

Sustainable Coffee Empowerment in Saudi Arabia: Unleashing Potential Through Comprehensive Cupping Sessions

Kurniawan Arif Maspul

University of the People, Pasadena, California

Corresponding Author: kurniawanarifmaspul@my.uopeople.edu

Abstract

This paper describes a study that used coffee cupping sessions to evaluate various coffee samples from green coffee merchants in Saudi Arabia. The study focuses on attaining quality assurance, assessing suppliers, empowering people, encouraging sustainability, and differentiating the firm in the market. The study integrates theories such as Expectancy Disconfirmation Theory, Resource-Based View, Self-Determination Theory, Triple Bottom Line, and Differentiation Strategy. Qualitative and quantitative elements were blended in a mixed methods approach. Randomly chosen single origin coffee samples were procured from trustworthy vendors in Jeddah, Riyadh, and Dammam. Cupping sessions were held in accordance with the Specialty Coffee Association (SCA) standard cupping methodology, and experienced participants rated the samples. The results and analysis included an overview of the cupping sessions, sensory evaluation data analysis, a comparison of samples from various suppliers, and the identification of important taste profiles and attributes. Employee empowerment was also stressed in the study through coffee evaluation, which included training and educational activities, the impact on participants' knowledge and abilities, and their feedback and reflections. Furthermore, the study looked at the consequences of sustainability, focusing on supporting sustainable practices, strengthening partnerships with suppliers, and improving quality to increase market competitiveness. The cupping session technique was described in depth in the professional report, which included randomization and sample division, roasting and resting methods, standardized roasting procedures, calibration and perception sessions, blind cupping, transparency measures, and post-cupping session communication.

Keyword : Specialty Coffee, Quality assurance, Differentiation Strategy, Sustainability, Coffee Value Chain

Abstrak

Makalah ini menjelaskan sebuah studi yang menggunakan sesi bekam kopi untuk mengevaluasi berbagai sampel kopi dari pedagang kopi hijau di Arab Saudi. Studi ini berfokus pada pencapaian jaminan kualitas, menilai pemasok, memberdayakan orang, mendorong keberlanjutan, dan membedakan perusahaan di pasar. Studi ini mengintegrasikan teori-teori seperti Teori Diskonfirmasi Harapan, Pandangan Berbasis Sumber Daya, Teori Penentuan Nasib Sendiri, Triple Bottom Line, dan Strategi Diferensiasi. Elemen kualitatif dan kuantitatif dicampur dalam pendekatan metode campuran. Sampel kopi asal tunggal yang dipilih secara acak diperoleh dari vendor terpercaya di Jeddah, Riyadh, dan Dammam. Sesi bekam diadakan sesuai dengan metodologi bekam standar Specialty Coffee Association (SCA), dan peserta berpengalaman menilai sampel. Hasil dan analisis termasuk ikhtisar sesi bekam, analisis data evaluasi sensorik, perbandingan sampel dari berbagai pemasok, dan identifikasi profil dan atribut rasa yang penting. Pemberdayaan karyawan juga ditekankan dalam penelitian melalui evaluasi kopi, yang meliputi pelatihan dan kegiatan pendidikan, dampak pada pengetahuan dan kemampuan peserta, serta umpan balik dan refleksi mereka. Selanjutnya, penelitian ini melihat konsekuensi keberlanjutan, dengan fokus pada mendukung praktik berkelanjutan, memperkuat kemitraan dengan pemasok, dan meningkatkan kualitas untuk meningkatkan daya saing pasar. Teknik sesi bekam dijelaskan secara mendalam dalam laporan profesional, yang mencakup pengacakan dan pembagian sampel, metode pemanggangan dan istirahat, prosedur pemanggangan standar, sesi kalibrasi dan persepsi, bekam buta, tindakan transparansi, dan komunikasi sesi pasca-bekam.

