

BUILDING A BETTER FUTURE FOR COFFEE

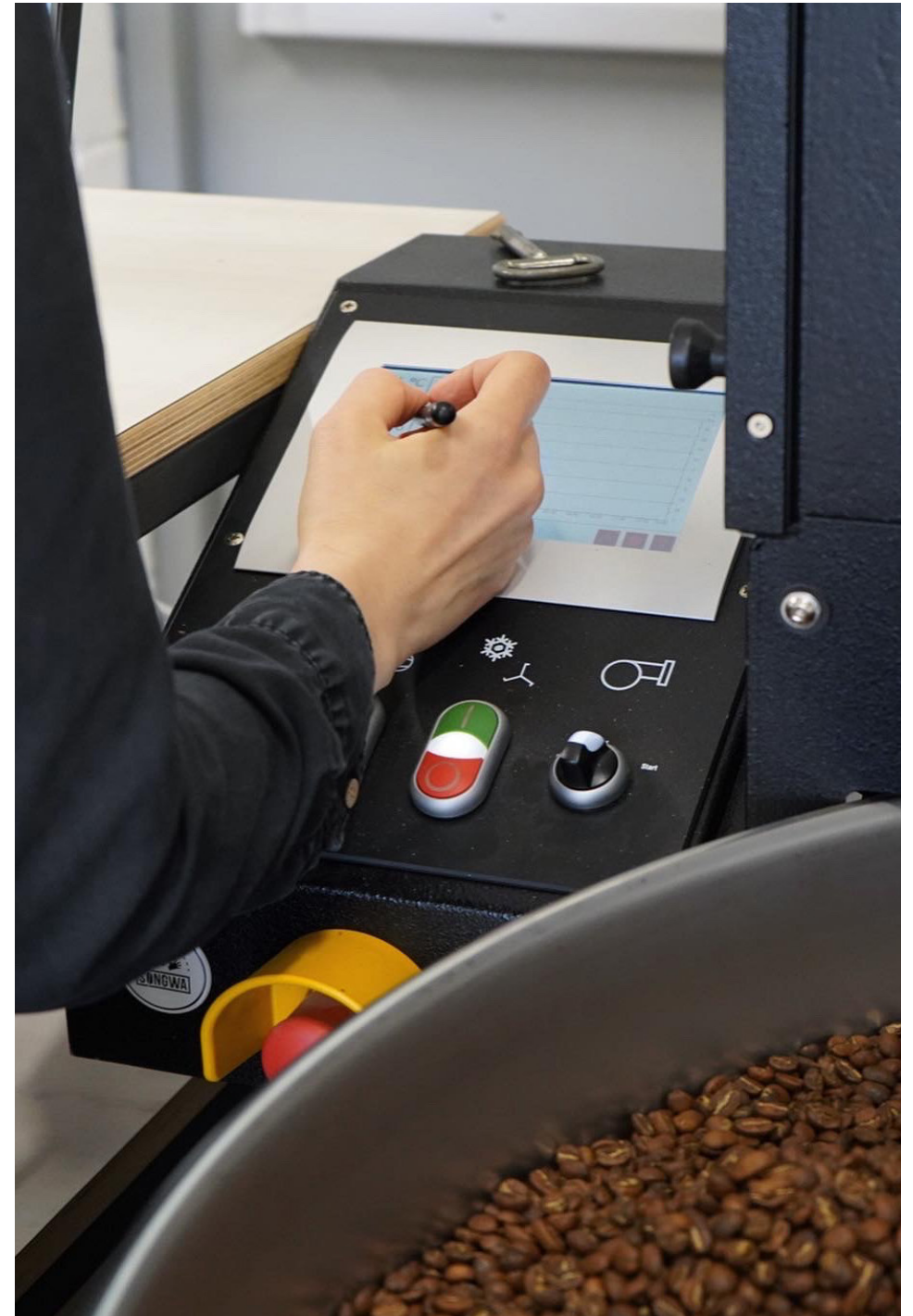


OUR STRATEGY
2023 - 2025



OUR STRATEGY 2023-2025

FOREWORD	1
AN UNSUSTAINABLE INDUSTRY	3
OUR MISSION	7
POWER IN NUMBERS	45
REFERENCES	49



Making gas changes
Credit: Calendar Coffee

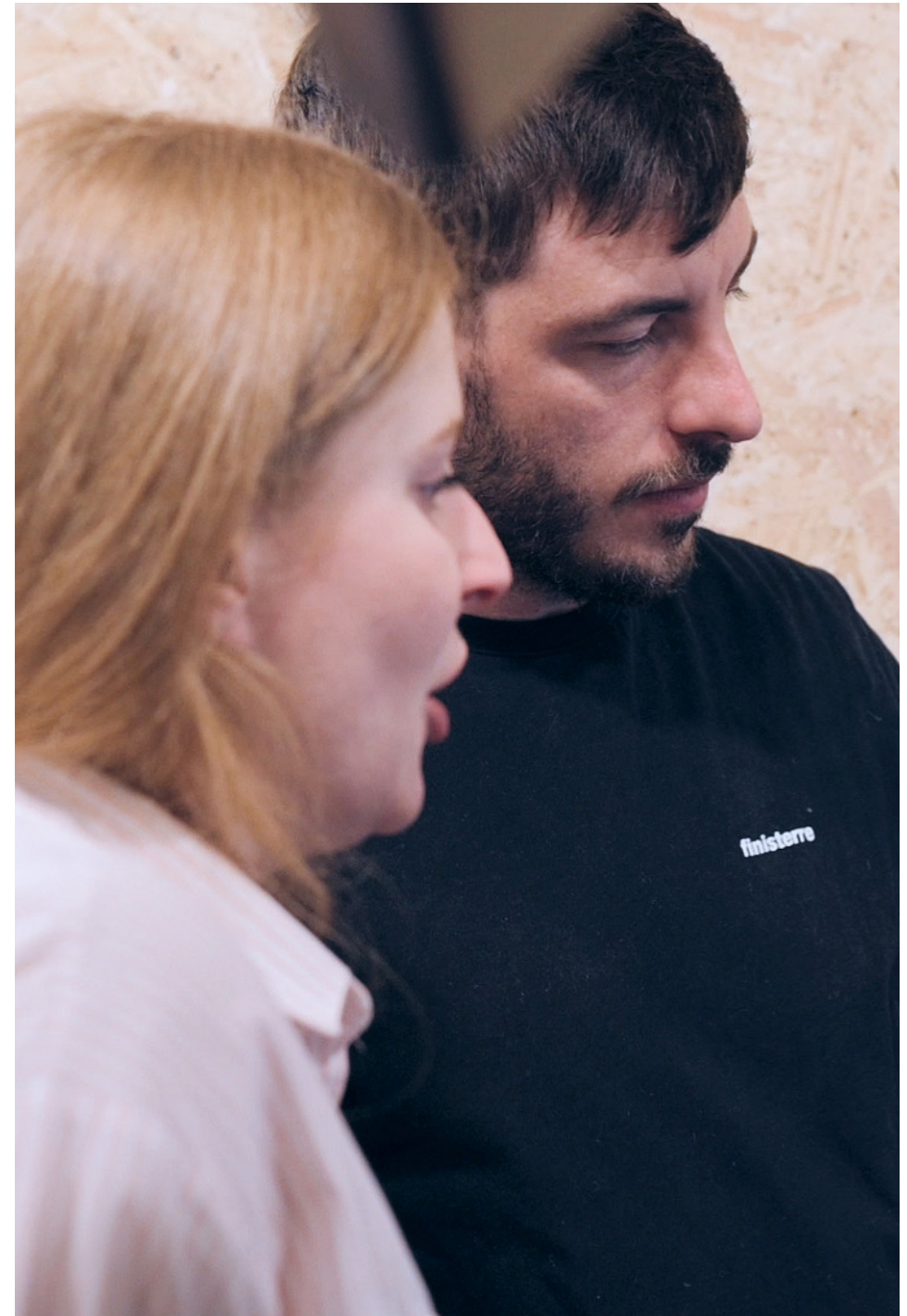
FOREWORD

Writing this strategy has been one of the most challenging things we've ever done as a business. It's not easy making decisions about the future, and sometimes it's hard to know where to begin. Dan and I started Calendar as two young and naive coffee lovers with nothing to lose. We knew we wanted to shake things up and prove businesses could do some good in the world. If we were going to fail, we wanted to fail on our terms.

Thankfully that never happened, and as the years have gone by, we've grown more confident in how we do business. But we've also realised that the coffee industry needs to radically change if we want to keep enjoying the variety and quality that exists today. We needed a plan - something to keep us on track as we navigate our way forward. This strategy marks the beginning of the next chapter for Calendar.

Throughout this process, I would imagine a conversation with my daughter at the kitchen table in fifty years time. The world will be a different place by then, and the climate crisis will be even more present in our lives. As cheesy as it sounds, I want to be able to tell her that we did everything we could to help. Above all, I want her to be proud that her parents did their best.

ZARAH LAWLESS - CO-FOUNDER



Co-Founders - Zarah Lawless & Daniel Boobier
Credit: Calendar Coffee

AN UNSUSTAINABLE INDUSTRY

Today, we're spoiled by the quality and range of coffee to choose from. With so many producers, varieties, and ways to process coffee, the options seem endless. But the future of coffee is at risk. Climate change and the unsustainable prices producers are paid are threatening the foundations of our industry.

In the last decade, it's become clear that climate change is having a devastating impact on coffee producing regions. According to World Coffee Research, half of the land used to grow Arabica coffee today will no longer be suitable by 2050.¹ For millions of smallholder farmers whose livelihoods depend on coffee, many will experience significant decreases in yields and quality as the climate continues to deteriorate.

