



VRU
VAN LOVEREN



CASE STUDY: WINE GRAPE FARM & CELLAR

By Carina Wessels

Van Loveren shares 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 a wine grape farm and cellar and CCC user to share their sustainability initiatives and some of their experiences with the online carbon calculator.

About Van Loveren's history

Van Loveren has been in the Retief family since 1937 when Hennie Retief snr acquired the land in the Robertson Valley and named it after Christiena van Loveren, an ancestor of his new bride, Jean van Zyl. Today, Van Loveren is a third-generation family-run farm. The story of the third generation began in the 1990's, when the four Retief cousins joined the family business. In 2000, they introduced the Four Cousins wine range, cementing their role in Van Loveren's success. The four Retief cousins (photo on the right) are now the driving force behind the company.



Photo: Van Loveren

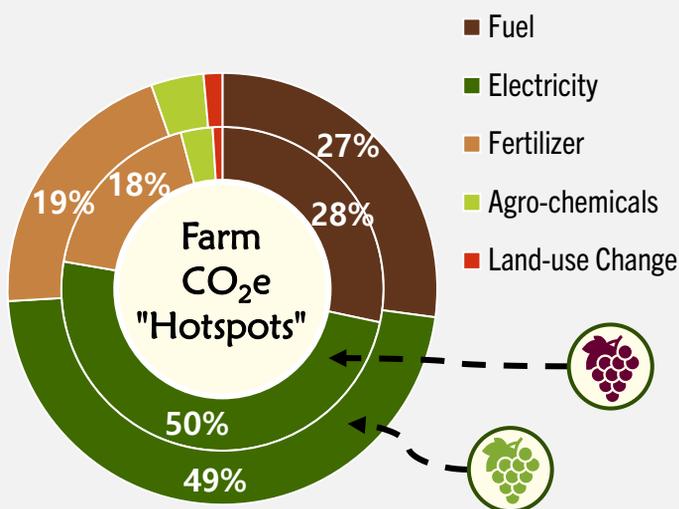
CCC supports Van Loveren in their carbon reduction strategy

Van Loveren started using the carbon calculator as they are deeply involved in conservation and protecting their natural resources and wanted to know how much CO₂ their processes emit. Calculating their carbon footprint with the CCC tool has allowed Van Loveren to become more aware of the impact of their inputs. Since they started using the carbon calculator, they have seen that electricity and diesel contribute most to their farm emissions, and packaging is the biggest culprit in the winery.



Van Loveren is now one of our Carbon Heroes! Carbon Heroes (www.carbonheroes.co.za) showcases producers going the extra mile to reduce emissions and increase their resilience in the face of climate change.

Typical wine grape farm hotspots



On the average wine grape farm, usually grid electricity is the main contributor to carbon emissions. Because South African grid electricity is predominantly coal based, it is especially carbon emissions intensive, both in production and use. The high electricity consumption is typically derived from pumping of water for irrigation and therefore one should optimise irrigation needs through precision irrigation. It can reduce your electricity bill for the pumping of irrigation water and reduce your carbon emissions.

Diesel usage is the second largest source of emissions on the average wine grape farm and relates to activities such as harvesting, spraying, soil preparation, transportation, etc. To reduce fuel related emissions, one could consider the use of smaller purpose driven vehicles and equipment, and/or electrical vehicles if possible.

Synthetic nitrogen-based fertilisers are the third biggest emitter at wine grape farm level, and are emissions intensive from a production and usage side. Producing these synthetic fertilisers are energy intensive and it is often applied inefficiently or in excess, resulting in large amounts of nitrous oxide (N₂O) emissions. N₂O is a very powerful greenhouse gas - one ton of N₂O is equivalent to 300 tons of CO₂! It is thus important to optimise the amount of synthetic fertiliser and other plant protection products used. This will reduce your impact on the environment, reduce your carbon emissions, and reduce your input costs.

Emission reduction and other sustainability initiatives at Van Loveren

Van Loveren is especially considerate towards the environment and want to help preserve our natural resources and provide prosperity for future generations. They are convinced that sustainability is the foundation on which to build a secure future and are thus committed to reduce their carbon footprint. They are looking into starting their own carbon project, with the aim of attaining carbon neutrality in future. Van Loveren was awarded WWF Conservation Champion status for work being done on their Vinkriver farm.



