

Innovation drives citrus nursery's 450% production increase

By Jeandré du Preez 3:23 pm - April 10, 2017

In 2014, the Cederberg Tree Nursery produced 100 000 citrus trees a year. Two years later, after its acquisition by ANB Investments, the nursery produces more than 550 000 citrus trees annually.



Trees are produced on 11ha at Cederberg Tree Nursery.
Photo: Jeandré du Preez



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An increasing demand for trees has seen the Cederberg Tree Nursery, outside Citrusdal, one of South Africa's prime citrus areas, greatly expand its existing production capacity. Projections are that the nursery will be producing 850 000 trees per annum by 2019.

"The citrus industry has been doing very well in the past four years and we've seen a large spike in the demand for trees," says Cederberg's general manager Scott McKenzie.

At present, the nursery is processing orders from as far afield as northern KwaZulu-Natal and Groblersdal in Limpopo. "We're already fully booked until 2019 in terms of trees to be supplied."

The higher demand is due to increased planting and favourable fruit prices. In the Western Cape particularly, wine and stone fruit farmers are planting more citrus.

Cederberg Tree Nursery is a wholesale operation and does not handle retail sales. All plant material, including seeds and budwood, is certified by the Citrus Foundation Block of Citrus Research International (CRI).

"They supply us with the plant material that we need to produce the trees. In this way, the industry ensures that diseases aren't being spread," says Scott.

For example, the heat-resistant Asian form of HLB (from the Chinese huanglongbing, commonly called citrus greening disease), is a major threat to the industry worldwide.

"If it were to infiltrate South Africa, it would have a devastating effect on productivity in the citrus industry. Biosecurity is therefore of the utmost importance," stresses Scott.

Pest control and infrastructure

The nursery covers 20ha; of this, 11ha are used as growing space. There are five net structures, five large greenhouses and seven tunnels.

"It's important to keep good control over the trees, to keep the nursery free of any sickness and to regularly test for any diseases that present a risk to the nursery," says Scott.

All of Cederberg's rootstock tunnels are equipped with sticky traps that, along with plant inspections, detect the presence of potentially damaging pests.

Soil samples are tested four times a year to ensure that the trees are not infected with soil-borne pathogens such as Phytophthora.

"All of our equipment is regularly sterilised to prevent the spread of any pests and diseases," explains Scott. "The entrance and exit of each growing structure has a footbath to control the spread of any soil-borne disease that might be present on shoes."

In expanding to meet the growing demand for trees, the nursery has focused on structures that are 'bio-secure ready'. "These will have a fine mesh that will protect against a large range of disease-spreading vectors," he says.

Growing rootstocks

The process of producing a citrus tree for commercial production starts in the germination room, where climate and lighting are strictly controlled. After germination, seedlings are

taken to a greenhouse, where they are planted out and fertilised. To meet demand, the seedlings are planted in a high-intensity system.

Water efficiency

Improved propagation methods have enabled Cederberg Tree Nursery to significantly decrease the time it takes to grow a plantable tree.

"The nursery used to take 20 to 24 months to produce a tree. Now we're producing trees in 14 to 18 months," says Scott.

He's unwilling to reveal the trade secret of how they do this and will only say that various 'hi-tech' methods are involved.

The demand is currently so great that the effect of the nursery's improved production turnaround time might not be felt by customers, "but in the long run, when the demand is not so high, we'll be able to produce a tree faster than most other nurseries and therefore allow producers to get their trees in the ground sooner."

As soon as the seedlings have reached the required size, they are planted out in 4l rooting bags. Each bag is filled with coir, a natural fibre extracted from the husk of coconut, and fitted with drippers through which the plant gets its water and fertiliser.

The current drought has not affected the nursery, thanks to good boreholes.

"Our water efficiency is very high. Because each plant is in a bag we can monitor exactly how much water each bag gets to avoid over-watering the trees," says Scott.

Once the rootstocks are established and growing well, certain varieties are grafted onto them.

According to Scott, the most popular are mandarin and lemon varieties, with navel oranges and Valencias also in demand. After grafting, the rootstock is grown to the point where it is sold to the producer.

"Usually, we let the plant grow past a height of 80cm from the bag before cutting it back to 80cm. This is industry standard, but it also depends on the producer's preference," says Scott.

Clients are notified as soon as their trees are ready. "At ordering we give each client a specific delivery date that we try to stick to, although unforeseen circumstances might result

in a short delay."

Customers can also inspect their trees at the nursery so that they know exactly what size tree they will be buying.

The nursery prides itself on its pre- and post-plant service and technical guidance.

Cederberg Tree Nursery employs 60 full-time workers and up to 100 seasonal workers.

A culture of pride

The company is strongly focused on its employees' personal development. Every growth structure in the nursery has a team leader. Along with their team, they ensure that their area of responsibility is well looked after.

"We also believe in empowering our employees through education," says Scott. "We regularly give them opportunities to attend courses to improve their leadership and communication skills.

"Through this, we try to instil a culture of pride and ownership in our employees."

Personnel are also supported through the nursery's active involvement in the community, especially in the area of early childhood development.

Email Scott Mckenzie, general manager at Cederberg Tree Nursery, at scott@cederbergcitrusnursery.co.za.

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