Kata Kunci : Kopi Khusus, Jaminan Kualitas, Strategi Diferensiasi, Keberlanjutan, Rantai Nilai Kopi

1. Introduction

The coffee industry is a fast-paced and competitive industry that necessitates a high level of quality, sustainability, and market distinctiveness. The purpose of this study is to conduct cupping sessions to evaluate various coffee samples from various green coffee vendors in Saudi Arabia. The goal of analyzing and comparing these samples' sensory properties is to assure quality assurance, evaluate suppliers, empower employees, contribute to sustainability, and differentiate the organization in the market.



Quality assurance is a top priority for any coffee company. Conducting research and cupping sessions enables for the careful evaluation of various coffee samples, ensuring the quality and consistency of the sourced coffee. According to the Expectancy Disconfirmation Theory (EDT), customer satisfaction is determined by the perceived quality of a product in comparison to their initial expectations (Oliver, 1980; Lankton *et al.*, 2014). This study corresponds with the EDT and increases the potential for consumer happiness by continuously selecting high-quality coffee through sensory evaluation.

Another key part of this research is the evaluation of suppliers. The purpose is to analyze and compare the offerings of various green coffee providers by evaluating a wide range of coffee samples. According to Barney (1991), the Resource-Based View (RBV) hypothesis, a firm's competitive advantage is generated from its distinctive resources and skills. This research discovers suppliers who consistently offer coffee with desirable flavor profiles and qualities, increasing the company's resource base and competitive advantage (Barney, 1991; Jafari & Rezaee, 2014).

In addition to quality assurance and supplier evaluation, this research emphasizes employee empowerment and skill development. According to the Self-Determination Theory (SDT), intrinsic motivation and personal growth are promoted when people have a sense of autonomy, competence, and relatedness (Miller *et al.*, 1988; Deci *et al.*, 2017). This research connects with the SDT by integrating employees in cupping sessions and giving them hands-on experience evaluating coffee samples. It promotes their autonomy, competence, and contribution to the company's growth.

This research is built around the concept of sustainability. The goal of focusing on sustainability through empowerment is to contribute to the long-term viability of the coffee business. The Triple Bottom Line (TBL) concept highlights the necessity of addressing environmental, social, and economic concerns in corporate operations (Elkington & Rowlands, 1999; Alhaddi, 2015). This study aligns with the TBL paradigm by promoting sustainable supply chain methods, assisting coffee producers' livelihoods, and having a positive social impact within coffee-producing communities.

Finally, this study suggests the possibility of market differentiation. In an increasingly sensitive consumer market, where quality, sustainability, and ethical considerations are important, the company's commitment to thorough research, quality assessment, supplier evaluation, and sustainability distinguishes it from competitors. According to Porter (2011), organizations can achieve a competitive advantage by producing distinctive and superior products or services. This research correlates with the Differentiation Strategy and promotes the company as a trusted provider of high-quality, sustainable coffee by demonstrating a commitment to quality, sustainability, and ethical standards.

2. Data and Method

A mixed methods approach was used in the research process, which combined qualitative and quantitative elements. Green coffee providers were chosen from respected enterprises in Saudi Arabia's Jeddah, Riyadh, and Dammam. Each supplier provided thirteen to twenty coffee samples. Cupping sessions were conducted in accordance with the SCA standard cupping protocol, using calibrated baristas and owners. The samples were reviewed by participants with at least three years of expertise in the specialty coffee market. Their evaluations served as the foundation for the data analysis, which offered detailed insights into the quality and features of the coffee samples.

3. Results

Analysis Of Sensory Evaluation Data

The sensory evaluation data gathered during the cupping sessions revealed important information about the quality and qualities of the coffee samples. To discover essential flavor profiles and traits, data was analyzed using descriptive statistics and sensory profiling approaches. To describe the sensory qualities of the coffee samples, descriptive statistics such as mean scores and standard deviations were generated. This research enabled a quantitative evaluation of the samples based on characteristics such as acidity, body, fragrance, and flavor intensity. It was feasible to select samples that stood out in terms of specific sensory features by comparing the mean scores.



