



CASE STUDY: POME & STONE FRUIT

By Carina
Wessels

Dutoit Agri & Fruitways 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 pome &/or stone fruit producers and CCC users to share some of their experiences with the online carbon calculator. Both Fruitways and Dutoit Agri started using the CCC carbon calculator as part of Woolworths Farming for the Future audits.

About Dutoit Agri



Dutoit Agri was established in 1893 when Gysbertus du Toit (I) settled on Kromfontein Farm in the Koue Bokkeveld region north of Ceres. Little did he know that Dutoit Agri would become one of South Africa's largest agricultural businesses. Dutoit Agri currently comprises of eight separate business divisions and have around 4 500 hectares of pome fruit, stone fruit and vegetables under irrigation in the Koue and Warm Bokkeveld, the Berg River and Sandveld regions, as well as in the Langkloof, Eastern Cape. They produce, distribute and market 250 000 tons of fresh produce a year. Dutoit Agri also employs around 7 500 workers in their production areas during peak season and are passionate about and committed to the training and development of their people and their communities.

About Fruitways



Fruitways is a specialist producer, packer and marketer of pome fruit and supply their products to retailers and wholesalers around the globe. Fruitways consists of five separate business units. Fruitways Farming and Packing are located in the beautiful Elgin valley, which is renowned for its apple and pear orchards. Fruitways Farming yields a combined total of 60 000 tons of fruit from 1 200 hectares. Their packing division consists of three facilities that collectively handle 90 000 tons of apples and pears, as they provide services to their own farms as well as independent growers in the area. Fruitways employs around 2 500 people and have established the Fruitways Foundation in 2009 to facilitate a number of admirable social investment programs.

Regions that participate in the CCC Initiative

From 2011 to 2020 the CCC database (incl. graded + ungraded data) has grown to cover **9 387** unique hectares of pome fruit farms and **3 592** hectares of stone fruit farms in South Africa. This represents **25%** and **20%** of the pome and stone fruit industry respectively, in the country.

Pome Fruit Regions	Industry Ha	CCC Ha	%	Stone Fruit Regions	Industry Ha	CCC Ha	%
Stellenbosch / Somerset West	378	357	94%	Ceres / PA Hamlet	2 855	1 533	54%
Mpumalanga	204	78	38%	Wolseley / Tulbagh	1 474	583	40%
Ceres / PA Hamlet	12 225	3 727	30%	Mpumalanga	132	52	39%
Villiersdorp / Vyeboom	5 386	1 460	27%	Piketberg / Somerset West / Citrusdal / Stellenbosch	832	317	38%
Elgin / Groenland / Grabouw	8 810	2 135	24%	North West & Limpopo	564	143	25%
Berg Rivier (incl Paarl)	124	28	23%	Berg river (Paarl / Wellington)	1 416	281	20%
Wolseley / Tulbagh	1 460	281	19%	Grabouw / Groenland / Elgin	853	126	15%
Free State	534	93	17%	Langkloof	596	65	11%
Piketberg	509	81	16%	Franschoek	575	53	9%
Langkloof	6 457	1 023	16%	Klein Karoo	6 365	418	7%
Klein Karoo	1 241	123	10%	Worcester	701	23	3%

