

A close-up photograph of a branch of a coffee plant. The branch is covered with numerous bright green, oval-shaped coffee cherries. Some cherries are in sharp focus, showing their smooth texture and the small stem at the top. Others are blurred in the background. Several dark green, glossy leaves are interspersed among the cherries. The lighting is bright, creating highlights on the cherries' surfaces.

Warfair Coffee

A close-up photograph of a branch of a coffee plant, similar to the one above. It shows green coffee cherries and leaves. The focus is slightly different, with some cherries in the foreground being very sharp.

Coffea Stenophylla

Pictures:

Frontpage picture: [Vandelino Dias Junior](#)

Page 1+2: Desert by [Linaberlin](#)

Page 3: Red coffee berries by [Vandelino Dias Junior](#)

Page 4: Coffee cup by [Pexels](#)

Page 7: Coffee beans by [Gedsarts](#)

Coffee bag mockup template by [Mockup+](#)

Why?

To save our planet and prevent conflict.

The goal is to help mitigate climate change, give the local people an active and economic role, and raise awareness to variety and diversity (in food supplies).

Coffee is a massive economic and global phenomenon. In a general there are only two option for coffee beans: Arabica and Robusta. There is a large variety of taste within these two branches of coffee, but both – especially Arabica – need quiet specific conditions in order to grow. Coffee grows in the Coffee Belt – which is located around equator – and these areas are under pressure from climate change and raise in temperature.

We should therefore look into diversifying coffee in order to make our supply more robust. For instance, the lack of diversity in the production of banana is a large problem, because they al stems from the same plant – the Cavendish – which means all bananas are receptive to the same diseases and environmental changes. Actually, prior to the Cavendish the most common banana was the Gros Michel, but it has almost vanished because of Panama disease.

We need diversity in all aspect of our lives. In order to grow. In order to learn and understand. In order to discover.

1 Climate & Coffee

We are in a crisis. A climate crisis.

The raise in temperature will result in profound changes to livable areas and our food supply. This will result in more migration, as people will have to relocate in order to survive.

Over the last 50 years nitrogen-based fertilizer has risen almost 800 %, whereas food production only risen 240 %. In the same periods livable areas, which has experienced desertification, has increase by almost 200 %. And humans are a key factor in climate changes:

“Land provides the principal basis for human livelihoods and well-being including the supply of food, freshwater and multiple other ecosystem services, as well as biodiversity. Human use directly affects more than 70% ... of the global, ice-free land surface.”

(Climate Change and Land, IPCC, 2020)

With the current trend, we are on route for raise around 1.5° within the next 10 - 30 years, which will further desertification. Even though these changes are global, many areas will be hit harder than other. These areas are in many regards not ready and are already affected by changes:

“...climate change is affecting food security in drylands, particularly those in Africa, and high mountain regions of Asia and South America.”
(Ibid)

Therefore, we need to look at new sources of food, which are more resistant to climate changes. The changes in climate, will also have an impact on migration and war, because changes in food and water supply will escalate conflict and force people to move.

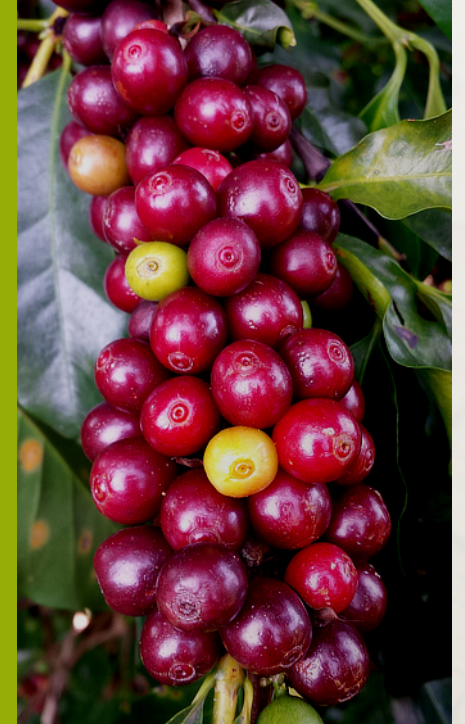
Arabica and Robusta

Arabica and Robusta are the de facto coffee species. They are the most widely and common coffee types. Arabica is mainly grown in Latin America, South America and Ethiopia. Whereas, Robusta is primarily grown in Africa and Indonesia. There are other coffee areas, such as India, which produces both species of coffee.

Arabica is very delicate, as it likes sun and stabile colder weather. This is why most Arabica is grown along mountainsides. Whereas, Robusta can be grown at higher temperatures and at lower altitude.

“Arabica beans tend to have a sweeter, softer taste, with tones of sugar, fruit, and berries. Their acidity is higher, with that winey taste that characterizes coffee with excellent acidity...”

Robusta, however, has a stronger, harsher taste, with a grain-like overtone and peanuttty aftertaste. They contain twice as much caffeine as arabica beans, and they are generally considered to be of inferior quality



compared to arabica. Some robustas, however, are of high quality and valued especially in espressos for their deep flavor and good crema.”
(Kitchn, Faith Durand, 2021)

Coffee is consumer in every corner of the world and many people consider it a natural and essential part of their daily life. When they read a newspaper, attend to a meeting or socialize, coffee often has a central place.