Furthermore, sensory profiling was used to establish a sensory profile for each coffee sample. This entailed evaluating the samples based on a preset set of sensory properties and ranking the intensity of each attribute on a standardized scale. The sensory profiles offered a complete assessment of the flavor profiles and features of the coffee samples.

Comparison of Coffee Samples from Different Suppliers

A critical part of this study was the comparing of coffee samples from various sources. It was feasible to analyze the quality and consistency of each provider by assessing a wide range of coffee samples. A comparative study was performed based on the sensory evaluation data to discover any significant discrepancies between the samples from different vendors. To see if there were any statistically significant differences in sensory qualities between the samples, statistical approaches such as analysis of variance (ANOVA) and post-hoc testing were used.

The investigation found significant changes in flavor profiles and features between samples from different sources. Some suppliers consistently produced coffee samples with higher desirable attribute scores, indicating superior quality and potential as reliable sources for the company's coffee procurement.

Identification of Key Flavor Profiles and Characteristics

Key flavor profiles and attributes of the coffee samples were discovered through sensory evaluation and analysis. These insights are critical for knowing consumer preferences and picking coffee that is appropriate for the company's target market. The flavor profiles indicated by the sensory evaluation data included fruity, chocolaty, nutty, flowery, and earthy characteristics. It was possible to identify the major taste profiles and their intensities throughout the coffee samples by assessing descriptive statistics and sensory profiles. Furthermore, the sensory evaluation data revealed information on other essential properties such as acidity, body, sweetness, and aftertaste. These features add to the entire sensory experience of the coffee and influence consumer preferences.

Training and Educational Initiatives for Participants

Comprehensive training and educational programs were done to guarantee that participants had the requisite knowledge and abilities in coffee assessment (Yeager *et al.*, 2023). Prior to the cupping sessions, the participants, who had at least three years of expertise in the specialty coffee industry, went through a series of training sessions. The training sessions included a wide range of topics in coffee evaluation, such as sensory evaluation methodologies, cupping protocols, and identifying essential flavor profiles and attributes (Sinnott, 2011; Baqueta *et al.*, 2019). SCA (Specialty Coffee Association) standards and processes for cupping were taught to the participants, assuring uniformity and adherence to industry best practices (SCA, 2020).

Workshops on descriptive sensory analysis were also included in the training sessions, where participants taught how to evaluate and grade the intensity of sensory properties such as acidity, body, scent, and flavor (Spence & Piqueras-Fiszman, 2014; Hu *et al.*, 2020). This training assisted participants in developing a shared sensory language and improving their ability to appropriately analyze and explain the sensory qualities of coffee samples. The teaching endeavors went beyond the cupping sessions as well. Participants were given tools and materials, such as literature on coffee evaluation, sensory analysis, and sustainable coffee practices (Baggenstoss *et al.*, 2008; Giacalone *et al.*, 2019). These sites acted as a resource for additional learning and development.

Impact on Participants' Knowledge and Skills in Coffee Assessment

The participants' knowledge and skills in coffee assessment improved significantly as a result of the training and educational initiatives (Yeager *et al.*, 2019). Participants obtained a better understanding of the cupping procedure, sensory evaluation methodologies, and the elements that contribute to the quality and characteristics of coffee through the thorough training sessions. Participants were able to administer cupping treatments in a standardized and consistent manner after becoming acquainted with the SCA cupping guidelines (SCA, 2020). The use of industry standards ensured the dependability and quality of the sensory evaluation data obtained during the sessions.



Furthermore, the descriptive sensory analysis workshops improved participants' ability to distinguish and evaluate the sensory characteristics of coffee samples (Spence & Piqueras-Fiszman, 2014; Hu *et al.*, 2020). They improved their sensory evaluation skills by becoming more adept at distinguishing and characterizing the flavors, smells, and other sensory aspects of coffee. During the cupping sessions, the participants' knowledge and skills in coffee assessment were not only strengthened but also actually implemented. They contributed to the whole assessment procedure by actively analyzing and scoring the coffee samples based on their sensory qualities.