Extreme temperatures, rising humidity and unpredictable weather are making harvesting seasons less defined, and in some cases destroying crops altogether. These conditions are also creating new opportunities for the pests and diseases that affect Arabica coffee. One of these diseases is a fungal pathogen known as leaf rust, which is estimated to destroy \$1-2 billion USD of coffee each year.² As temperatures rise, leaf rust, pests and other diseases will be able to thrive at higher altitudes, placing more farms at risk of future outbreaks. Coffee farming is not only becoming more difficult, it's increasingly risky and less profitable for producers around the world.

As an industry, we're not prepared for even the most conservative climate change predictions, and our ability to adapt is hindered by the low, unsustainable prices producers are paid. Smallholder farmers produce 60% of the world's coffee, yet 44% of those live below the international poverty line of \$3.20 a day.³ This is testament to how broken the system is.



Coffee cherries at Ssajja Emmanuel farm, Rubirizi district, Rwenzori, Uganda.
Credit: World Coffee Research

As well as better prices, producers need commitment from the people who buy their coffee. It's common for coffee buyers to cherry pick the top scoring lots in pursuit of the highest quality, regardless of who produced it. Unless buyers invest in long-term relationships, farmers will continue to face uncertainty and will be unable to plan for the future. This instability is forcing many younger farmers to leave the industry for more secure careers. This is already a problem in Africa, where the average age of a coffee farmer is 60 years old.⁴

Sustainability starts with commitment from buyers, and farmers earning a profit. Those who can't earn enough money producing coffee could be forced to cut corners on sustainable agriculture, plant more profitable crops or leave farming altogether. Low prices may be great for the consumer, but much more money needs to make it back to the producer. After all, without them, this industry wouldn't be possible. As a roastery, we're in a unique position in the supply chain to really make a difference. By having a strong connection with both the producer and the consumer, we have an opportunity to change the way coffee is valued and work towards a more sustainable future for our industry.