Some of the initiatives Van Loveren has introduced include:

- 800 solar panels on the winery's roof, which supplies about 30% of their energy.
- the production of certain wine and alcohol-free products in 100% recyclable aluminium cans as an alternative to glass bottles.
- running a successful recycling project on their farms which removes paper, plastic, and bottles.
- setting aside 600 ha of land for conservation, minimizing loss of natural habitat.
- an alien invasive plant clearing programme.
- a water-wise management programme.
- a biodiversity hiking trail educating their visitors



Photo: Van Loveren

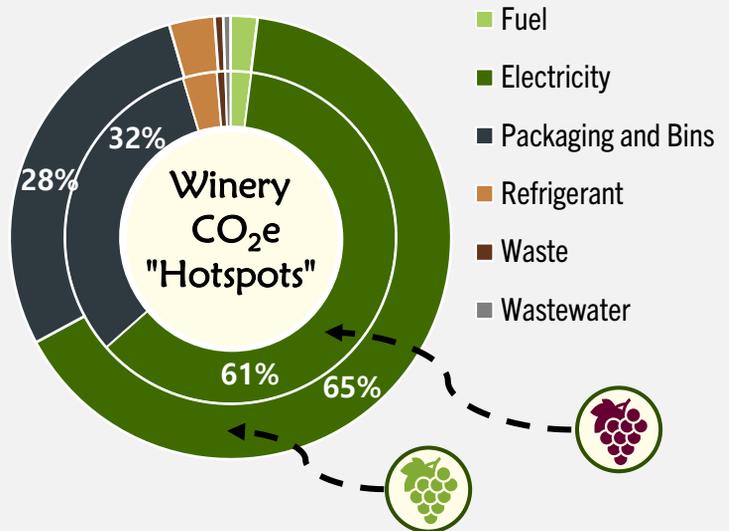


Photo: Van Loveren

Typical wine cellar hotspots

From 2011 to 2021 the CCC database (incl. graded and ungraded data) has grown to cover 206 wine cellars. This represents 39% of the wineries in the country.

In general, electricity is the highest contributor to the average winery's emissions. The second largest source of emissions is packaging and bins. Of the packaging materials, glass is the biggest culprit, while corrugated cardboard boxes also contribute significantly. Packaging materials cause a large portion of the supply-chain carbon emissions and are therefore a priority area when looking at reducing winery carbon levels.



To reduce packaging related emissions, one could consider lighter weight wine bottles. Demand from wineries for lighter bottles are bringing down average weights and luckily new technologies exist that can make lighter glass strong enough. Also consider eliminating palette wrap, and moving away from the use of Sellotape and replacing it with water-soluble glue. Tree-free labels are also a sustainable option. These can be made from fibres of sugar cane, leftovers of sugar production, that normally would be discarded. You would thus be recycling an agricultural waste product, and saving trees. Labels are also now available with a specialised adhesive that allow the labels to be easily separated from the bottles when recycled.

More on Van Loveren's user experience with the CCC tool

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

It was a bit overwhelming the first time we used the carbon calculator, but once you get the hang of it, you realise it's actually very easy to use. You should just follow it step by step, it's very nicely laid out.

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

Yes, definitely! We didn't really know what to expect, so it was a really nice introduction. Afterwards we clearly understood what it was about and how to use the tool.

How do you find the support that is given?

Extremely valuable. We were helped very nicely, and the ladies are always so patient. We are definitely grateful.

Any suggestions for improvement in the tool?

Maybe an autosave option. When you are away from your computer for a long time and you forgot to save, you could lose some data.

Is there any aspect of the CCC online carbon calculator that you would say is especially valuable?

The option to have your data sense checked. It helps a lot if someone can point out to you if something might not look quite right. Especially pointing out the little things, like making sure we are using the right units.

Would you say the CCC online carbon calculator adds value to your business?

Yes, we use our carbon footprint report for IPW audits. Our export managers are very excited, and we might be using it for our export markets in future.



Photo: Van Loveren

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



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



Photo: Van Lovenen