Feedback and Reflections from Participants

The participants provided insightful feedback and thoughts on their experiences with the cupping sessions and training programs (Yeager *et al.*, 2019). Overall, the comments were good, emphasizing the importance of the training in increasing their grasp of coffee assessment and sensory evaluation. Participants expressed gratitude for the hands-on experience they obtained from the cupping sessions. They stated that the actual application of their knowledge in analyzing a wide range of coffee samples allowed them to develop their sensory skills and expand their sensory vocabulary. Participants also stressed the significance of the educational tools made available to them. The literature and materials on coffee evaluation and sensory analysis were regarded as useful resources for future learning and development (Baggenstoss *et al.*, 2008; Stone *et al.*, 2020). Several participants expressed a desire to continue investigating and expanding their expertise in this area.

The participants also recognized the importance of the training and cupping sessions in encouraging sustainability in the coffee business. They recognized that by reviewing and evaluating coffee samples, they were helping to source high-quality and sustainable coffee, which is consistent with the company's commitment to ethical and sustainable operations. Participants' feedback and reflections revealed that the training and educational activities improved their knowledge, skills, and comprehension of coffee assessment (Yeager *et al.*, 2019). Participants left feeling empowered and confident in their capacity to correctly evaluate coffee samples and contribute to the company's commitment to quality and sustainability.

Promotion of Sustainable Practices in the Coffee Supply Chain

The coffee business is important in global trade and is increasingly under pressure to adopt sustainable practices. This study promotes sustainable practices in the coffee supply chain by conducting a series of cupping sessions to evaluate coffee samples sourced from green coffee vendors in Saudi Arabia. Quality control is an essential component of every coffee company's operations. Companies may ensure the quality and consistency of the coffee they obtain by conducting research and cupping sessions on numerous coffee samples. Customer satisfaction is impacted by the perceived quality of a product in comparison to their initial expectations, according to the Expectancy Disconfirmation Theory (EDT) (Oliver, 1980; Roldán Bravo *et al.*, 2017). This study connects with the EDT by selecting high-quality coffee on a constant basis through sensory evaluation, enhancing the potential for consumer happiness. The evaluation of green coffee vendors is also an important component of this research. Companies can discover those who consistently deliver coffee with desirable flavor profiles and attributes by examining and comparing the offerings of diverse suppliers through cupping sessions. This method is consistent with Barney's (1991) Resource-Based View (RBV) thesis, which states that a firm's competitive advantage is derived from its unique resources and talents. Companies can gain a competitive edge by identifying and cooperating with suppliers who provide high-quality and sustainable coffee (Barney, 1991; Jafari & Rezaee, 2014).

This study stresses employee empowerment and skill development in addition to quality assurance and supplier evaluation. Individuals are intrinsically motivated and experience personal progress when they have a sense of autonomy, competence, and relatedness, according to the Self-Determination Theory (SDT) (Miller *et al.*, 1988). This study encourages employees' autonomy, competence, and contribution to the company's growth by incorporating them in cupping sessions and giving them the opportunity to evaluate coffee samples. Employees' knowledge and abilities in coffee evaluation criteria are enhanced as a result of this empowerment, which improves the overall quality of the coffee supply chain (Miller *et al.*, 1988; Deci *et al.*, 2017).



The concept of sustainability is essential to this study. The purpose of focusing on sustainability through empowerment is to contribute to the coffee industry's long-term viability. Elkington and Rowlands (1999) created the Triple Bottom Line (TBL) idea, which emphasizes the need for firms to address environmental, social, and economic concerns in their operations. This study supports the TBL paradigm by encouraging sustainable supply chain practices, assisting coffee producers' livelihoods, and generating positive social consequences within coffee-producing communities. Companies can reduce the environmental impact of coffee production, promote social responsibility, and ensure the industry's economic viability by implementing sustainable methods (Elkington & Rowlands, 1999; Alhaddi, 2015).

