ready cultivars, he sprays Atrazine, a herbicide for pre- and post-emergence broadleaf and grassy weeds after planting.

The main canola pests in this area are diamondback moth and aphids. To control the former, he sprays Methamidophos, an organophosphate insecticide (750mL/ha). For aphids, he sprays a Dimethoate-based insecticide such as Dimet (500mL/ha) during stem elongation.

FERTILISATION, PLANTING AND HARVESTING
Boet practices no-till planting, using a 4.5m-wide Rovic planter with an inter-row spacing of 280mm that prepares the soil surface and plants in one pass. Seed, fertiliser and herbicide are applied directly into the stubble and residue of the previous crop. "We usually start planting during the last week in April and we take great care to properly sift the seed before planting," he explains.

To prepare the soil, 500kg/ha of gypsum is applied, providing about 80kg/ha of sulphur.

CONTINUED ON NEXT PAGE →
Canola needs only about 30kg/ha of sulphur, but the gypsum is retained in the soil to help neutralise nitrogen and potassium, especially during subsequent wheat planting years that follow canola in the cycle. Between 95kg/ha and 115kg/ha of nitrogen is applied to the canola annually, in three applications: 15kg at planting, 60kg during stem elongation, and between 20kg/ha and 40kg/ha at 5% to 10% flowering.

LIFE ON THE FARM
Boet believes that to be successful, it is crucial to stay at the forefront of new technology, and his vineyards testify to this. Almost all of them have been planted to

'SOME CULTIVARS THAT OFFER HIGHER YIELD REQUIRE MORE INPUTS – RATHER LOOK AT OVERALL PROFITABILITY'

Boet also applies 12kg/ha of phosphorus at planting. The trace elements zinc, boron and molybdenum are applied as a top dressing, along with a fungicide spray at flowering.

'Timing is everything when it comes to harvesting canola,” he says. Canola can be harvested directly or first swath and then threshed (this technique is mainly used in areas where the canola is more likely to suffer pod shatter or wind damage). "We don't do swathing. We use a defoliant such as Disrupt which we spray towards the end of October at 75% pit colouring. After applying the defoliant, we have to start harvesting within seven to 10 days.”

ABOVE: Boet won the 2013 Canola Block Competition for the Swartland region with a block of Agrofax canola that yielded 2.24t/ha. The average canola yield for the farm is about 2t/ha.

APPRECIATE FARMING ITSELF
"I want the children to want to come back and work here after they finish school,” he says. Recognising the difficulties in finding work without experience, Boet offers the children the opportunity to return to the farm after school, to gain experience and "get a foot in the door". One of his greatest frustrations, he says, is the growing administrative burden on farmers. "Farmers are people who like being outside, but these days I spend more time in the office than on the lands,” he says. He is perplexed by how farmers are often depicted in the mainstream media, saying there appears to be little understanding of the diverse and complex skills needed to run a successful farm. "You have to be an agricultural economist and a mechanic. You have to understand chemistry, politics and even the weather!”

• Email Boet le Roux at boetleroux@telkomsa.net.