Case study: Wine cellar

By Carina Wessels

Wellington Wines shares their user experience feedback on the CCC carbon calculator

About the CCC Initiative

CONFRONTING CLIMATE CHANGE
A SOUTH AFRICAN FRUIT & WINE 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.

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.

CCC asked a wine cellar and longstanding CCC user to share some of their experiences with the online CCC carbon calculator.

About Wellington Wines

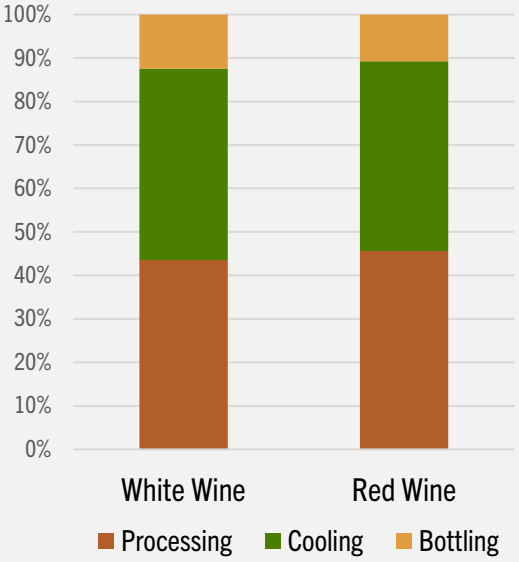
Wellington Wines' history dates back to 1906, 1907 and 1941 when Wellington Co-operative Winery, Bovlei Co-operative and Wamakersvalley Wines were founded respectively. These three wine giants, with years of knowledge and passion, joined forces in recent years to form Wellington Wines. Their 56 member farmers across Wellington and neighbouring areas ensure only the best grapes are grown and hand-selected for their exceptional quality. Wellington Wines is a wine producer of outstanding characteristics, implementing innovative methods to ensure the region is experienced with every sip.

WELLINGTON WINES

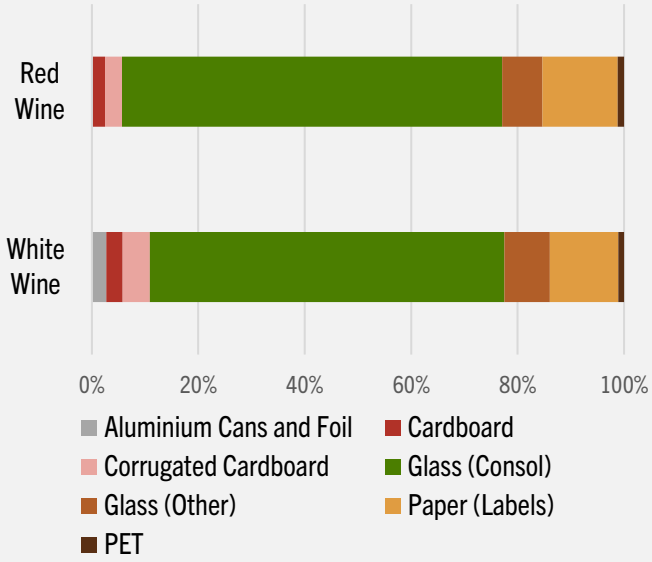
Wine cellar hotspots

* data averages extracted from CCC and not specific to Wellington Wines

Where do the Electricity CO_2e emissions come from?



Where do the Packaging CO_2e emissions come from?



In general, electricity is the highest contributor to a winery's emissions. Most of this electricity emissions come from processing and cooling, which contributes to more than 85% of emissions, while bottling is responsible for less than 15%.

Measures that could be implemented to reduce electricity related emissions in the winery include:

- Consider an energy audit that will specifically analyse the energy flows and could make recommendations on cost effective opportunities for energy savings.
- Install electricity meters specifically for the winery to accurately measure and monitor usage.
- 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.

The second largest source of a winery's emissions is usually packaging and bins. Glass is the biggest culprit here, while paper for labels and corrugated cardboard boxes also contribute significantly. The use of wooden barrels also play a role in a winery's emissions, as these barrels are often imported and have a relatively short life span. To reduce packaging emissions investigate lighter glass bottles, as well as packaging materials with a higher recycled content.

The way one handles waste could also have a large impact on your winery 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.

Wellington Wine's history with CCC

Wellington Wines has been completing their carbon footprint since 2011. This year will thus be their 11th year of using the CCC online carbon calculator. They first heard of CCC through IPW (Integrated Production of Wine), a voluntary environmental sustainability scheme established by the South African wine industry in 1998.

Wellington Wines 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.

CCC supports Wellington Wines in their carbon reduction strategy

Wellington Wines is committed to reducing their carbon emissions. Calculating their carbon footprint with the CCC tool has allowed Wellington Wines to become more aware of the impact of their inputs. Since they started using the carbon calculator, they have seen that grid electricity contributes most to their overall emissions. Wellington Wines do not bottle on-site and therefore packaging and bins do not contribute significantly to their carbon footprint.

Wellington Wines has been monitoring their electricity for years. They installed individual electricity meters at their three premises to monitor usage and see where machinery need to be replaced. For example, older machinery's efficiency is lower, and it also draws more power. They also launched an LED project for two of their premises about 5 years ago where all light bulbs were replaced with LEDs. About three years ago they had planned to install solar panels, but unfortunately the Covid-19 pandemic put a temporary hold on this strategy.

Wellington Wines is also in the beginning phase of investigating reusing CO_2, which is a by-product of alcoholic fermentation, in their processes or making it available to other institutions to reuse. Environmentally friendly chemicals are used where possible, and Wellington Wines recycle on an ongoing basis. They have also opened their recycling bank for all their producers who do not have a recycling facility on their farms.

Although not part of the carbon footprint, being upright water stewards form a significant part of Wellington Wines' sustainability strategy. They are considering installing a purification system for their cellar outflow water. This water will be used for irrigation of their gardens, general washing in the cellar, as well as in cooling towers in future.

Photo provided by Wellington Wines

Photo provided by Wellington Wines

More on Wellington Wines' user experience with the CCC tool

How have you found the use of the online tool, easy or challenging?
We have been using the tool for many years now and it is really straight forward. We constantly update our spreadsheets with data and when we reach the end of the financial year it takes us only a couple of hours to complete the tool.

Would you say the tool is user friendly?
The adjustments you have made over the years resulted in the tool being very user friendly. For example, the sections where you can type notes are really helpful. If you only use the tool once a year you don't always remember what you have done the previous year. Being able to go back and look at the previous year's notes are really helpful.

Have you attended a CCC training workshop?
Yes, one of your in-person workshops in Ceres many years ago. It was to get familiar with the tool initially. We are on your mailing list and get notifications of your workshops but have not attended one recently as we feel confident in the use of the tool.

How do you find the support that is given?
The people that have helped us in the past have been very competent and efficient. Whenever we have called or emailed with a query, we got the answers to our questions relatively quickly.

Would you say the CCC online carbon calculator adds value to your business?
Yes, we share the carbon footprint report with our board every year. It confirms what our significant emission sources are.

Any final comments or suggestions?
We are happy with the tool and have not experienced any issues.

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.

1 YEAR CARBON HEROES

3 YEARS CARBON HEROES

Photos provided by Wellington Wines