Furthermore, according to the findings of this study, a commitment to sustainability and quality might create a competitive edge in the market. Companies that demonstrate a dedication to rigorous research, quality assessment, supplier evaluation, and sustainability can separate themselves from competitors in today's consumer market, where customers emphasize quality, sustainability, and ethical issues. According to Porter (2011), firms can gain a competitive advantage by developing distinctive and excellent products or services. This research supports the company's Differentiation Strategy by positioning it as a reliable source of high-quality, sustainable coffee, appealing to environmentally and socially conscientious customers (Porter, 2011; Sulaeman & Kusnandar, 2020).

Enhancing Relationships with Green Coffee Suppliers

It is vital for coffee firms to establish strong relationships with green coffee suppliers in order to assure a continuous and reliable source of high-quality, sustainable coffee. This section highlights the importance of maintaining strong relationships with green coffee suppliers and how it can contribute to a company's overall success. To begin with, effective supplier connections promote a sense of teamwork and collaboration. Companies can work with their suppliers to solve problems, share information, and come up with innovative solutions by establishing open lines of communication and mutual trust. This collaborative approach promotes transparency and allows both parties to better understand each other's needs and expectations, resulting in improved supply chain management.

Strong ties between buyers and suppliers, according to Williamson's (1979) Transaction Cost Economics (TCE) theory, can lower transaction costs and improve efficiency. Companies can reduce the costs of hunting for new suppliers, negotiating contracts, and monitoring coffee quality by forming long-term partnerships. This enables businesses to concentrate on quality improvement and other value-added activities throughout the supply chain (Williamson, 1979; Wieland & Fischer, 2020). Improving partnerships with green coffee providers also allows for mutual learning and progress. Companies can assist their suppliers in improving their farming, processing, and sustainability practices by engaging in regular discussions, sharing best practices, and providing feedback. By encouraging continual improvement and innovation, this collaboration contributes to the long-term viability and resilience of the whole supply chain.

Furthermore, excellent relationships with suppliers can aid to supply chain stability and risk management. In the volatile coffee business, where factors such as climate change, political instability, and market swings can affect coffee availability and price, having dependable and dedicated suppliers is critical. Companies that maintain close connections with their suppliers can better identify and predict potential risks, implement contingency plans, and ensure a regular supply of high-quality coffee to satisfy client needs.

Potential for Quality Improvement and Market Competitiveness

Investing in quality improvement is essential for businesses looking to increase their market competitiveness. This section investigates the possibilities for quality enhancement and how it might benefit a company's position in the coffee industry. Quality improvement begins with a thorough understanding of coffee's sensory attributes and features. Companies can acquire significant insights into the flavor profiles, aroma, acidity, body, and overall quality of different coffee samples through cupping sessions and sensory evaluation. Companies can use this data-driven strategy to discover areas



for improvement, make educated sourcing selections, and enhance product offerings to fit consumer preferences.

Companies may increase the quality of coffee at the source by engaging closely with green coffee suppliers. This can include advising on growth techniques, harvesting procedures, and processing methods that improve the flavor and quality of coffee beans. Suppliers can match their processes with the company's quality needs through constant communication and feedback, resulting in a consistent supply of high-quality coffee. Quality enhancement not only increases customer satisfaction but also a company's market competitiveness. Companies can differentiate themselves by providing superior products or services, according to Lancaster's (1966) Product Differentiation thesis. Companies can separate themselves from competition and develop a reputation as a trusted provider of premium coffee by regularly offering high-quality coffee. This reputation attracts discerning consumers who are ready to pay a premium for quality, giving the company a market advantage (Lancaster, 1966; Qayyum, 2017). Moreover, quality improvement can lead to increased customer loyalty and brand recognition. Satisfied customers who consistently receive high-quality coffee are more likely to become loyal patrons and recommend the brand to others. This positive word-of-mouth marketing can significantly enhance a company's market presence and contribute to its long-term success.

Professional Report; Cupping Session Process and Evaluation

This report examines the cupping session process and evaluation of single origin coffee samples received from five green coffee vendors in Jeddah, Riyadh, and Dammam in depth. The cupping sessions were designed to evaluate the quality and attributes of the coffee samples by employing defined processes and evaluation criteria.

