

WORLDWIDE  *fruit*

Water Stewardship Case Studies

South Africa


delecta
fruit | marketing | export

Case Study 4: **Dreem Fruit**


BLUE NORTH
THINKING | FUTURE

Report compiled by Blue North Sustainability
Photo: Carina Wessels

Worldwide Fruit Limited are investing in Water Stewardship across their supply-base and will be presenting 12 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)



Summary

Leonard Droomer, general manager of Dreem Fruit, was honoured with Delecta’s Stone Fruit Producer of the Year award in 2019. When visiting the farm, we came to understand why. Leonard is a modern-day farmer who sees farming as managing a business. He acknowledges that you cannot be an expert in everything and is not afraid to outsource or buy-in knowledge on the sciences. When it comes to sustainability, Dreem Fruit tries to achieve a balance around the principles of economic and social wellbeing, while protecting the environment. Some of the initiatives they have implemented to promote sustainable water use include planting higher value crops and planting the right cultivars, mulching, staying informed on the latest technology, their irrigation methods, and scheduling. For Dreem Fruit, sustainable management of biodiversity is all about getting the right information and then making the right decisions. They have seen how their low impact spray programs increased biodiversity. Dreem Fruit’s cover crops are also a biodiverse mix of whatever wants to be there, promoting plant and animal diversity, in addition to ensuring soil health. Their biggest driver to success is testing cultivars for at least 3 years before planting commercially, making sure they plant the right cultivars for their specific region and climate.

Contents

- Background 2
- Sustainability: Water Use 4
- Sustainability: Biodiversity 6
- Coping with Climate Change 7
- Plans For The Future 8
- Biggest Driver to Success 9

Background

We had the privilege of visiting Rouzelle farm, which is the home of Leonard Droomer, General Manager of Dreem Fruit. The Droomer family purchased Rouzelle farm as recently as 2006. Not coming from a fruit farming background (Leonard's dad worked in forestry) it is commendable what a successful business Dreem Fruit has become.

In 2019, Leonard Droomer was honoured with Delecta's Stone Fruit Producer of the Year award. About half of Dreem Fruit's stone fruit production is marketed by export company Delecta.

Rouzelle farm is based in the Breede River Valley between Worcester and Ceres and is a small 100 hectare farm, of which 70 hectare is currently utilised for stone fruit and some wine grapes. Dreem Fruit (the name comes from the family's surname - Droomer) was created in 2016, when they realised they needed to have a brand associated with the fruit produced on their farm.

Leonard joined the farm in 2010 after completing a BSc Agricultural Economics & Economics degree. He also achieved an MBA in 2019. Leonard is responsible for most daily activities, ranging from production, packing, and marketing decisions, as well as for longer term strategic decisions, such as which cultivars to plant and who to align with.



Photo: Carina Wessels

Leonard Droomer of Dreem Fruit, on his farm Rouzelle, in the Breede River Valley.

“I see modern day farming more as managing a business. You can outsource, or buy-in the knowledge on the sciences, because you can’t be an expert in everything.”

When the family originally bought the farm, it cultivated 100% wine grapes. However, since Leonard joined, the focus has moved away from wine grapes to higher value crops, mostly stone fruit. Over the years they have been evaluating fruits such as cherries, pears, apples, apricots, plums, etc. They have tested 250 cultivars from 11 breeding programs and their current focus is on nectarines and peaches. They are also considering planting citrus in the near future.

Dreem Fruit packs all of their own fruit. At the moment they have a very small packhouse, but they plan to expand later this year.

“We feel you can optimise your fruit a lot better if you pack your fruit yourself and also guarantee quality.”



Dreem Fruit plans to expand their current packhouse later this year. Photos: Carina Wessels

Sustainability: Water Use

Rouzelle farm is located in the middle of the Breede River Valley, with no rivers running through the farm, or mountains on the farm. Therefore, around half of Dreem Fruit's water comes from the Waboomsrivier water scheme. The rest comes from boreholes. They pump water into personal dams on the farm.

When it comes to sustainability, Leonard says that they try to achieve a balance around the principles of economic and social wellbeing, while protecting the environment.



Water being pumped into one of Dreem Fruit's dams.

“It's kind of about the small things we can do.”

Some of the initiatives Dreem Fruit have implemented to promote sustainable water use include:

Planting higher value crops - “I think the first thing is to make sure you are using your water on high value crops”, says Leonard. If you can move to higher value crops, you are using your water more sustainably from an economic and an environmental point of view. This is one of the reasons Dreem Fruit is moving away from wine grapes.

Cultivars - Planting the right cultivars and planning your cultivar spread can lead to water savings. Dreem Fruit has started to plant earlier cultivars to reduce the need for irrigation. These earlier cultivars will get more water from rainfall and once they have been harvested, the need for water is much reduced. The farm is in a winter rainfall region, so citrus will also get a lot of winter rain, therefore the plan to plant citrus in the near future.

Mulching - As Dreem Fruit is moving away from wine grapes, they have taken out many of their old vineyards. To not let anything go to waste, they have chipped it up to use as mulch in their orchards. Mulching has many benefits, such as reducing evaporation of water and promoting soil health.