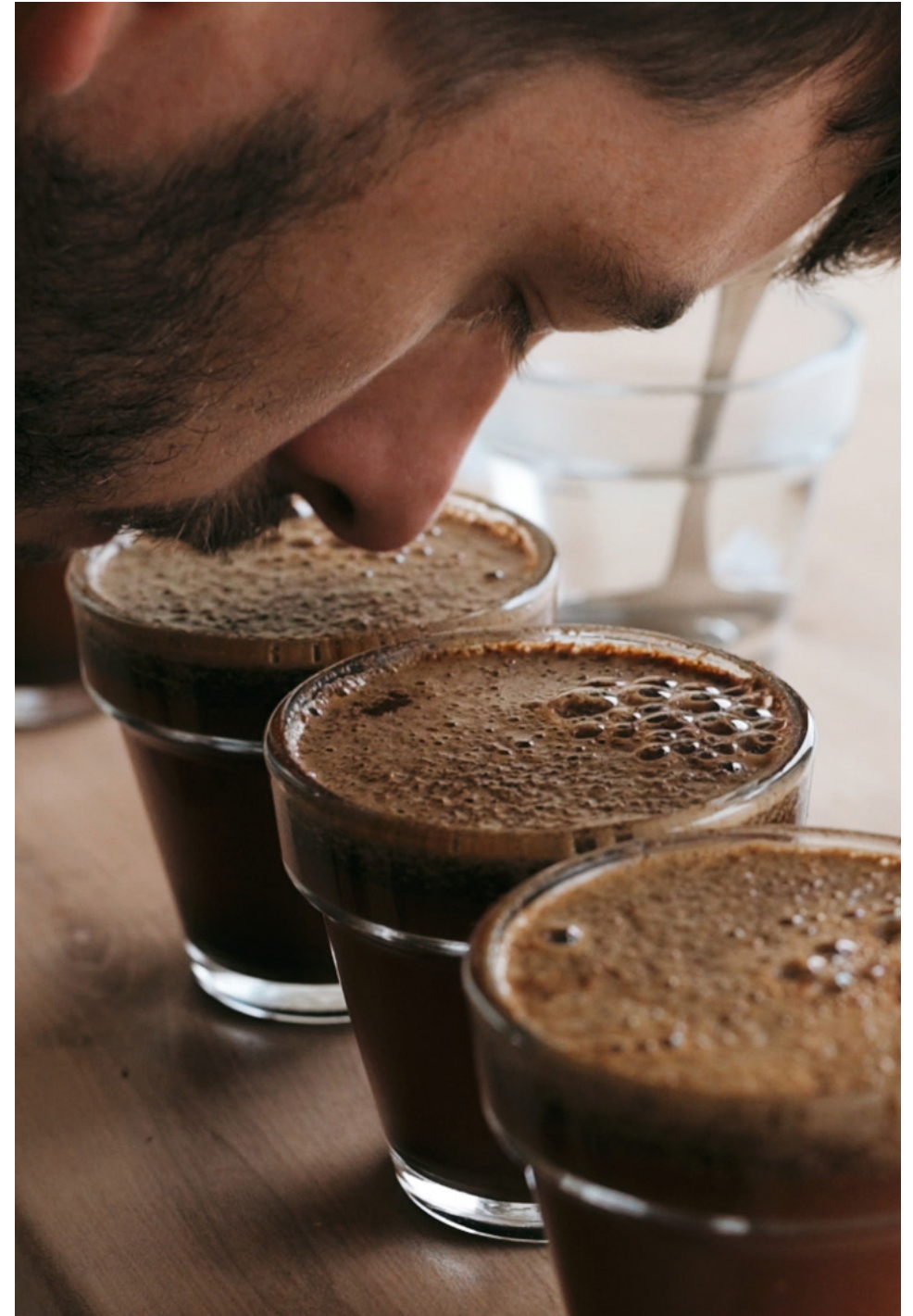
Rust on a susceptible F1 hybrid at the WCR research farm
Credit: World Coffee Research

OUR MISSION

WE EXIST TO BUILD A BETTER FUTURE FOR COFFEE

Despite the challenges facing the coffee industry, we're hopeful about its future. We are committed to using our voice, influence, and resources to raise awareness about these issues and help drive change in the way coffee is valued and produced. We also want to help and inspire others to do the same. To achieve this, we are committing to three pillars of action:

- 1. DRIVE CHANGE IN THE WAY COFFEE IS VALUED**
- 2. MAKE COFFEE PART OF THE CLIMATE SOLUTION**
- 3. SET AN EXAMPLE AS A RESPONSIBLE BUSINESS**



Quality control
Credit: Calendar Coffee



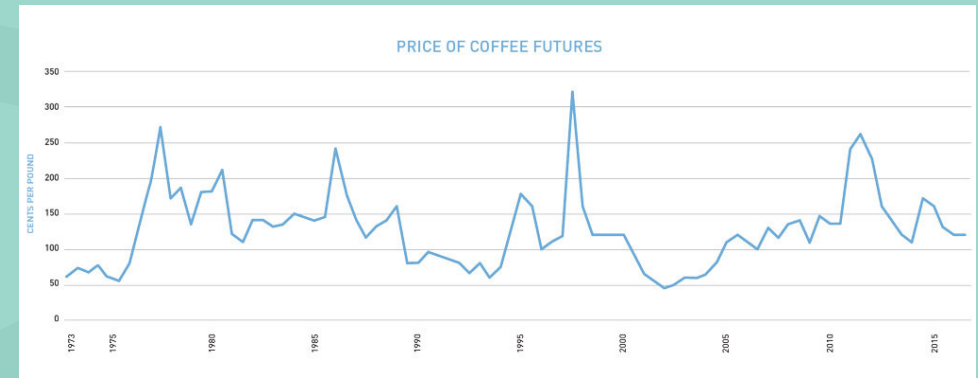
Coffee cherries being depulped by the COMICOVEL cooperative in Honduras
Credit: Ally Coffee

