

Abstract

New Sensory Lexicon for Liberica Coffee: Insights into the Sensory Attributes of the Different Origins, Processing Methods, Elevation, and Roasting [†]

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1. Introduction

Liberica coffee, an often-overlooked species, has emerged from the shadow of Arabica and Canephora in recent years, gaining recognition and value due to various factors. As climate change continues to impact the global production of Arabica and Canephora, coffee professionals have begun exploring alternative species, with Liberica topping their list. Additionally, Liberica coffee has made notable appearances in world coffee competitions, challenging the dominance of prestigious Arabicas. Despite its growing fame, limited studies can be found regarding Liberica's sensory lexicon and flavor profiling based on different growing conditions and post-harvest processing methods. Such information is crucial as sensory quality is mostly responsible for Liberica coffee's rise in popularity in the past decade.

2. Methods

The information presented in this paper is mostly qualitative data collected via different means:

1. Descriptions of Liberica's sensory attributes found in the existing literature.
2. Liberica sensory evaluation data in the form of flavor descriptions recorded via cupping tests by trained coffee experts in various cupping events (scores are not used because there is a lack of an grading system for Liberica).
3. Liberica sensory evaluation data collected from judges (coffee experts) at the first Liberica Roasting Competition conducted in 2019, which were later compiled into a graphic info chart that will be attached in this paper.
4. Descriptions of Liberica's sensory attributes recorded from interviews with specialty Liberica coffee producers and coffee scientists who are specialized in coffee sensory.

The above data will be analyzed and categorized according to the different origins, processing methods, elevation, and roast levels. The results will then be compiled and transcribed to data relatable to the Cirad Coffee Flavor Wheel used in a paper that studied sensory attributes of various coffee species to assess which range of spectrum of the flavor wheel best represents Liberica's sensory aspects in light of the different treatments and conditions of this species.

3. Results and Discussion

The recent emphasis on the different cultivation conditions, varieties, processing methods, and roast levels advocated within the specialty coffee community has led to new



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sensory discoveries of Liberica coffee. Unsurprisingly, many flavor descriptions from our data could not be located on the existing flavor wheels and sensory lexicon, and there are numerous positive sensory aspects that represent exotic fruits and spices and herbs found only in Asia. This opens up the discussion to why Liberica has been better appreciated in recent years compared to the negative sensory descriptions associated with the species historically, thus more focus should be placed on growing conditions and post-harvest treatment. The results also indicate the need for a new approach and grading system to evaluate this rare and uprising species. And more studies and flavor charting should be conducted for the many undocumented Liberica varieties that we had encountered during sample collection.

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