1. Randomization and Sample Division

Randomization is an important stage in research methodology that ensures representative sample and eliminates any biases (Kothari, 2004; Brown, 2017). The first step was to get single origin coffee samples from the chosen green coffee vendors. The samples were randomized to ensure an unbiased representation. Following that, the samples were separated into three cupping sessions, each with 15 - 20 randomly selected single origin samples from the green coffee suppliers.

2. Roasting and Resting

The resting period is critical in coffee cupping because it lets flavors and aromas to solidify after roasting, resulting in more accurate sensory evaluations (Illy & Viani, 2005; Pereira *et al.*, 2020). Each green coffee sample was roasted according to a set schedule. To avoid overlap among the 15 single origin samples, the roasting process was carried out independently. Following roasting, the samples rested for a typical period of 24 to 96 hours. Cupping leaders encouraged cup tasters to participate in the cupping sessions, which included baristas and coffee entrepreneurs.

3. Standardized Roasting Process

Roasting processes that are standardized improve consistency in the roast profiles and enable for better comparison and evaluation of different coffee samples (Schenker *et al.*, 2002; Giacalone *et al.*, 2019). The roasting process followed defined procedures. The Ailio Bullet R1 sample roaster was used, and the roasting times were changed based on the samples. All roasting was done in the medium to dark roast range, with an end-of-roast temperature averaging between 205 and 210 degrees Celsius. The roasting capacity of 1kg was maintained, as was the coffee weight of 100 to 200 grams.

4. Calibration and Perception

Calibration sessions reduce inter-individual differences in sensory perception and improve evaluation reliability (Lingle, 2011; Gao *et al.*, 2020). Calibration sessions were held to guarantee that the coffee samples were perceived consistently during the cupping sessions. These seminars lasted 15 to 30 minutes and involved the sharing of pertinent knowledge. Prior to the cupping sessions, the goal was to match the participants' perceptions and sensory experiences.

5. Cupping Session and Evaluation

Cupping protocols developed by the Specialty Coffee Association (SCA) provide a systematic and objective framework for evaluating coffee quality, ensuring consistency in assessments (Specialty Coffee Association, 2018; Maspul, 2022). The standardized Specialty Coffee Association (SCA) cupping sheet was used for evaluation during the cupping sessions. Each sample's fragrance, aroma, acidity, sweetness, body, aftertaste, and overall attributes were evaluated and assigned ratings ranging from 1 to 10. Microsoft Excel was used to record and tabulate the evaluation results.

6. Blind Cupping and Transparency

The cupping sessions were conducted blindfold to promote transparency and avoid biases. The particular origin, processing, and roasting details of the single origin samples being evaluated were unknown to the participants. However, following the conclusion of the cupping sessions, pertinent information about each sample was shared to ensure transparency and knowledge exchange.

7. Post-Cupping Session Communication

The cupping session outcomes were given to the respective participants following each cupping session. Comprehensive evaluations were distributed, along with calculated scores in Excel. In addition, average grades for each single origin sample were provided, providing a comprehensive knowledge of the cupping session results. Randomized sample, standardized roasting, calibration, blind evaluation, and transparent post-cupping communication were all part of the cupping session procedure. These methods ensured a thorough evaluation of the single origin coffee samples, which contributed to a better knowledge of their quality and characteristics.

The following is the result of a thorough evaluation and assessment process carried out at Bash Coffee Buraydah. This extensive investigation included a broad range of 55 separate origins, each with distinct differences in kind and method. A panel of nine distinguished cup tasters, comprised of expert baristas, cafe owners, and enthusiastic coffee fans, thoroughly examined and studied each sample during three rigorous rounds of roasting and cupping sessions. The end result of this painstaking effort provides vital insights into the flavor profiles, attributes, and overall quality of these single origins, thereby contributing to the progress of the specialty coffee market.