PILLAR ONE

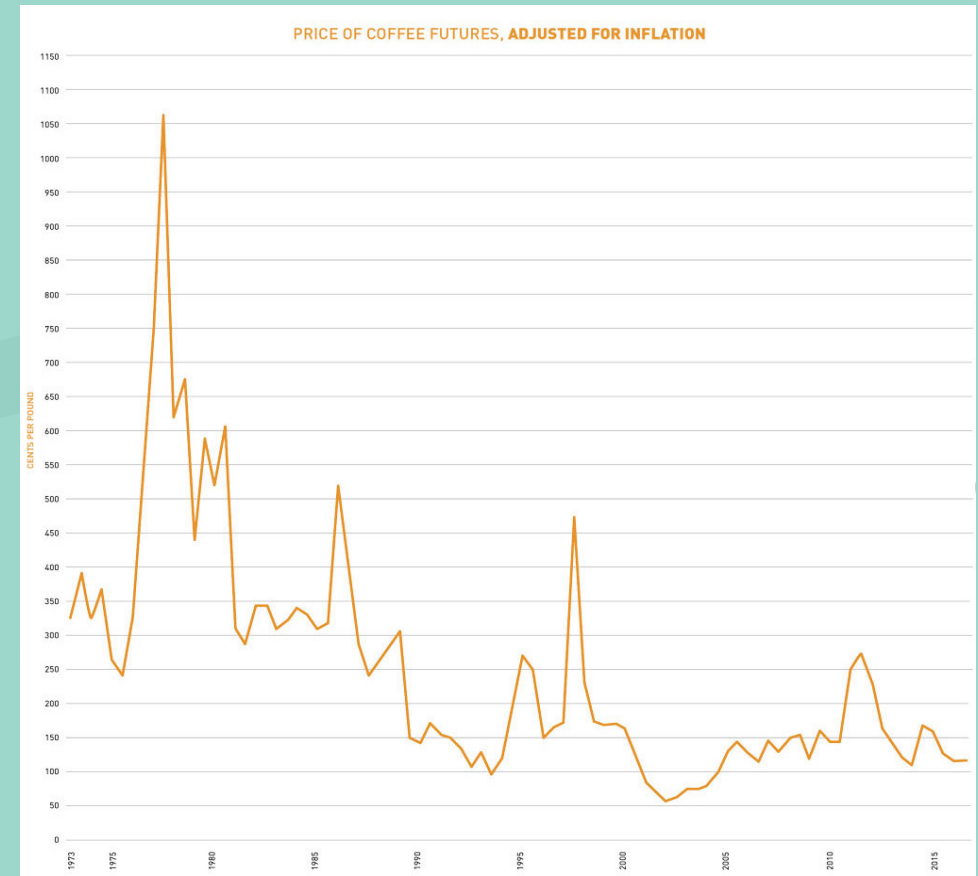
DRIVE CHANGE IN THE WAY COFFEE IS VALUED

The global coffee market is worth \$200 billion USD annually, yet most producers only see the smallest fraction of this.⁵ This is the direct result of the societal expectation that coffee should be cheap. Today, owning and running a coffee farm is expensive and comes with an enormous amount of risk. Most producers are struggling to earn a sustainable income, and an increasing number are choosing to plant more profitable crops or are abandoning their farm completely.

Most farmers sell their coffee based on prices in the C Market, a global exchange where Arabica coffee is bought and sold every day. The flow of buying and selling informs the fluctuating price of coffee or 'C price'. For the past fifty years, the price of coffee has largely remained between \$0.50 and \$3.00 USD (graph A). However, once these prices are adjusted for inflation, there has been a distinct downward trend since the 1980s (graph B).⁶



Graph A



Graph B

The C Market is heavily influenced by supply and demand. Brazil and Vietnam produce 50 per cent of the world's Arabica coffee, so when they experience high productivity, the price of coffee goes down on the C Market.⁷ This market is very volatile, and there have been many times when the price has dropped below \$1.00/lb - most recently in June 2020.⁸ Selling coffee at these prices doesn't cover the costs of production on most farms, especially for smallholder farmers.

There have been some improvements in the speciality sector, where producers can earn premium prices for higher quality coffee. Some buyers even offer fixed-price contracts, which guarantee farmers a certain price for an agreed quality or cup score - regardless of any fluctuations in the C Market. These types of contracts can provide greater financial security for producers, but the increased costs associated with producing high-quality coffee aren't always reflected in the price. This means that farmers who sell their coffee to the specialty market are not necessarily profitable.

In order to create a more equitable supply chain, everyone has to be willing to pay higher prices for coffee. Producers everywhere are experiencing skyrocketing production costs, and many are forced to carry this financial burden on their own. Much more money needs to make it back to the farm, but to do this, we must change the way we value coffee as a society.



Teamwork Espresso
Credit: Calendar Coffee

OUR IMMEDIATE GOAL

PUBLISH OUR COFFEE PRICES

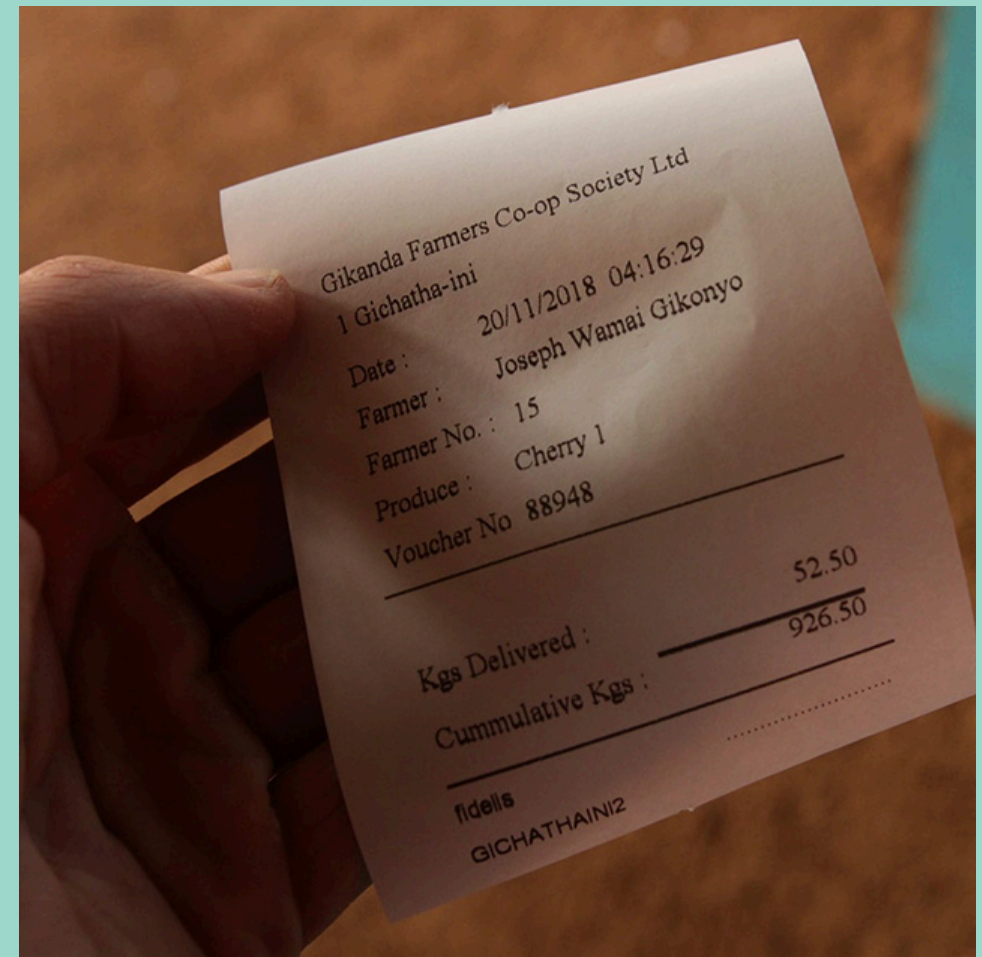
Greater transparency surrounding the prices we pay for coffee can benefit the entire supply chain. Green coffee buyers can see what others are paying for similar lots, and consumers will know exactly how much the farmers receive. Producers would also have a much better understanding of what their coffees are worth.

