Tanzania: coffee production

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Abstract

The current article is inspired by my impressions of a visit to “Materuni” – a family coffee plantation on Mount Kilimanjaro – the highest volcano in Africa (Tanzania). The trip was taken on February 2022 and aimed to get acquainted with the local culture and coffee-growing traditions. In the current paper attention is focused on the history of coffee production in Tanzania in the context of the world industry of coffee, and also on harvesting and processing of coffee in the country. This paper is an attempt to find out what problems locals face in producing coffee on plantations and what importance they attach to this industry today.

Keywords: Tanzania; Kilimanjaro; coffee; Coffee Belt; Arabica; Robusta

1. Introduction

Coffee is the second most consummated beverage in the world after water. For instance, In Germany, with 146 liters per person and year, coffee is even more consummated than water and beer (No marketing. No hunger. 2023).

The United Republic of Tanzania (or just Tanzania for short) is one of the world’s top coffee-producing countries. With Kenya to its North, Rwanda to its West, and Malawi to its South, Tanzania makes up 885 miles of Africa’s eastern coast along the Indian Ocean (Fig.1).

Since the 19th century, coffee has been one of the most important exports in the country. It only makes up 0.7% of the global coffee trade, but it is the largest export crop in Tanzania – and has only recently been overtaken by other industries, such as tourism and mining.

And from the rich, volcanic soil of the slopes of Mount Kilimanjaro to the fertile Southern Highlands, coffee production has played a very important role in the history of Tanzania (Homegrounds 2023).

Coffee was introduced to Tanzania from the Bourbon (the Réunion, a French island to the east of Madagascar) (Fig.1). French began to cultivate coffee on the island as late as 1714 (Ayvazoğlu 2011). However, when it came to Tanzania, it did not receive major attention in the region until the arrival of German missionaries some 200 years later. It was first grown at Kilema Mission on the slopes of Mt. Kilimanjaro. Coffee spread slowly to other regions of Tanzania and later to Kenya, thus crowning Tanzania as the ‘Mother’ of Coffee culture in the region.
Fig. 1. Location of Tanzania in Africa (the current map has been made after the map shown in Wikipedia 2023)

2. Regions where coffee is cultivated and production profile

Plantations of coffee existing in Tanzania are mainly located on the Southern slopes of Mount Meru, but excellent plantations have also been established on the Western, Northern, and Eastern Slopes of the mount, where, on account of soil differences, it was at one time thought coffee would not thrive.
However, the practice has shown that coffee plantations can be outside the so-called Coffee Belt (Fig. 3). The term Coffee Belt refers to the regions where the best conditions for cultivating coffee exist (Gaku 2021).

While the growing conditions are generally quite similar between the countries within the coffee belt, the variations in soil, temperature, rainfall, and altitude significantly affect the flavor of the coffee beans. In fact, just as with wine, the taste of one coffee can differ seriously from another produced on a neighboring plantation.

More than 98 percent of the world’s coffee is made up of only two species of coffee plant: Coffea arabica and Coffea canephora, better known as Arabica and Robusta, respectively. The two species have different botanical and chemical features and qualities. Arabica is the more delicate of the two, requiring particular conditions for cultivation. Robusta is able to withstand greater extremes of temperature, altitude, and rainfall (Eleven coffees 2023).
Tanzania produces both Robusta and Arabica coffee, over 90% of which is exported. Arabica is principally produced in the country’s Southern Highlands. However, coffee is also cultivated on the Tanzanian slopes of Mount Kilimanjaro and Mount Meru (Fig.2) in the northern reaches of the country, often under the shade of banana trees. Areas such as the Mara region also grow Arabica in this part of the country. The split in Arabica production between the country’s mountainous Northern Zone and rainy Southern Highlands means that there is a distinct difference in flavor between the two. Northern coffees tend to have a pleasant aroma, rich acidity and mouthfeel, and a sweet, balanced taste. These characteristics are derived from the mineral nutrients found in the region’s mountainous volcanic soils. Southern coffees, meanwhile, are characteristically medium-bodied with fine acidity. They generally have good fruity and floral aromas and flavors (Gakuo 2021). Arabica comprises 70% of all coffee grown in Tanzania and they say that the main varieties are Bourbon and Kent. Other popular varieties include Typica, Nyassa, and N39.