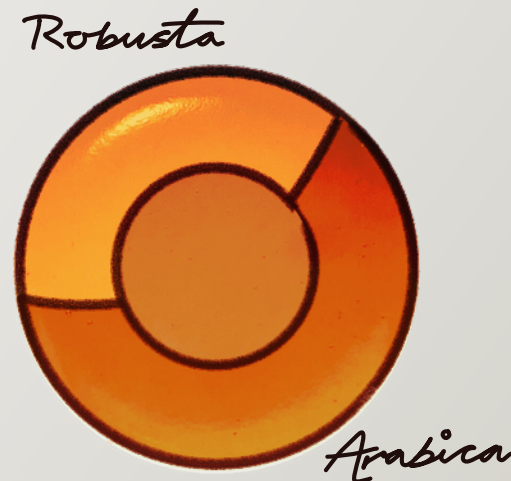
2 Coffee Economy

Bean counting.

Coffee is big business. According to Statista, the coffee industries revenue was over \$435b in ‘20 and revenue is expected to grow by 8 % annually over the next five years. There are many initiatives from cultivating more fair and transparent, such as Fair Trade or UTZ, but more could and should be done in order to

The current market only consist of two main types of beans: Arabica with \approx 70 % market share and Robusta with \approx 30 % market share.

The price of coffee vary by type, area, and, often, locality. Generally, Arabica is much more expensive than Robusta. Furthermore, Arabica from Colombia and regions similar to Colombia often get a significant higher price for their coffee than other regions. It has a perceived (and often rightfully so) higher status and value in the coffee economy.





Colombia + others
Brazil

Robusta

The price of Robusta is roughly 60 % lower than that of Arabica from Colombia and around 40 % lower than Brazilian coffee (IOC Coffee Market Report: March 2021, 2021). The average price of coffee is around \$2,5/kg.

There is a raise in coffee consumption and more and more specialized products are being provided and developed, such as ice coffee, espresso tonic, or Dalgona coffee.

As noted by CNN, more local producers are entering the market and for the moment they are mostly domestic. These could have the same potential, as beer micro-brewing has had over the last 20 years.

And for some areas, war has played a central role in the underdevelopment or abandonment of production and farming, such as in Sierra Leone:

"Until 1991, Sierra Leone was exporting up to 25,000 tons of coffee annually.

But in that year, conflict in the neighboring country of Liberia, led by Charles Taylor, spread to Sierra Leone, triggering an 11-year civil war. Farmers abandoned the fields ... and the coffee industry disappeared." ([Cairns, CNN, 2021](#))

Therefore, the economic benefits of reenabling the local population could be large – especially with a type of coffee that demand a higher price than robusta.

3 Coffea Stenophylla



Enter a new bean.

Recently, a newcomer has entered the scene: *Coffea Stenophylla*. It is actually an oldcomer, which was almost lost for the ages.

It was rediscovered in the wild in 2018 in Sierra Leone. Later, samples were obtained by scientists, who have tested it and their

findings have been published in a short article in Nature ([Davis et al., 2021](#)).

So why could *Stenophylla* be an important discovery?

First and foremost, it is always interesting that we have a unique opportunity to diversify our production. Secondly, in taste tests, it was found to be much more similar to Arabica than Robusta. Thirdly, it is more robust and it can be grown at higher temperatures – over 6° higher than Arabica – and lower altitudes. The yields are assumed to be lower than Robusta and

Arabica, but it could find a place in a growing market.

"Following the rediscovery of wild populations of stenophylla in Sierra Leone in late 2018 ... in May 2020 we obtained a sample of wild-collected stenophylla coffee beans ... A second sample was obtained in October 2020 ... on Reunion Island (originally collected from the forests of eastern Ivory Coast). These samples and other accessions were evaluated by five professional, independent sensory panels" (ibid, 2021, p. 414)

The producer and the consumer are key to opening up the market. Firstly, a lower temperature and altitude opens up the possibility for production in areas previously considered impossible for coffee productions. This gets more people to consider getting into farming of coffee and here we have to ensure good working conditions and a fair price or share. This brings us to the second key, as the consumer needs to be told the story of Stenophylla and get them to spend money on coffee with Stenophylla content.

A challenge with Stenophylla is it takes longer to mature and the yields are lower. This means that on average it takes Stenophylla "... takes nine years to reach maturity and yield fruit, two years more than Arabica and five more than Robusta... [it] naturally repels the coffee leaf miner (*Perileucoptera coffeella*) which, in contrast, is very dangerous for other, more widespread coffee varieties." ([Slow Food Foundation for Biodiversity](#)). So investment in production is a very long term investment.

4 Warfair Coffee

"The rediscovery of Sierra Leone's highland coffee has renewed hopes that the uncommon crop could be cultivated and produced commercially -- and help to revive the country's floundering coffee industry, which was decimated by 11 years of civil war.