To achieve this, we need to establish the ‘farmgate’ price, which tells us how much money from a particular sale made it back to the farmer. Because of the complex and sometimes secretive nature of the supply chain, this information isn’t always available. Paying high prices as a roastery doesn’t guarantee that the producer made a sustainable income.

Farmgate prices are also difficult to compare. Living costs, farm size, currency fluctuations, and costs of production can vary significantly between countries, regions, and even neighbours. This means a profitable price on one farm may not cover the production costs on another. The value of coffee is also different depending on whether a farmer is selling whole cherries, parchment, or fully milled green coffee. Each step in processing adds value and should be taken into account in the price.

To shed more light on how much we pay for coffee, we are publishing our first transparency report, which will contain the prices (including farmgate where available) and volumes we purchased in 2021. We will also share detailed contract information with the [Specialty Coffee Transaction Guide](#) and sign [The Pledge](#).

Both the Specialty Coffee Transaction Guide and the Pledge strive to increase the prices paid to farmers and provide living incomes in coffee-producing countries. They do this by compiling data from producers, exporters, importers and roasters, with the goal of establishing new benchmarks for what we should be paying for quality coffee. We’re excited to join a growing number of international coffee roasters who are embracing transparency and empowering everyone in the supply chain to make informed choices.



Credit: Nordic Approach

OUR 2025 GOAL

STRENGTHEN RELATIONSHIPS WITH PRODUCERS THROUGH CALENDAR PARTNERSHIPS

Since starting Calendar in 2018, we've bought all our coffee through importers. They provide a list of coffees they've contracted, we request samples of what we're interested in, and we select the coffees that taste best. This has allowed us to buy small volumes of high quality coffee, with minimal commitment, and without any of the risks associated with shipping it from the country of origin. This was hugely beneficial in the early days of running a roastery, and over the last four years, it enabled us to discover some exceptional coffees and producers.

Over time, however, our definition of quality coffee has evolved. We believe it's more complex than simply how it tastes. For us, having a connection with the farm, knowing how the coffee was produced and what price the producer was paid all contribute to quality. This is why we've made it our goal to work much more closely with the people who grow, process and export our green beans.



Weighing out batches
Credit: Calendar Coffee



Aime and Alexis Gahizi, Gitesi washing station, Rwanda.
Credit: Nordic Approach

To strengthen our relationships with producers and ensure we are paying more sustainable prices for our coffee, we will launch [Calendar Partnerships](#). Coffees under this umbrella must meet the following criteria:

1. We have visited the producer*
2. The price paid for the coffee is negotiated with the producer or exporter
3. When the terms of a coffee purchase is not negotiated with the farmer(s) we know how much they were paid
4. The coffee is contracted prior to harvest and has been bought for a minimum of three consecutive years

* The producer is a farmer, cooperative or washing station that sells coffee processed, dried, and packaged down to a 'parchment' stage. In some cases, the producer also mills and exports their coffee.

We've never visited a coffee farm, but these trips will be invaluable to the future of Calendar. Visiting farms and meeting producers will not only build trust, it will give us a first hand understanding of the hard work and challenges producers face. We also hope to come away with a deeper knowledge of the costs of production, to ensure this is reflected in the price we pay for our green beans. While we will always strive to work more directly with the people who grow our coffee, there are some countries and scenarios where this is impractical. Particularly when multiple farmers contribute to a single lot. In situations where the terms of a coffee purchase is not negotiated with the farmer, we will require full transparency on what they were paid.

Paying higher prices isn't sustainable without commitment, which is why we'll be contracting coffees before they've been harvested, wherever possible. Coffee won't be included in Calendar Partnerships unless we've bought it for at least three consecutive years.

OUR LONG-TERM GOAL

CHAMPION THE FARMS & PRODUCERS WE WORK WITH

The average consumer isn't aware of where their coffee came from or who grew it, but the land, the farmers and varieties they grow have the biggest impact on quality. As roasters, our job is to bring out the best characteristics of the green beans we buy, but it's the producers that are the real rockstars in this industry. We want to celebrate that by increasing the visibility of the people who grow and process our coffee, and help them to build a reputation independent of us.

The coffee industry is predominantly a buyers market, where the consumer dictates the price and the producer has little choice but to accept it. Imagine going to a cafe and telling the barista that you were only going to pay €1 for a flat white, no negotiations. You probably wouldn't get your coffee, yet we expect producers to sell themselves short, time and time again. The future of our industry depends on producers selling their coffee for what it's actually worth.

With their consent, every coffee we sell from a single farm or washing station is named after the producer. We do this so they can build their own reputation, and in time command higher prices in the marketplace. Just like the Caballero coffees from Honduras or the Kieni Washing Station in Kenya, we want to help more producers and cooperatives to develop their own brands that consumers can identify. By visiting the farms and washing stations we buy from, we can better market our coffees, and champion the people and processes that made them possible.