CCC supports Fruitways in their carbon reduction strategy

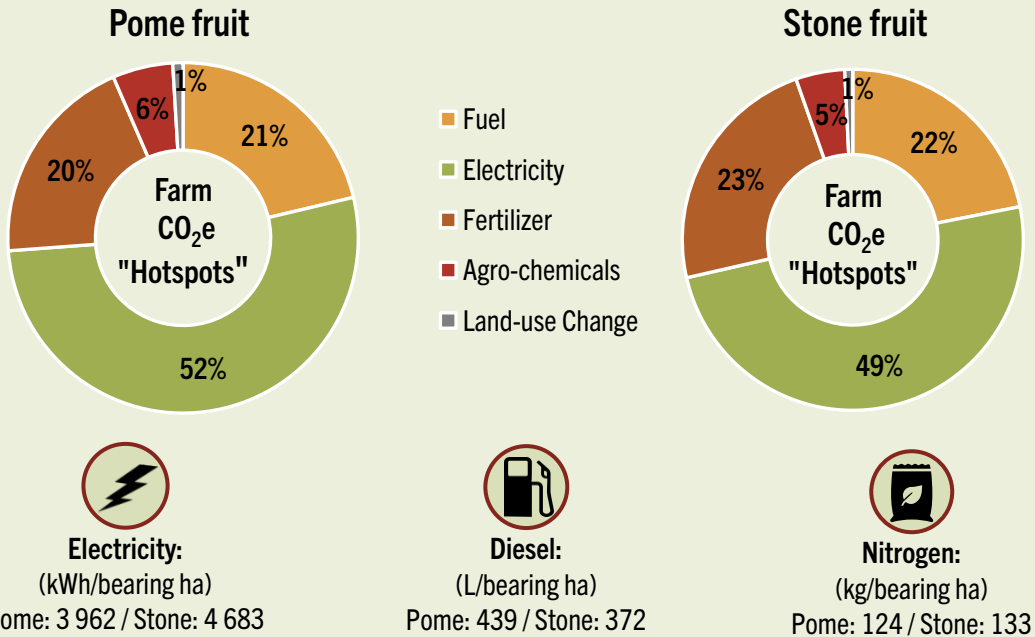
Fruitways currently have five active business units on the CCC platform. They use the CCC carbon calculator in combination with the Sherpa sustainability management system (<https://mysherpa.co.za/>) to determine their carbon reduction strategy. Fruitways proudly states that they have seen a reduction in their carbon footprint over the past few years, “we must be doing something right”, they say. They take their role as custodians of the land they farm on very seriously and one of their key values is to maintain and improve the environment in which they work. In this regard, Fruitways have implemented a number of initiatives that form part of their sustainability strategy. They are founder members of two nature conservancies, one of their farms is a conservation champion in the WWF Biodiversity and Wine Initiative, and since 2008 their farms have been part of a project to improve soil health in a sustainable manner.

Fruitways stringently measure all of their inputs and usage that the CCC tool considers farm hotspots. This includes their electricity and diesel use, their fertiliser, as well as agro-chemical inputs. They also measure and manage their water use and have seen a reduction in water use over the past few years.

Farm hotspots

Reduce your carbon emissions at farm level by measuring and managing your hotspots!

For both Pome & Stone fruit, **Electricity** is the highest contributor to farm CO₂ emissions.



CCC supports Dutoit Agri in their carbon reduction strategy

Dutoit Agri currently have five active business units on the CCC platform, where they collect data and calculate their carbon footprint for their farms, packhouses, cold stores, controlled atmosphere stores (for pome fruit), as well as distribution. All of these areas are managed extremely well. Dutoit Agri is committed to the responsible use of natural resources, responsible handling of waste, minimising environmental pollution and good management of biodiversity. The Wagenboom Nature Reserve, situated in Dutoit Agri's Tandfontein Estate, recently received the Award for Best Stewardship Site – Biodiversity Conservation, from Cape Nature.

In 2019, Dutoit Agri became part of an increasing number of companies exploiting solar energy for commercial purposes, when 2 800 solar panels were installed on the roof of one of their packhouses. The full installation has a capacity of 500kW - enough to supply as many as 40 households with electricity. By using solar energy, Dutoit has already prevented the release of around 550 tons of CO₂ into the atmosphere and saved more than R600 000, and this is only the first phase of their renewable energy journey.



