

Shared Value Partnership Concept: Creating a Unique Market Segment for Yemen Premium Coffee



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Opportunity

Arabica coffee (*Coffea arabica* L.) is the basis of the global specialty coffee market and commands premium prices for high quality, unique origin, and special taste or cup characteristics.

Yemen, the origin of cultivated Arabica coffee began growing this crop as early as the 6th century C.E. with genetic material brought from Ethiopia. Yemen's coffee is considered the basis for all specialty coffee production worldwide.*

As the source of the ultimate “heirloom” varieties, Yemen has the opportunity to create a unique marketing strategy that can link small scale coffee producers to very high value premium coffee markets through DNA “fingerprinting” for certification of origin.

* “The Origin of Cultivated *Coffea arabica* L. Varieties Revealed by AFLP and SSR Markers,” *Theory of Applied Genetics* (2002), F. Anthony, M.C. Combes, C. Astorga, B. Bertrand, G. Graziosi, P. Lashermes, Feb. 2002. *Coffea arabica*'s scientific name reflects its origin in Felix Arabia (Yemen's ancient name).

“If Yemen had proprietary terms that are widely recognized—as Mocha once was—then it could have enormous value in the marketplace. In order to achieve this, the issue of varieties, their characterization, and their taxonomy must first be addressed. More than most countries, Yemen lends itself to differentiation based on unique flavors and corresponding agro-ecological zones.”

MOVING YEMEN COFFEE FORWARD
ASSESSMENT OF THE COFFEE INDUSTRY
IN YEMEN TO SUSTAINABLY IMPROVE
INCOMES AND EXPAND TRADE

[http://www.dgiovannucci.net/docs/
Yemen_coffee_Giovannucci.pdf](http://www.dgiovannucci.net/docs/Yemen_coffee_Giovannucci.pdf)

Yemen's Unique Coffee

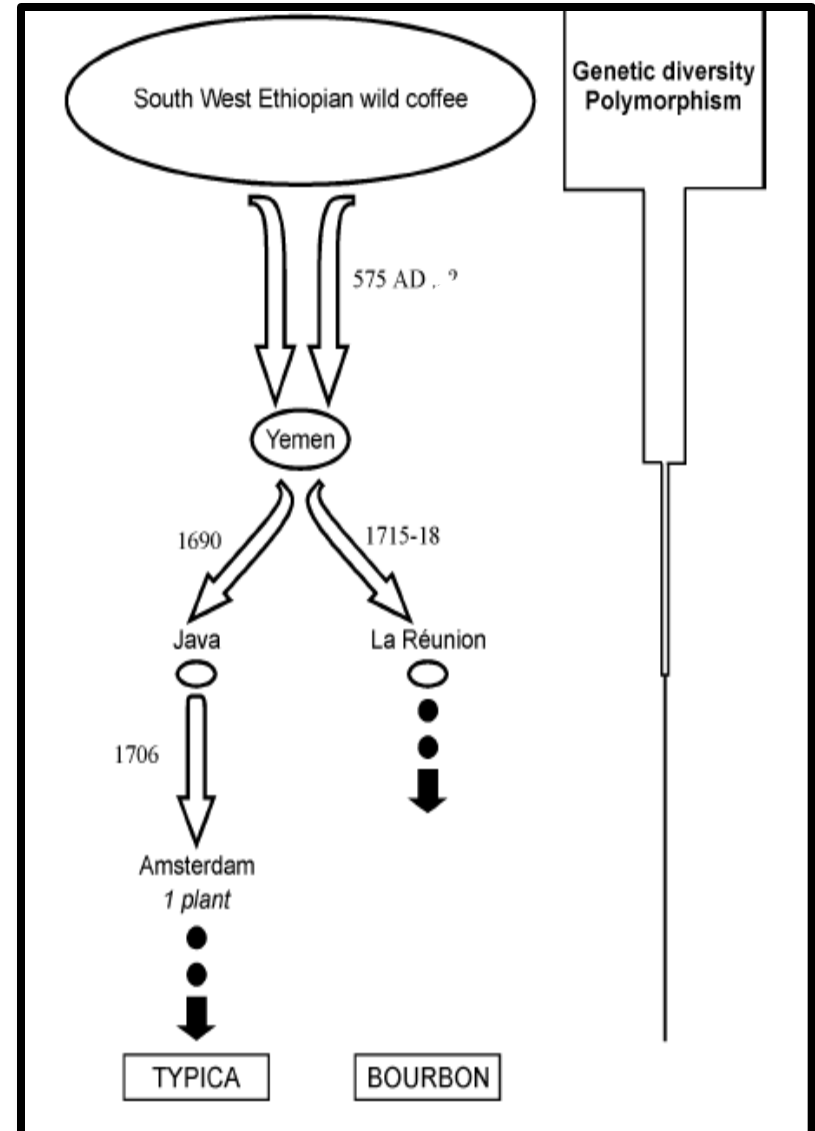
Cultivation of *Coffea arabica* started in Yemen as early as the 6th century.