Kenneth Njeru, Kiangoi washing station, Kenya
Credit: Nordic Approach



A coffee nursery at Mirazu, Costa Rica
Credit: LM Salazar, Crop Trust

PILLAR TWO

MAKE COFFEE PART OF THE CLIMATE SOLUTION

The last decade has been the hottest in recorded history.⁹ According to the United Nations, we need to limit the rise in global temperature to 1.5°C to avoid the worst effects of climate change, yet we are projected to reach 3.2°C by the end of this century.¹⁰ We are already seeing the devastating impact the climate crisis is having on communities across the world, from rising sea levels and extreme flooding, to intense droughts and declining biodiversity. Without urgent action, this will only get worse and the damage will become irreversible.

It's estimated that the production, packaging, and distribution of food and drink is responsible for one third of global greenhouse gas emissions, and up to 80 percent of biodiversity loss.¹¹ One of the best ways we can reduce global emissions and combat the climate crisis is to revolutionise our food systems.



Ecuadorian Coffee
Credit: Calendar Coffee

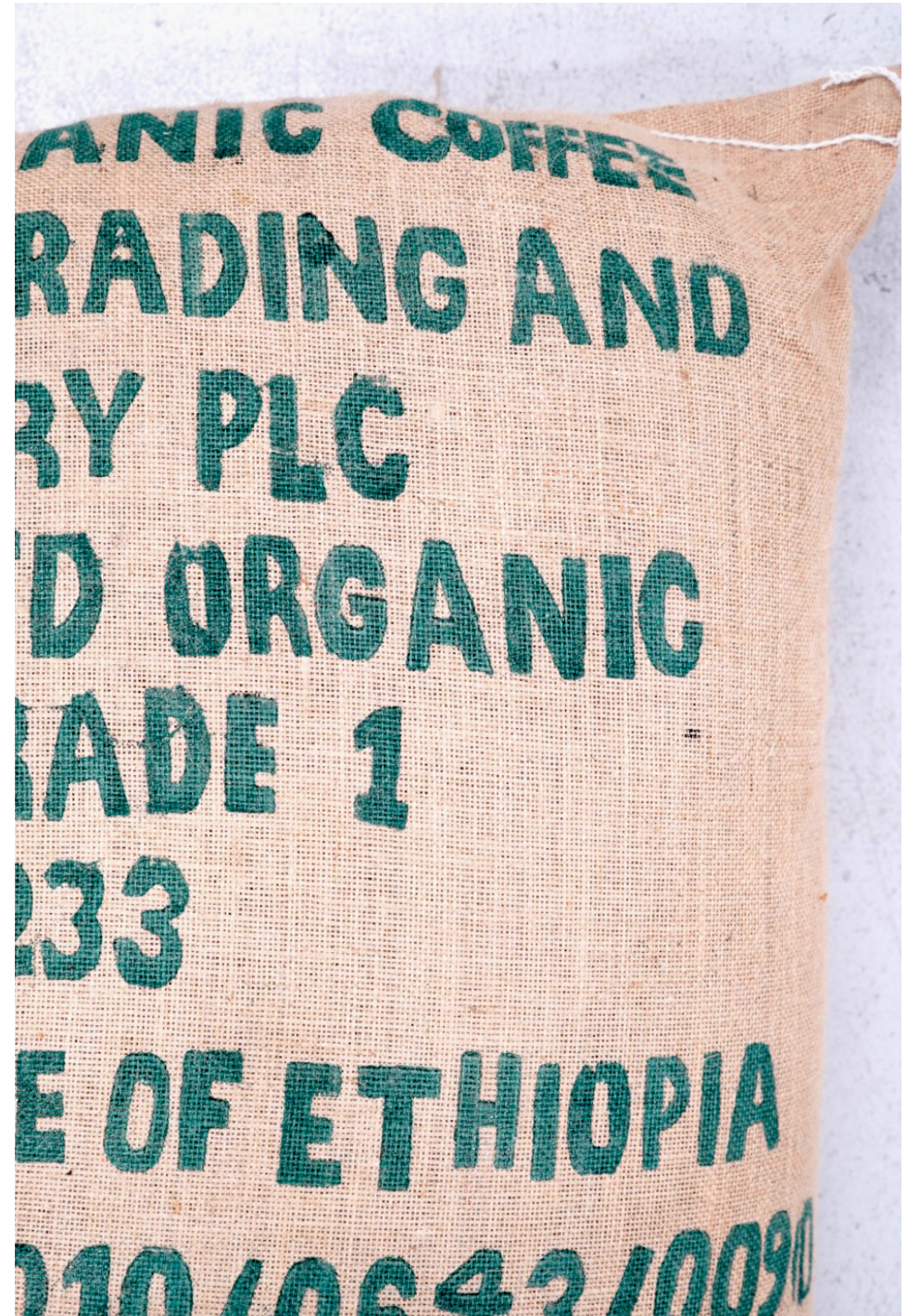
OUR IMMEDIATE GOAL

PURCHASE MORE ORGANIC & SHADE-GROWN LOTS

Coffee naturally grows under the shade of a forest canopy, and has a unique role in this complex ecosystem.¹² However, the increasing demand for coffee and the low prices farmers are paid has transformed the way most coffee is produced. To earn a profit, most farmers need to sell as much coffee as possible. In most cases, this involves cutting corners on sustainable agriculture, by clearing the land to plant more trees, and using synthetic inputs. This can produce highly productive plants in the short-term, but without healthy soil and a diverse ecosystem, these plants will be more susceptible to pests and disease,¹³ and coffee quality is likely to decrease over time.¹⁴

Coffee farming accounts for nearly 70% of Calendar's overall carbon footprint, which is why buying certified organic and shade-grown coffee is one of the best ways we can lower our impact. Certified organic coffee is grown using holistic and regenerative principles and doesn't use synthetic fertilisers, herbicides, or pesticides in its production. This improves soil quality, while avoiding chemical runoff that can pollute local water sources. Shade-grown coffee is not necessarily organic, but comes from plants growing in the full or partial shade of larger trees. This promotes reforestation, and when done effectively, it can create a diverse and competitive ecosystem that provides nutrients and natural pest control for the coffee trees.