'Coffee could change the narrative for our farmers,' Sarmu tells..."
([Cairns, CNN, 2021](#))

Three main factors are at play for bringing Stenophylla to market:

1. Climate changes
2. Consumer awareness
3. Consumption specialization

The climate changes are real and there are here. We should do what we can to mitigate and stop further rise in temperature and do more in order to help our planet. A new source of coffee is a new opportunity to rethink how we farm, produce, and consume coffee in order to make it contribute to fighting climate changes.

The consumers are getting more aware of the meaning of diversity and the need for action. There are often willing to pay more for production, which acts on climate change and enables fair trading.

A great example of specialization is the rise in pro-consumer grade machines and equipment, such as the Fellow Ode or Wilfa.

Furthermore, we have YouTubers and Instagrammers, for instance [James Hoffmann](#), who have been growing in popularity along side the specialty cafés and/or roasters. Here, Stenophylla would fit perfectly in and be able to grow, as the places would be able to tell the story of Stenophylla, the importance diversity in our food supply, and – to be frank – the novelty.

A proposal for coffee

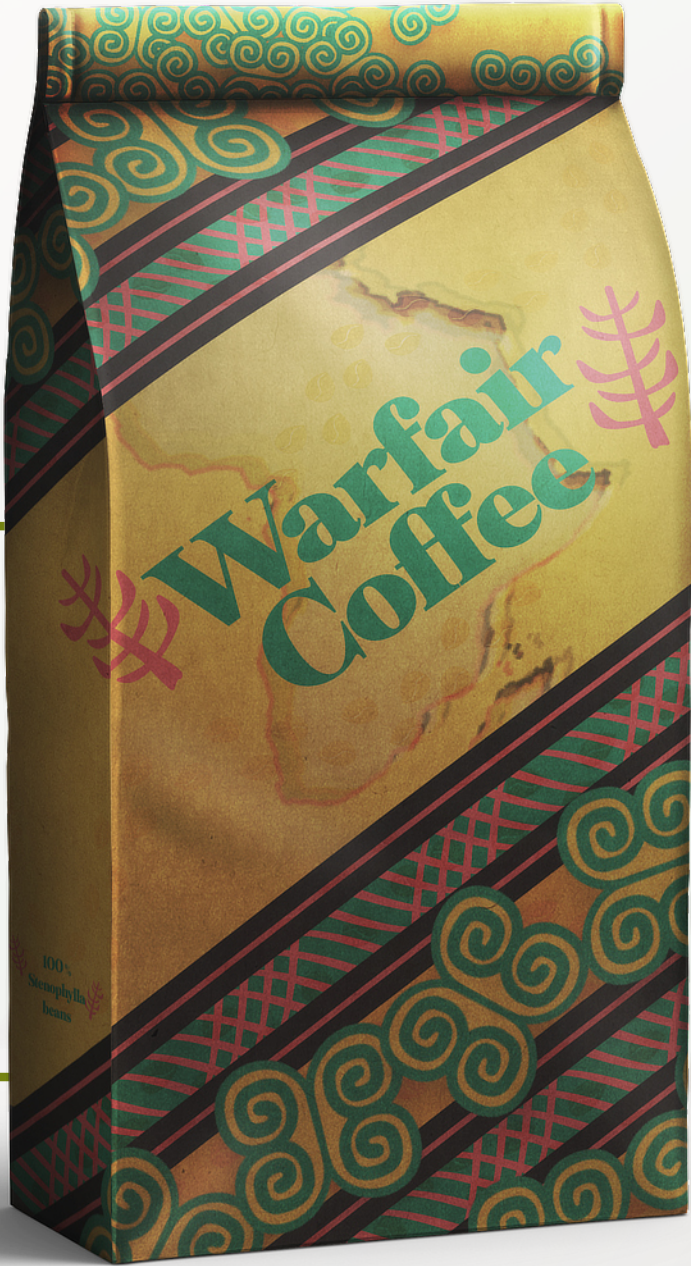
Size: 250g, 500g, or 1000g bag

Taste notes: Closely resembles Ethiopian Arabica

First bags: 1-10 % Stenophylla + Arabica

Future bags: 100 % Stenophylla

Price: Slightly above Arabica



What should the price of Stenophylla be?

If the quality and taste is similar to Colombian Arabica, the price should be similar, but, as shown earlier, Colombian Arabica has a higher status than all other producers. This means that the price could be a little lower – even with a lower yield per plant. The price would properly be in the \$3/kg, if capacity is possible. If capacity remains very low the price would be very high – properly \$5/kg+.

\$5/kg

\$2.5/kg

\$1/kg

The proposal of Warfair Coffee is to engage in partnership with existing coffee production (mix of Arabic, Robusta, and Stenophylla) and actively enable and pursue new production of Stenophylla. The new productions would be based on cooperations and shared structure. The local partners will get a larger than normal cut and they will – over time – bear equal amount of risk in the production. This will enable development of local areas and give them the opportunity to take control of their own lives and the area they live in.

Coffee is for everyone. Warfair Coffee is for you, me, us and them.



Coffea Stenophylla