



## CASE STUDY: AVOCADO

By Carina  
Wessels

### Halls & Laeveld Boerdery Trust share their user experience feedback on the CCC carbon calculator

#### About the CCC Initiative



The Confronting Climate Change (CCC) Initiative is a carbon footprinting project, developed to support SA's wine and fruit sectors through identifying and responding to the risks and opportunities associated with carbon emissions.

CCC asked two avocado producers/packers and CCC users to share some of their experiences with the online carbon calculator.

#### About Halls



Halls is a global fresh produce supplier trusted for over 130 years. Halls was established in 1890 by H.L. Hall on the banks of the Crocodile River in the Eastern Transvaal, now known as Mpumalanga. Since then, Halls has firmly established itself as a brand built on integrity, family values and sustainability. As a leading avocado and tropical fruit supplier, Halls source their produce from their own farms and selected global grower partners. They supply fresh produce to 28 countries around the world.

#### About Laeveld Boerdery Trust



Laeveld Boerdery Trust produce and export quality avocados and macadamias. There is a rich history here that starts with Merensky High School in Tzaneen, which first opened its doors as an agricultural school in 1935. The school and the land they use for farming belong to the state, and Laeveld Boerdery Trust, created in 1996, manages the farm on behalf of the school. Today, learners at Merensky have the option to study Agri-Sciences, but also a wide range of other learning areas, including General Academic, Technology, Music, Dance, Drama and Art.

## CCC supports Laeveld Boerdery Trust in their carbon reduction strategy

Laeveld Boerdery Trust started using the CCC carbon calculator in 2018 as part of their SIZA (Sustainability Initiative of South Africa) audits. Their electricity usage is an estimate, as they share an electricity account with the school, however, they diligently measure their other farm hotspots, which include diesel, fertilisers, and agrochemical inputs. Laeveld Boerdery Trust uses their CCC carbon footprint report to compare their inputs year on year. Since using the CCC tool, they have become much more aware of the impact fuel use and fertilisers have on their carbon footprint. They reduce their diesel use where possible, avoiding unnecessary rides. The Merensky High School also has an active recycling project for all recyclable materials, and all the school's food waste and garden waste are composted and used as fertiliser on the farm. Since using the CCC tool, they have also started to spray more environmentally friendly agrochemicals.



### Reduce your carbon emissions by measuring and managing your hotspots!

#### Farm Hotspots

On the average avocado farm, electricity is the highest contributor to CO<sub>2</sub> emissions, followed by diesel and nitrogen fertiliser.

- Ensure that you only use the optimum amount of water. This will reduce your electricity used for pumping water, reducing your cost, and lowering your carbon footprint.
- Optimise the amount of plant protection products used, and synthetic fertiliser used. This will reduce your impact on the environment, reduce your carbon emissions, and reduce your input costs.
- Consider the use of smaller purpose driven vehicles and equipment, and/or electrical vehicles to reduce fuel usage.
- Use mulching and/or cover crops to improve soil health, with the added benefits of:
  - reducing evaporation,
  - improving soil water holding capacity,
  - improving soil carbon sequestration potential,
  - enhancing biodiversity (above and below ground).





Photo provided by Halls

## **CCC supports Halls in their carbon reduction strategy**

Halls started calculating their carbon footprint for their Limpopo and Mpumalanga farms, packhouses, and coldstores with the CCC carbon calculator in 2019. Their aim was to be more transparent about their sustainability strategy. The CCC carbon footprint report now provides them with a quantifiable output of the areas they really need to work on.

Halls strive to be responsible stewards of the land, from soil to shelf. They have five environmental goals: responsible water use, improved soil health, enhanced biodiversity, reduced carbon footprint and waste reduction.

On farm level, Halls gravity irrigate most of their orchards. This saves electricity for pumping water, lowering their carbon footprint, as well as reducing electricity costs. They are also in the process of replacing old vehicles with more fuel-efficient ones, as well as replacing equipment, such as diesel operated pole pruners, with battery operated ones. All their pruned material gets chipped and is used as mulch. They also buy in additional mulch when needed. Halls have recently installed solar energy at their Mpumalanga packhouse, all lights have been replaced with more energy efficient LEDs, and they also drive general awareness amongst their staff to do the little things such as switching lights off when leaving a room.