Original genetic material came from Ethiopia where the greatest diversity is found.

In terms of modern specialty coffee, the entire genetic base is built on two genotypes from Yemen: (1) Typica; and (2) Bourbon.

The specialty coffee industry highly values the taste and cup characteristics of “heirloom” varieties of *Coffea arabica*.

Source: “Coffee Species and Varietal Identification,” *Tools for Identifying Biodiversity: Progress and Problems* – pp 307-313. ISBN 978-88-8303-295-0.

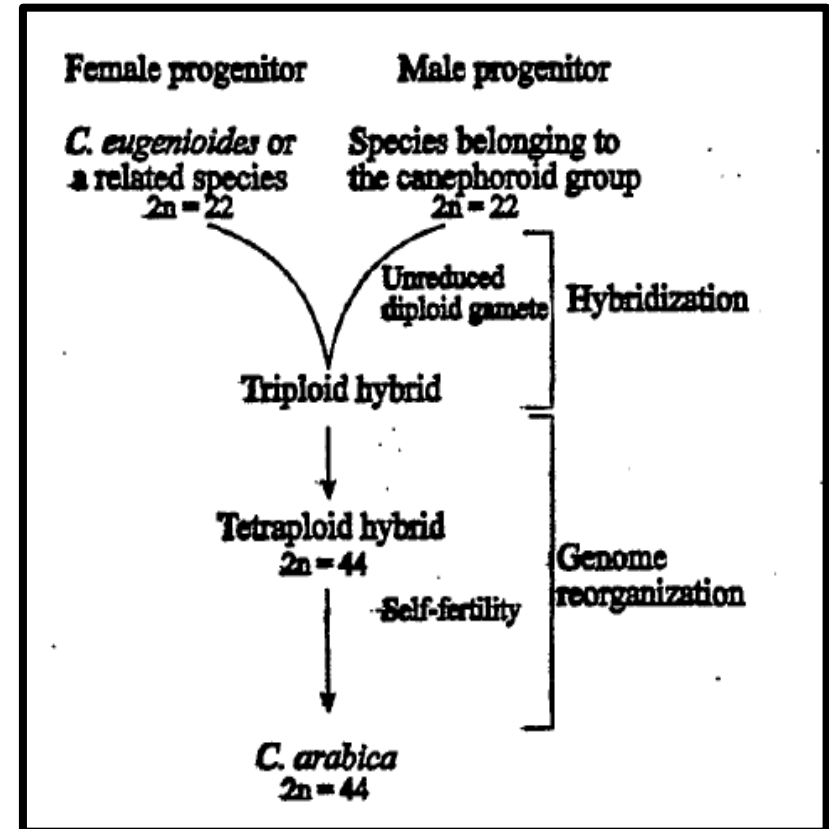


Creating a Coffee Product Category Based on Variety and Origin

Using DNA mapping, coffee type and origin can be certified which could form the basis of an appellation process that identifies coffee as a product category linked to a specific geographic and genetic origin comparable to wine and cheese product categories certified by geographic origin.

According to the Nestle R&D Center, a DNA mapping method has been developed to allow identification of *Coffea arabica* varieties by variety and geographic origin. According to Nestle: “The method is applied on routine basis to guarantee the purity and authenticity of raw material used by Nespresso.”

Source: “DNA Traceability for Variety Purity in Nespresso Product,” Morel, E., Bellanger L., Lefebvre-Pautigny F., Lambot C., and Cruzillat D., Nestle Research Center, France



Proposed Mode of Speciation for *Coffea arabica*.

