

Water Stewardship Case Studies
South Africa



Case Study 6:
Morgenzon Farm

Worldwide Fruit Limited are investing in Water Stewardship across their supply-base and will be presenting Water Stewardship case studies from supplying farms over the next 12 months. Their aim is to raise awareness of the challenges that South African growers deal with on a daily basis. Water management challenges and the solutions implemented to overcome them will be explored, but we will also see how growers are driving ongoing good management of water resources. Apart from water, case studies will also look at current sustainability strategies implemented and plans for improving sustainability into the future.

Case study 1: Boomerang Fruits

Case study 2: Dennegeur Farms

Case study 3: De Keur

Case Study 4: Dreem Fruit (Delecta)

Case Study 5: Cerasus Farming (Stems)



Case Study 6: Morgenzon Farm (Rubisco)

Summary

Morgenzon is situated in the Banhoek valley, just outside of Stellenbosch in the Western Cape province of South Africa. Morgenzon predominantly farms with plums, but also some pears, butternut, pumpkins, as well as indigenous flowers (Fynbos). They produce, pack and export their own fruit. They have their own packhouse on the farm, from where containers are loaded directly for the export market. Morgenzon is also one of four growers who are shareholders in RuBisCO (Pty) Ltd, a grower-based fruit marketing and exporting company. They are one of the original founders of the Banhoek Conservancy, and an active member in the conservancy's various social and environmental initiatives. A noteworthy sustainability initiative Morgenzon has implemented, is their new indigenous tree wind breaks and ecological corridors. This initiative leads to massive water savings and increases the biodiversity on the farm. They are currently taking out all non-indigenous alien trees, and are chipping it up along with old orchards and using it as organic mulch. Morgenzon believes that through their efforts with the conservancy and other initiatives, they are doing the right thing, and making a change. They believe that everyone can contribute to change, no matter how small the contribution is.

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About Morgenzon

Morgenzon produce, pack and export their own fruit. On the production side, Morgenzon Farm is situated in the Banhoek Valley, centre of the Cape Winelands, just about an hour's drive from Cape Town. Morgenzon has been farming predominantly with plums for the past 40 years. Of the 68 hectare farm, about 35 hectares are plum orchards, with some pear orchards, butternuts and pumpkins. 15 hectares of indigenous flowers (Fynbos) is also grown. Morgenzon Farm is 400 meters above sea level, with cold winters and deep red, well drained soils, making it ideal for fruit and indigenous flower farming. The flower farming also assists in ensuring the effective use of labour throughout the year. The farm currently has 150 staff members during peak season and 55 permanent staff that have been with the farm for the past 15-20 years. Morgenzon is always trying to improve with new varieties with the focus on taste. They are currently testing about 20 different varieties in experimental orchards. Because of concerns for global warming, their current focus is on low chill and single temperature varieties.

Grange Pack (Pty) Ltd Packhouse, owned by Morgenzon, is located on the farm. Containers are loaded directly on the farm ensuring a cost effective and reliable cold chain. They also pack stone fruit for a number of other growers.

Morgenzon is also one of four growers who are shareholders in RuBisCO (Pty) Ltd, a grower-based fruit marketing and exporting company, established in 2010. Grower shareholders own 76% of the company with management retaining 24%. RuBisCO is home to elite South African fruit growers, who dedicate their skills and manpower to consistently deliver high-quality fruit to overseas markets.

We had the privilege of visiting Morgenzon where we met with André Le Grange, owner of Morgenzon Farm, who told us all about their sustainable farming practices, together with their social and environmental initiatives.

“We are very passionate about farming with nature” - André Le Grange



View over Morgenzon Farm and the Banhoek Valley, with the Simonsberg Mountain in the background. Photo: Carina Wessels

Sustainability initiatives - water

Morgenzon Farm is fortunate to be located in a high winter rainfall region, while summers are relatively dry. They get part of their irrigation water from the Banhoek river and tunnel system in the mountains. The rest is from private dams. Borehole water is used mainly for household consumption.

Indigenous tree wind breaks

A noteworthy initiative Morgenzon has implemented, is their new indigenous tree wind breaks and ecological corridors. This initiative leads to massive water savings and encourages biodiversity on the farm. On establishing new fruit orchards, the old non-indigenous wind break trees are replaced with ecological corridors of indigenous trees, creating green zones that link up with natural veld so that wildlife can move around freely.

On most South African farms non-indigenous trees, such as beefwoods or pines, are still used for wind breaks, mainly because they are really fast growing compared to indigenous species. However, these alien trees consume huge amounts of water, is not that effective at reducing wind, and their roots can cause a lot of damage to irrigation systems. Morgenzon Farm suggests planting indigenous trees such as Yellowwood in combination with wild peach, wild olives and Keurboom (Afrikaans for “choice tree”). Keurboom, or *Virgilia*, is a genus of Southern African trees known for its very fast growth, but a tendency to fall over as it matures. Keurboom can last for about 20-25 years, however by the time the Keurboom is gone, your other long-lived trees have matured, providing the protection you need. “You give them enough water and look after them and it’s a much better option than beefwoods, pine trees and other aliens. Bees also love Keurboom when they flower, another sustainable way of keeping your bees healthy and happy”, says André.