Planting shade trees and obtaining organic certification is not viable for most producers because it requires significant labour and financial investment. We believe it's important to support producers who go the extra mile to protect the environment, but it can be short sighted to exclusively buy organic and shade-grown coffee, given the entry barriers. We'll continue to partner with producers who share our values and are working towards more sustainable production. In 2021, 7% of the coffee we roasted by volume was certified organic. By 2025, we aim to increase this to 30%.



Organic coffee from Ethiopia
Credit: Calendar Coffee

OUR 2025 GOAL

REMOVE TWICE AS MUCH CARBON FROM THE ATMOSPHERE THAN WE PRODUCE

Over the past fifty years, CO2 emissions have increased by nearly 90%¹⁵ and are the biggest contributor to the rise in global temperatures today.¹⁶ It's crucial that all businesses not only reduce and offset their emissions, but become carbon negative to try and mitigate the worst impacts of climate change. As we continue to implement solutions to reduce our environmental footprint, we want to ensure buying our coffee has a positive impact on the planet. By 2025, we commit to removing twice as much carbon from the atmosphere than we emit.

To achieve this, we will work with the carbon auditing company Zevero to calculate our emissions and identify the steps, from seed to roasted beans, that have the largest impact on our planet. Once we have accurate data, we can implement a plan to reduce our emissions and make more informed decisions about the coffees we purchase.

By 2025, electricity for our roastery will be provided by 100% renewable sources and we will use a fully electric vehicle for our local deliveries. Through our continued partnership with Hometree, we'll plant double the amount of trees needed to offset our remaining carbon footprint, while establishing and conserving native woodlands on the west coast of Ireland.



Calendar Coffee tree planting day, March 2019
Credit: Malcolm Mcgettigan

OUR LONG-TERM GOAL

INVEST IN SUSTAINABLE AGRICULTURE

Coffee agriculture and running a successful farm is something we know little about, but we've made it a priority to learn more. As we strengthen our partnerships at origin, we hope to better understand the challenges that come with producing coffee, and how we can help protect its future. Visiting the farms, and speaking directly with the people who grow our coffee will help us set more measurable goals moving forward.

As a roastery, we see the benefits of helping farmers obtain organic certification wherever possible. This will reduce the environmental impact of the coffees we buy, and it could also allow producers to earn more money in the long-term. While organic coffees generally command premium prices, the certification process is costly and takes a minimum of three years to obtain.¹⁷ During this time, no synthetic fertilisers or pesticides can be used on the land, which often results in reduced yields in the short-term.¹⁸ In the future, we want to help finance the certification process for our producing partners, and commit to buying their coffee throughout the transition period.



Maureen inspecting coffee at Kasenda coffee estate in Kabarole district, Rwenzori, Uganda
Credit: World Coffee Research



Colour sorter
Credit: Calendar Coffee

PILLAR THREE

SET AN EXAMPLE AS A RESPONSIBLE BUSINESS

The current economic system, where businesses prioritise profit and the bottom line, isn't fit for purpose. Since the industrial revolution, global carbon emissions have skyrocketed, from 6 billion tons in 1950, to over 34 billion tons today.¹⁹ During the same period, the world population has more than tripled, and the gap between the rich and poor has continued to grow wider.²⁰

Now, more than ever, we need urgent social and environmental transformation. To drive real change in the coffee industry, we will demonstrate that a roastery can prioritise people and the planet, and still be profitable. Sustainability in coffee is complex, but by being transparent about how we operate and our plans for the future, we will raise awareness about the issues we're trying to solve. To build a better future for coffee, we need others to play their part. Over time, our actions can have a much bigger impact if we can help and inspire other businesses to do the same.



Nordic Approach Spring Cupping 2022
Credit: Calendar Coffee

OUR IMMEDIATE GOAL

PUBLISH AN ANNUAL TRANSPARENCY REPORT

Today, we are surrounded by misleading and greenwashed marketing, and one of the best ways we can be held accountable is by publishing an annual transparency report. This document will include a detailed breakdown of our carbon footprint, alongside our coffee prices and full transparency of our finances. We will also use these reports to talk about our initiatives, and compare our performance against the goals and objectives set in this strategy.

Our carbon footprint will be calculated by an external auditing company. This will educate us and our customers about the impact of our operations, and it will provide the data we need to become carbon negative by 2025. As well as publishing our coffee prices, we will be transparent about our finances. We will outline all the costs associated with running our business, from operational costs and taxes, to salaries and donations. We will show you exactly where your money goes when you buy a bag of Calendar Coffee, and how we spend any profits. Publishing coffee prices is just part of the picture, and it's important to highlight how money flows at our end of the supply chain too.



Kamwangi Espresso packaging
Credit: Calendar Coffee

OUR 2025 GOAL

BECOME A CERTIFIED B CORP

B Corp is a non-profit organisation that measures a company's entire social and environmental impact, with a mission to transform the global economy into a more inclusive, equitable, and regenerative system. Our values are aligned with B Corp, and we recognise the importance of external accreditation. Through a rigorous process, B Corp assesses and scores businesses against five categories: governance, workers, community, the environment, and customers.

GOVERNANCE

Evaluates a company's overall mission, ethics, accountability, and transparency.

WORKERS

Measures how the company treats its employees through compensation, benefits, and training.

COMMUNITY

Evaluates a company's diversity, their relationship with suppliers, and involvement in the local community.

ENVIRONMENT

Looks at a company's environmental performance based on emissions, resources, and energy usage.

CUSTOMER

Focuses on whether a company sells products that promote public benefit and are targeted toward serving underserved populations.

After analysing these five categories, B Corp certifies businesses that demonstrate high social and environmental performance. Once you are certified, the process must be verified every three years, which will make sure we are continuously focusing on improvement within our company. We will also be able to compare our performance to our peers and identify further areas for development to increase our accountability and social responsibility.



Probat P12 Coffee Roaster
Credit: Calendar Coffee



Zarah packing wholesale orders
Credit: Calendar Coffee

OUR LONG-TERM GOAL

100% OF OUR PROFITS WILL BE USED TO SUPPORT OUR MISSION

We didn't start Calendar to become rich, and now we have a shot at making a real difference. Over the years, we've proved to ourselves that decisions that are good for the future of coffee are good for business too - even if they don't make sense on a spreadsheet! As we enter our fifth year, we're planning to take this a step further.