Fresh wood chips for mulching, on a young nectarine orchard. Photos: Dreem Fruit

Technology - Dreem Fruit tries to stay informed about the latest technology. For example, they irrigate with soil moisture probes in almost all of their new blocks. Monitoring soil moisture has been a major change in their water management. They have also looked at using applications such as FruitLook (<https://www.fruitlook.co.za/>). FruitLook is an online tool that helps producers to understand how their crops respond as part of the bigger water cycle of their region. This online tool can provide insights into water use on farms, helping producers to become more resource efficient.

Irrigation methods & scheduling - Dreem Fruit is still debating whether micro or drip irrigation works best in their region. They planted two blocks of the same cultivar, in the same soil, with the same rootstock, one block with micro irrigation and one with drip irrigation. They could not see much difference. However, if you take water to fruit conversion rate, drip irrigation might be the best option for certain cultivars, says Leonard. Currently about 90% of their new plantings are under drip irrigation, but they design their irrigation system in a way that if they see the trees do not get adequate water quickly enough, they can convert to micro irrigation.



Drip irrigation in a young orchard.
Photo: Carina Wessels



Micro irrigation being installed.
Photo: Carina Wessels

Not all the water savings initiatives Dreem Fruit have tested have always been successful though. Last year they tested a weed mat, which is meant to help with weeds and soil moisture, but it was not successful. They could not see any difference between orchards with and without it. Leonard saw these weed mats in Turkey, where they use it quite extensively, and thought it must work. “Their soils are a bit different, maybe that’s the reason it didn’t work here. But yes, you have to test it”, says Leonard. He visited Turkey in 2019 to look at production techniques and cultivar selection.



Weed mat. Photo: Carina Wessels



Leonard visited Turkey in 2019 to look at production techniques and cultivar selection. Photos: Dreem Fruit

Sustainability: Biodiversity

For Dreem Fruit, sustainable management of biodiversity is all about getting the right information and then making the right decisions.

Low impact spray programs – Leonard says that whenever Delecta asks them for their spraying records, they can hardly believe how little Dreem Fruit has sprayed. Dreem Fruit works with an independent agricultural consultancy who do not sell chemicals, so they do not have any incentive to put down chemicals.

A good example of Dreem Fruit not using chemicals and how that leads to more biodiversity is the fact that they have not had to spray for red spider mite in the last three seasons. Leonard says that they do sometimes see red spider mite, but there are so many predators that are hunting it that you can just wait 3-4 days and then the red spider mite is gone. Red spider mite is a nasty pest and once you get into a red spider mite spray cycle it is very difficult to get out of it.

“Biodiversity, I think, is critical.”



Dreem Fruit’s strategy in terms of cover crops is to manage the diversity of whatever wants to be there. Photo: Carina Wessels

Cover crops – Dreem Fruit have completely moved away from monoculture cover crops. They encourage their weeds to grow. They have also had two different consulting companies come and look at planting extra weeds. The consultants would for example say that you do not have enough legumes and then you plant them in. Dreem Fruit’s cover crops are now just a nice mix of whatever wants to be there, promoting plant and animal diversity, in addition to soil health.

“It’s cheaper to run a more biodiverse weedy cover crop than monocultures, where you have to disk, mow, fertilise, mow again, etc. Instead, you just manage what is there.”

Coping with Climate Change

Dreem Fruit’s main strategy to cope with future climate change is selecting the right cultivars. They are testing almost everything for about 3-4 years before they plant commercially. “If you’re planting the wrong cultivars, you’re not going to get your tons per hectare, and you’re wasting a lot of money and obviously also water”, says Leonard.

Dreem Fruit has experienced chill units to drop over the last 10 years. Chill units for the region used to be about 700-800, where now it is averaging 600. This means that they would need to plant cultivars that are about 400 to 500 max chilling requirement, just to give them some scope to handle any warmer winters.



Nectarines blossoming with snow on the mountains in the background. Photo: Dreem Fruit

Chilling requirement is the minimum period of cold weather after which a fruit-bearing tree will blossom. One chilling unit, in the simplest models, equals one hour exposure to the chilling temperature; these units are summed up for a whole season. Advanced models assign different weights to different temperature bands. On the right is an example table of average winter temperatures and its respective chill units.

Average temperature (°C)	Winter chill units
0	1250
7.9	1100
10.2	800
12.7	600
13.1	520
13.6	500
14	450
15.3	330
15.5	300

Plans For The Future

Dreem Fruit's plans for the future include planting citrus, as that would allow them to pack continuously for 11 months of the year, and also to employ more permanent staff. The plan is to end with about 30/40 hectares of stone fruit, 30/40 hectares of citrus and about 10 hectares of wine grapes.

They are also planning to expand their packhouse later this year, hoping to use the packhouse more consistently throughout the whole year. With the new packhouse they are considering going solar, and then they will also use solar energy to run part of their irrigation pumps.

Biggest Driver to Success

Leonard says that planting the right cultivars are their number one biggest driver to success. That is why they focus so much on testing cultivars. “We only want to plant things with the ‘eat some more’ characteristic, you want to eat this one, and the next one, and the next one...”



Photo: Carina Wessels



Photo: Carina Wessels

Dreem Fruit tests any new cultivars for at least 3 years before planting commercially.



Photo: Carina Wessels



Photo: Dreem Fruit



Photo: Dreem Fruit



Photo: Dreem Fruit

Harvest time at Dreem Fruit.