# Reduce your carbon emissions by measuring and managing your hotspots!

## Packhouse & Coldstore Hotspots

For the average avocado packhouse, packaging contributes most of the CO<sub>2</sub> emissions, with the amount of corrugated cardboard (cartons) used typically being the biggest culprit. Electricity is usually the second largest emissions source in any packhouse. However, in the average coldstore, electricity is the main contributor to emissions, followed by refrigerant leakage.

How to reduce packhouse and coldstore carbon emissions?

- Conduct an energy audit that will specifically analyse the energy flows and could make recommendations on cost effective opportunities for energy savings.
- Refine your measurements by installing electricity meters to measure and monitor usage, and programmable thermostats.
- Investigate renewable energy options, such as solar panels.
- Install energy saving light bulbs throughout.
- Ensure continuous awareness training for staff on how to reduce electricity use.
- Ensure that all cooling units are in optimal condition and serviced regularly.
- Make sure that there are no leaks in air compression units.
- Repair and insulate ducting.
- Review Standard Operating Procedures (SOP's) to minimise loss of cold air from the coldstore.

The way one handles waste could also have a large impact on a packhouse carbon footprint. For example, the recycling of waste will result in a lower carbon footprint than the disposal of waste at a landfill site. Composting organic waste can also reduce emissions with the added benefit of ensuring soil health.



Photo provided by Halls

## More on Halls and Laeveld Boerdery Trust's user experience with the CCC tool

**How have you found the use of the online CCC tool, easy or challenging?**

**Halls:** *We are still new to the tool, and it was a bit of a learning curve. However, the hardest part was actually getting all the data together before entering it into the tool.*

**Laeveld Boerdery:** *We find the tool really user friendly.*

**Has the carbon calculator been of value to your business?**

**Laeveld Boerdery:** *It definitely adds value. We can compare our inputs over multiple years and adjust accordingly. Seeing that we use too much diesel and reducing it, also has financial implications, so it's a handy tool!*

**Halls:** *Yes, it's good to have that calculated data to see where we need to improve, and also to report to our directors. It's also very valuable to be able to benchmark ourselves against others in our industry.*

**Have you found any particular value in having everything together online?**

**Halls:** *Yes, definitely. It can be time consuming collecting the data, so it's really good to be able to log on and enter bits and pieces of data as we get it.*

**Laeveld Boerdery:** *Yes, it's a brilliant system. I pay the yearly license fee with a smile.*

**How do you find the support that is given?**

**Laeveld Boerdery:** *I called your office for support on my last report and I was helped immediately. I was given very clear feedback and it's nice to have been able to speak to someone in Afrikaans. Brilliant service!*

**Halls:** *Absolutely happy with the support. Compliments to the CCC team for that, thank you very much.*



Photo provided by Halls

**Have you attended a training workshop? If yes, was it helpful?**

**Laeveld Boerdery:** *Yes, I attended an in person workshop a view years ago. They showed us exactly how the tool works.*

**Halls:** *I attended two online workshops, the first one before we started our carbon footprint. Once we started, I felt that I needed a refresher and attended a second workshop. The workshops really helped to put everything into context. I also appreciated the introductory presentations which explained the importance of doing a carbon footprint.*

**Would you recommend CCC to others?**

**Halls:** *Yes, I have already recommended the tool to the South African Avocado Growers Association (SAAGA) as an option to help our avocado farmers to be more sustainable.*

**Laeveld Boerdery:** *Yes, I am very happy with the tool.*

---

**Contact Confronting Climate Change today to start measuring and managing your carbon emissions!**



[support@bluenorth.co.za](mailto:support@bluenorth.co.za)



063 688 5593



Find us online at [www.climatefruitandwine.co.za](http://www.climatefruitandwine.co.za)



Follow us on Twitter

@Confrontclimate

Follow

@BlueNorthSA

for agricultural updates



Email newsletters:

**Subscribe** on

our website

or send an email

**To join our Carbon Heroes programme visit:**

[www.carbonheroes.co.za](http://www.carbonheroes.co.za)

Carbon Heroes give recognition to our B-graded license holders for meticulously calculating their carbon footprint.