In the future, 100% of our profits, after being reinvested back into the business, will go towards our mission. This means the company won't pay dividends to its shareholders. Calendar is independently owned by its co-founders Zarah Lawless and Daniel Boobier, and they will no longer be entitled to profits generated by the company. We'll demonstrate this by being transparent about our finances. To date, the company has predominantly used its profits to support its goals, but we now want to formalise this commitment.

Over the coming years, we'll seek legal and financial advice to find the most impactful way to do this. It's too early to know exactly what this will look like, but it's important for us to always remain a purpose driven company.



Teamwork Espresso
Credit: Calendar Coffee

POWER IN NUMBERS

We're at a tipping point in history and no matter how much we try, we can't do this on our own. Real change will take commitment from all of us, and as much as we hope other businesses will join us to build a better future for coffee, we need consumers with us too. Consumer choices drive entire industries, which means the more engaged we all are, the faster the coffee industry will change.

Every business should be held accountable for their practices, and we encourage everyone to ask more questions about the coffee they purchase. Certifications such as Fair Trade, Organic Trade Association, and Rainforest Alliance have their benefits, but they don't guarantee the producer is paid an equitable and sustainable price for their coffee. We propose supporting businesses that are transparent about their prices, and better yet, those that show how much money made it back to the farm. The future of coffee depends on farmers earning a stable and profitable income, and we believe transparency is the first step towards achieving this.

An easy and accessible starting point for anyone looking to vote with their money and support the future of coffee is the [Speciality Coffee Transaction Guide](#) and [The Pledge](#), where you'll find a list of roasters, importers, and exporters who are sharing their prices.



Quality control
Credit: Calendar Coffee



Team photo, November 2022
Credit: Calendar Coffee

REFERENCES

- 1 Bunn, C., Läderach, P., Jimenez, J., Montagnon, C. and Schilling, T. (2015) Climate change: Pinpointing the world's most vulnerable coffee zones. Available at: <https://worldcoffeeresearch.org/news/2015/climate-change-pinpointing-the-worlds-most-vulnerable-coffee-zones>
- 2 Talhinhos, P., Batista, D., Diniz, I., Vieira, A., Silva, D.N., Loureiro, A., Tavares, S., Pereira, A.P., Azinheira, H.G., Guerra-Guimarães, L., Várzea, V. and Silva, M.d.C. (2017), The coffee leaf rust pathogen *Hemileia vastatrix*: one and a half centuries around the tropics. *Molecular Plant Pathology*, 18: 1039-1051. <https://doi.org/10.1111/mpp.12512>
- 3 Rushton, D. (2019) Map of the Month: Bringing Smallholder Coffee Farmers out of Poverty. Available at: <https://carto.com/blog/enveritas-coffee-poverty-visualization/>
- 4 International Coffee Organization (2015) Sustainability of Coffee Sector in Africa. Available at: <https://www.ico.org/documents/cy2014-15/icc-114-5e-overview-coffee-sector-africa.pdf>
- 5 International Coffee Organization (2020) The Value of Coffee: Sustainability, Inclusiveness, and Resilience of the Coffee Global Value Chain. Available at: <https://www.internationalcoffeecouncil.com/cdr2020>
- 6 Eldrige, C. (2016) The Ever-Falling Price of Coffee. Available at: <https://www.freshcup.com/the-ever-falling-price-of-coffee/>
- 7 Nab, C., Maslin, M. (2020) Life cycle assessment synthesis of the carbon footprint of Arabica coffee: Case study of Brazil and Vietnam conventional and sustainable coffee production and export to the United Kingdom. *Geo: Geography and Environment*. 7:e96. <https://doi.org/10.1002/geo2.96>
- 8 Macrotrends (2022) Coffee Prices - 45 Year Historical Chart. Available at: <https://www.macrotrends.net/2535/coffee-prices-historical-chart-data>
- 9 Borunda, A. (2020) Past Decade was the Hottest on Record. Available at: <https://www.nationalgeographic.com/science/article/the-decade-we-finally-woke-up-to-climate-change>
- 10 United Nations (2022) What Is Climate Change? Available at: <https://www.un.org/en/climatechange/what-is-climate-change#:~:text=In%20a%20series%20of%20UN,and%20maintain%20a%20livable%20climate>
- 11 United Nations (2022) Climate Action Fast Facts. Available at: <https://www.un.org/en/climatechange/science/key-findings>
- 12 Lee, C. (2022) Can Agroforestry Help Coffee Farms Become More Resilient to Climate Change? Available at: <https://earth.org/agroforestry-coffee-farms/>
- 13 Rodewald, A. (2017) The Coffee-Songbird Connection. Available at: https://blogs.scientificamerican.com/guest-blog/the-coffee-songbird-connection/?WT.mc_id=SA_syn_BusinessInsider
- 14 Craves, J. (2006) The Problems with Sun Coffee. Available at: https://www.coffeehabitat.com/2006/02/the_problems_wi/
- 15 United States Environmental Protection Agency (2022) Global Greenhouse Gas Emissions Data. Available at: <https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data#:~:text=Since%201970%2C%20CO2%20emissions,been%20the%20second%2Dlargest%20contributors>
- 16 NASA (2022) 2021 Continued Earth's Warming Trend. Available at: <https://earthobservatory.nasa.gov/images/149321/2021-continued-earths-warming-trend>
- 17 United States Department of Agriculture (2022) How to Become Certified Organic. Available at: <https://www.ams.usda.gov/services/organic-certification/becoming-certified>
- 18 Donovan, J. and Poole, N. (2014) Changing asset endowments and smallholder participation in higher value markets: evidence from certified coffee producers in Nicaragua. *Food Policy*. Volume 44:1-13. <https://doi.org/10.1016/j.foodpol.2013.09.010>
- 19 Ritchie, H. and Roser, M. (2020) CO₂ and Greenhouse Gas Emissions. Available at: <https://ourworldindata.org/co2-emissions>
- 20 United Nations Department of Economic and Social Affairs, Population Division (2022). World Population Prospects 2022: Summary of Results. UN DESA/POP/2022/TR/NO. 3.