Photo by Dutoit Agri

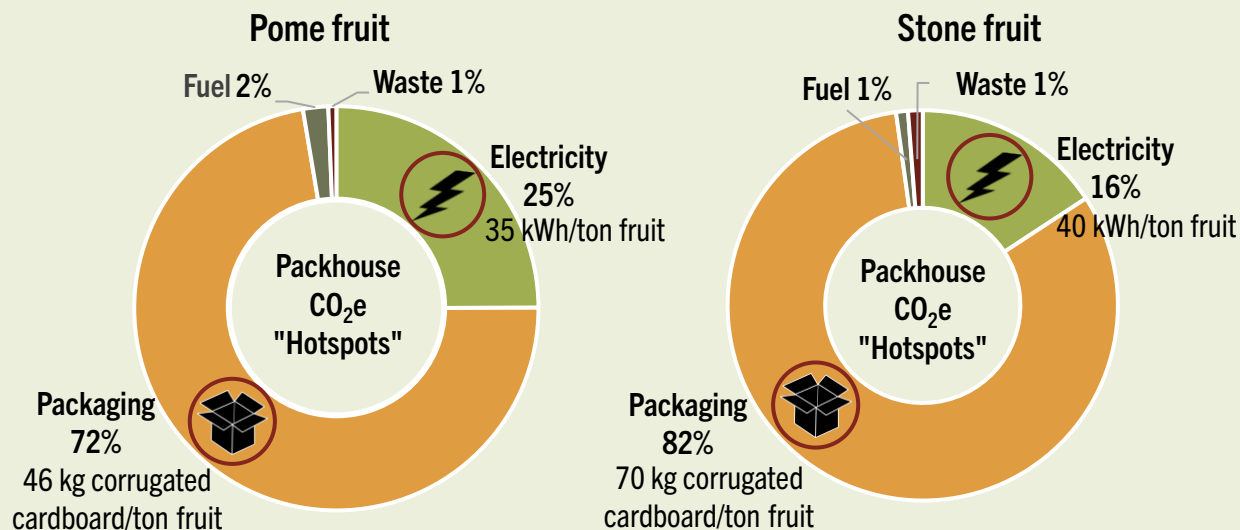


Photo by Dutoit Agri

Packhouse hotspots

Reduce your packhouse emissions by measuring and managing your hotspots!

For both Pome & Stone fruit, **Packaging** is the highest contributor to CO₂ emissions.



For both pome and stone fruit, packaging contributes to more than 70% of packhouse CO₂ emissions, with the amount of cardboard and corrugated cardboard (cartons) used being the biggest culprits. The second largest emission source is electricity. Pome fruit packhouse emissions are generally on the lower end of all fruit types, as “harder” fruits usually require less intense packaging than “softer” fruits.

More on Fruitways' and Dutoit Agri's user experience with the CCC tool

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

Dutoit: *The tool is really user friendly.*

Fruitways: *It's a very simple tool to use.*

What aspects of the CCC carbon calculator have brought the most value to your business?

Fruitways: *The report, especially the fact that we can see how much carbon we produce per kg fruit. It's very useful. Also that we can benchmark ourselves against other producers in the industry. We also compare our own production units to see if they run equally or if there are large discrepancies between them. So there is definitely value for us in using the CCC tool.*

Dutoit: *Now that we have a few years of data, we are really beginning to see the value of the tool. Three or four years of data are very valuable. One shouldn't have a gap in your data, then you lose the comparison aspect of it.*

How do you find the support that is given?

Dutoit: *It's very good. We can't complain. It's fast and efficient. Overall, the interaction with CCC is always very positive.*

Fruitways: *The support is fantastic. We really can't complain. They help you immediately. They also explain very well. If you have never worked with carbon footprinting and you contact support, you will immediately understand what to do.*

Has CCC helped you communicate your carbon reduction journey to your clients? If so, how?

Fruitways: Yes, we've shown clients our carbon footprint report. We use it as proof that we do not just say we are doing things, we have proof that we reduced our carbon footprint. We also use the CCC report in our internal management meetings. CCC has helped us drive compliance and make improvements. We have set our targets and we try to reduce at all times.

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

Dutoit: Yes, twice. The first time was a bit overwhelming, but I learned about calculating the active ingredients in the fertilisers we use. In the second workshop it was just me and Anel (Anel presented the workshop) and we could have a nice chat, it was very good. I learned that the important thing is that your raw data should be in the right format, then it's easy and goes fast.

Would you recommend CCC to others?

Fruitways: Definitely. In fact, we have recommended CCC to someone who recently started their carbon footprinting. The more businesses we can get invested in carbon reduction the better. We use the CCC tool in combination with the Sherpa tool (Sherpa is an online sustainability management system - <https://mysherpa.co.za/>) and these two tools are a winning combination to drive compliance. It's just really nice to use something that you know adds value to your business.





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



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