Source: ORIGIN AND GENETIC DIVERSITY OF COFFEA ARABICA L. BASED ON DNA MOLECULAR MARKERS F. IASHERMES I, M.C. COMBES', J. CROS', R. TROUSLOT I, F. ANTHONY *, A. CHARRIER' 'ORSTOM, 911 Av. Agropolis BP 5045, F-34032, Montpellier cedex, France 2CATIE, 7170 Tumulba, Costa Rica

Constraints and Market Response

Yemen's coffee production is constrained by inconsistent quality, low productivity, and lack of traceability.*

National standards and frameworks

- Colombia
- Brazil
- Guatemala
- Costa Rica
- India
- Ethiopia

Certification of origin and geographical indication marks

Grading systems (up to 8 defects; no primary defects)



Creating a system that certifies origin and distinctiveness could contribute 50% of the increased value of its specialty coffee. Increase market price could create the incentives to improve quality and traceability.

Yemen lacks the national institutions to create a verifiable certification system but there is the potential to create a benchmark system through DNA mapping to verify geographic and genetic origin. This system could be implemented by the World Coffee Research Center at the Borlaug Institute at Texas A&M in coordination with the Ministry of Agriculture and Irrigation, Republic of Yemen Government (ROYG).

This certification system could form the basis of a coffee marketing program that would bring higher prices and greater incentives for higher quality and increased productivity. Key to this approach would be for green coffee exporters to develop long term relationships with small scale producers and pay them premiums for high quality coffee production.

Market Focused Response

- Yemen has progressive coffee exporters that are already developing their own certification and traceability program (e.g., Al-Ezzi Coffee Exporters, Al-Hamdani Coffee Company, Yemen Coffee Export Company, etc.).
- DNA Mapping could provide the type of independent certification that would provide the basis for establishing a product category of geographic and genetic origin.
- These coffee product categories could create an appellation framework to allow Yemen (through the Ministry of Agriculture and Irrigation Marketing Department) to trademark key production areas: Mokka, Haraz, etc.
- The DNA Mapping could also form the basis for a “relationship marketing” strategy that links coffee farmers to the specialty coffee market in the US and other countries.

Marketing Strategy

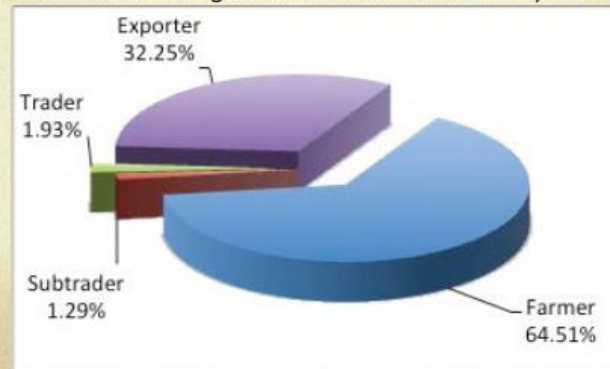
“Yemen has a rare combination of growing conditions, plant genetics, processing method and an ancient trade system that creates flavors not found elsewhere in the coffee industry.”

Jim Reynolds,
Roastmaster Emeritus
of [Peet's Coffee & Tea](#)

Market positioning of Yemeni coffee

- Around 300,000 bags of coffee are produced in Yemen
- Half of the coffee produced and more than half of *kishr* is consumed in Yemen
- 80% of exports are absorbed by Gulf countries, particularly Saudi Arabia
- Growers get relatively high prices in these traditional markets, but based on flat prices (little value addition, differentiation and price incentives for quality)

Distribution of gross coffee income in Yemen, 2013



Current marketing arrangements in Yemen provide relatively high prices to small scale farmers but there is the potential to double or triple their income through a product differentiation strategy that links production to their farms.