Robusta makes up the remaining 30%. It is produced primarily in the Kagera region, in the northwest of the country, by the shores of Lake Victoria.

3. Coffee: from growing to a coffee cup

The soil in which coffee is grown must be rich, moist, and absorbent enough to accept water readily, but sufficiently loose to allow rapid drainage of excess water. The best soil is composed of leaf mold, other organic matter, and disintegrated volcanic rock. Although coffee trees are
damaged easily by frost, they are cultivated in cooler regions. On the Materuni coffee plantation (Fig.4) people use an intercropping system for growing coffee and banana. Bananas make coffee production systems more diverse, reducing risk while increasing food security during dry seasons. In newly established coffee farms, bananas can offset cash flow constraints in the early years before the coffee becomes productive. In terms of resilience, bananas provide valuable shade coverage for highly climate-sensitive coffee crops. In addition, bananas are capable of remaining hydrated under drought stress, reducing water competition during drought, compared to other shade trees (Farming first 2021) (Fig.5).

![Fig. 4. Location of the Materuni coffee plantation (the map has been made after a Google Maps screenshot)](image)
The coffee tree produces its first full crop when it is about 5 years old. Thereafter it produces consistently for 15 or 20 years. Some trees yield 0.9 to 1.3 kg of marketable beans annually, but 0.45 kg is considered an average annual yield. Two methods of harvesting are used. One is based on selective picking; the other involves shaking the tree and stripping the fruit. Beans picked by the first technique are generally processed, if water is available, by the so-called wet method, in which the beans are softened in water, de-pulped mechanically, fermented in large tanks, washed again, and finally dried in the open or in heated, rotating cylinders. The so-called dry method, used generally for beans harvested by the second technique, entails only drying the beans and removing the outer coverings. In any case, the final product, called green coffee, is sorted by hand or machine to remove defective beans and extraneous material and is then graded according to size (Fig. 6).
Fig. 6. Beans graded according to size (photo by the author)

Next step – removing the husks. While coffee itself is relatively new, the age-old mortar-a-pistil method of removing the husks is not. The beans are pounded by hand to smash the husks away and reveal the white seeds underneath. It’s hard work, so while they do this they sing. While somebody pounds, everyone starts clapping to the rhythm of the work and singing along. It feels more like a party as everyone takes turns crushing away the husks and in no time at all the beans are ready for sifting (Fig. 7).

Fig. 7. Removing the husks (Image source – Neal 2017)
In banana-woven baskets the mortar’s contents are flipped, spun, and shaken to separate the husks and remove a powdery substance that accumulates in the crushing process, and, finally, the beans are placed in a pot to be roasted. The water is ready and bubbling away and the coffee is dumped straight from the pot into cups (Fig. 8). It’s time to enjoy!

![Fig. 8. The last step of coffee production (photo by the author)](image)

4. Conclusion

The coffee industry in Tanzania nowadays faces some challenges. Alongside the aforementioned issues with coffee wilt disease, there are a number of reasons that Tanzania’s coffee production figures are stalling. Firstly, locals note that Tanzanian coffee plants are broadly very old. A large number of older coffee trees in Tanzania are not capable of realizing their full potential yields. Beyond that, highly volatile coffee prices and other factors cause dramatic fluctuations in Tanzania’s coffee production.

Infrastructure is also an issue. A lack of access to mechanized irrigation systems is one of the biggest challenges facing smallholder farmers, who often struggle to source water at critical periods during the growing season. Finally, there is a reputational issue with the country’s coffee in Tanzania itself. Most Tanzanian coffee is exported, and very little remains for the underdeveloped internal market. However, when you are on the coffee plantation of Materuni, it becomes evident that coffee production here is a very honorable mission, which is
passed down from generation to generation and is a matter of life for the families living in the vicinity.

Despite these challenges, the future of the Tanzanian coffee sector looks very bright. Stakeholders across the supply chain are taking the sector seriously, with emphasis on quality, reducing production costs, and improving yields (Gakuo 2021).

References