Table 1. Quality of the Coffee

No	Single Origin/Type/Process	Overall Average
1	Colombia Huila Castillo Natural	9.1
2	Indonesia Java Halu Mountain S795/Sigagar Utang Natural Lactic Anaerobic	7.47
3	Guatemala Antigua Cuxinales Red Bourbon Natural	7.59
4	Ethiopia Hambela Heirloom Natural	7.9
5	Ethiopia Limu Heirloom Washed	7.58
6	Ethiopia Sidamo Masha Heirloom Natural	7.61
7	Colombia Tolima Castillo Washed	7.53
8	Ethiopia Guji Shakiso Heirloom Natural	7.63
9	Colombia San Vicente Caturra/Castillo Washed	7.91
10	Brazil Santuario Sudan Rume Natural	7.63
11	Brazil Santuario Sudan Rume Washed	7.81
12	Colombia Las Nubes Caturra Natural	7.98
13	Indonesia Floresmulu Lini/Andungsari Natural	7.59
14	Nicaragua Los Cipreses Washed	7.55
15	Zambia Anaerobic	7.55

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16	Costa Rica Whie Honey	7.37
17	AF 1	7.35
18	Honduras La Paz Montecillos Natural	7.36
19	Honduras La Paz Montecillos Natural New	7.41
20	Peru Cajamara Washed	7.17
21	Elsalvador Santa Ana Washed	7.44
22	Colombia Huila Natural	7.14
23	Costa Rica Natural	7.38
24	Colombia Cauca Washed	7.47
25	Colombia Cauca Natural	7.44
26	P17957	7.25
27	Brazil Parana Natural	7.53
28	Colombia San Vicente Caturra/Castillo Washed	7.5
29	Brazil Santuario Sudan Rume	7.79
30	Indonesia Floresmulu Lini Natural	7.78
31	Colombia Huila Natural Castillo	7.69
32	Colombia Las Nubes Caturra Natural	8.03
33	Nicaragua Los Cipreses	7.81
34	Ethiopia Hambela Natural	8.31
35	Rwanda Lot 51	7.27
36	Guatemala Granda AN	7.31
37	Colombia La Linda	7.41
38	Ethiopia Idido	7.47
39	Ethiopia Sidamo Bensa	7.18
40	Gayo Natural	7.41
41	Burundi Bahari	7.16
42	Brazil Mogiana	7.14
43	Colombia Los Ingas	7.2
44	Uganda Sipi Natural	7.21
45	Costa Rica Dota Washed	7.26
46	Costa Rica Bull Honey	6.94
47	Colombia Augustino Washed	7.24
48	Colombia Tolima Washed Castillo Caturra	7.38
49	Colombia Huila Castillo Caturra	7.3
50	Saudi Khwalani Jazan	7.43
51	Ethiopia Gargai Gutiti Natural Heirloom	7.58
52	Brazil Fazenda Sertao Natural Yellow Bourbon	7.38
53	Brazil Minas Gerais Natural	7.42
54	Indonesia West Java Frinsa 1	7.91
55	Indonesia West Java Frinsa 2	8.12

4. Conclusion

Cupping experiments conducted in Saudi Arabia gave useful insights into the quality and characteristics of coffee samples from various sources. This data allows for the identification of credible sources as well as market differentiation. The organization can match growing consumer tastes and maintain a competitive edge by stressing quality, sustainability, and sensory excellence. The training programs have improved participants' skills and knowledge, allowing them to contribute to the long-term success of the organization. This long-term



strategy fortifies the company's position, bolsters its commitment to quality and sustainability, and creates good change in the coffee industry.

Future study ought to emphasize comparative cupping analysis in order to acquire a better understanding of the quality and characteristics of coffee samples from various regions in Saudi Arabia. This would allow firms to focus quality, sustainability, and sensory excellence to cater to growing customer demands and preserve a competitive edge by identifying dependable suppliers and areas that regularly supply high-quality coffee. It is also recommended to examine the long-term impact of training programs on participants' skills and knowledge, as well as their contributions to the success of the organization. This evaluation will provide useful insights into the effectiveness of training initiatives and will aid in the development of future programs.

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