Newly planted indigenous ecological corridor in the foreground. Photo: Carina Wessels



Older, more established ecological corridors. Photos: Carina Wessels

Mulching

The non-indigenous trees they take out, along with old orchards, are chipped up and used as organic mulch. Mulching has many benefits, it helps maintain soil moisture, moderates soil temperature, it breaks down, enriching soil, replacing soil carbon and increasing soil biodiversity, just to name a few. “Healthy soil means healthy fruit”, says André.



Photo: Carina Wessels



Photo: Carina Wessels



Photo: Carina Wessels



Photo: Carina Wessels

Netting

In season Morgenzon has nets over their crops. Netting structures are designed so that the nets can be rolled up after the season, not restricting the natural movement of bees and other insects during pollination. “Nets have resulted in a 15-20% water saving, in addition to providing protection from the wind and sun”, says André.

Irrigation

Morgenzon is installing drip irrigation in all new orchards, as they have had great success and have seen huge water savings with drip. “It really depends on what soil you have. We are fortunate in that we have good quality clay soil with excellent water holding capacity”, says André. They have also adjusted their irrigation infrastructure about two seasons ago to now gravity feed more than 60% of the farm. This has already led to energy savings of 50 000 kilowatt-hour of electricity.



Morgenzon farm dam. Photo: Carina Wessels

Initiatives implemented during the drought

During the drought that hit large parts of South Africa, including the Western Cape, around two to three years ago, Morgenzon Farm had to change their irrigation cycles to less hours per week. During this time they learned that irrigating the top 20/30 cm of their soil is sufficient, as this is where all the fine root systems of the tree are. They used to irrigate down to 60/70 cm into the root zone and never realised that they were over-irrigating. “We’ve had great success with not irrigating as deep anymore”, says André.

André is also Chairman of the Banhoek Irrigation Board (IB). The Banhoek IB is allocated 1.8 million cubic meters of water per year, of which they normally only use about 60-70% annually. In the drought, the Banhoek IB got into an agreement with Department of Water Affairs (DWA) to draw excess water from the Banhoek River in winter. The agreement included that those growers with big private dams would help store excess water, and then give water back to DWA during the off season when needed. This initiative provided a lot of growers, including Morgenzon Farm, with the water they needed to survive during the drought.

Sustainability initiatives – other

Banhoek Conservancy

The Banhoek Conservancy is located within the Banhoek Valley. It was founded in 2013 by a group of farmers in an attempt to protect the environment, to uplift the local community and to re-establish a balance between human activities and nature. Morgenzon is one of the original founders and an active member in the conservancy's initiatives.



The conservancy generates an income by providing about 70 km of well-designed off-road tracks for mountain biking, trail running, hiking, and walking. Funds generated from donations, events and various other activities in the conservancy are used for invasive alien plant clearing and uplifting and supporting the local community.

Many jobs have been created in the construction and maintenance of the trail network, as well as with alien clearing. In 2019, a massive alien clearing project was undertaken in the Banhoek and Dwarsrivier Valleys, thanks to R6 million in funding from the DWA. Youth education programs have also been established locally, such as education on nature and conservation, building, managing, and maintaining trails, and how to remove alien species. The many sporting events that pass through the Banhoek Conservancy also require personnel on the ground to make them happen. All route marshals and other workers on the trails come from the local communities. Hosting these events in the conservancy has also provided funds to keep the Kylemore school grounds clean and tidy, as well as paint the Kylemore Clinic.



Building a trail in the Banhoek Conservancy.
Photo: Morgenzon Farm



Supporting community initiatives such as the Aitsa After Care Centre. Photo: Morgenzon Farm

Camera traps in the Banhoek Conservancy have captured evidence of many animals such as honey badgers, porcupine, small antelope, and even leopards. In a joint effort with the Cape Leopard Trust, the Banhoek valley is patrolled regularly to clear any animal snares or traps to help protect the endangered Cape Leopard and other animals.

Right: Removing a snare. Photo: Cape Leopard Trust



Final thoughts

“With all our efforts through the conservancy and other initiatives, we’re doing the right thing, we’re trying to make a change. Even if it’s a simple thing like recycling, everyone can contribute, no matter how small the contribution is. I think that’s what everyone needs to focus on” - André Le Grange.



André Le Grange, owner of Morgenzon Farm. Photo: Carina Wessels



All harvesting were done by the time we visited Morgenzon Farm, so Morgenzon and Rubisco provided these photos for us.