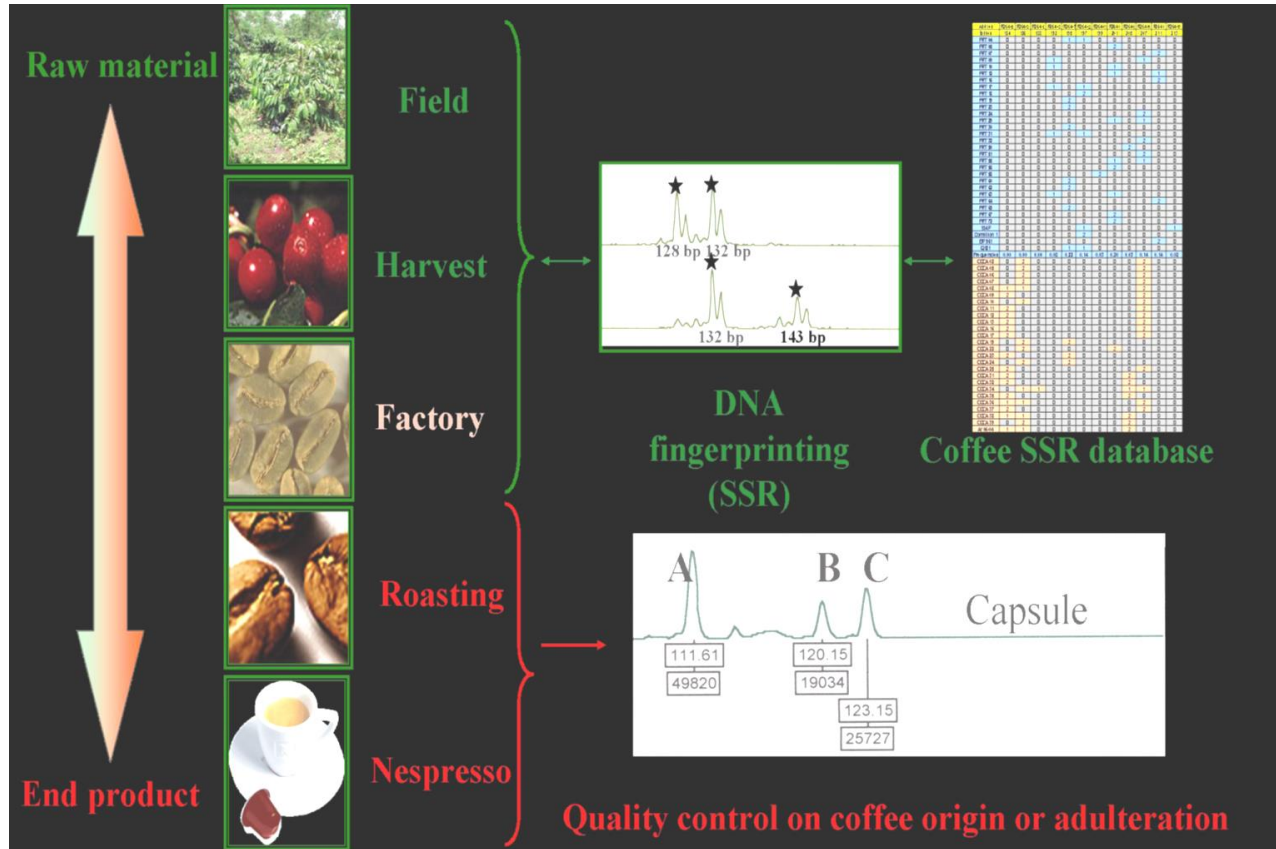
<http://www.coffeestrategies.com/2013/04/02/usaid-returns-yemen-to-specialty-coffee-map>

There is limited export – mainly to Saudi Arabia from 30,000 hectare coffee production area with 90,000 small scale coffee producers – total production is approximately . Current specialty grade Yemeni coffee price is \$15 to \$20/pound when sold in specialty coffee markets However, there is very limited production of specialty grade coffee. Also, there appears to be widespread blending of Ethiopia coffee and selling as Yemeni. Potential to produce unique, high quality coffee with certification of origin through DNA mapping double price of “true” Yemeni premium coffee to \$30 to \$40/pound. This should result in at least a doubling of the farm-gate price paid to farmers.

Yemen Coffee Land Races & Genotypes

GOVERNORATE	VARIETIES AND LOCAL TYPE NAMES
Sana'a	Mattari, Dawairi, Dawarani, Tufahi, Shubriqi, Harazi, Ismaili, Ja'adi, Hawri, Hubriqik, Shubrizi, Haimi, Sanani
Sada	Dawairi, Tufahi, Udaini, Kholani
Mahweet	Mahwaiti, Tufahi, Burrari, Udaini, Dawarani, Melhani, Hufashi
Hajah	Shani, Safi, Masrahi, Shami, Bazi, Methani, Jua'ari
Amran	Udaini, Tufahi, Ismaeli, Dawairi, Gu'adi
Dhamar	Dawarani, Ja'adi, Tufahi, Udaini, Fadli, Ja'adi, Sharafi,
Ibb	Udaini, Sa'afani
Taiz	Hammadi, Udaini, Tufahi, Dawairi, Melhani, Hufashi
Hodeidah	Dawairi, Tufahi, Sughari, Kubari, Udaini, Ja'adi, Jadi Shubriqi, Bura'ai, Bura'i Hufaini, Hufashi, Jabal Rass
Lahj	Yafei'
Abyan	Essai, Qudi, Banan and Tasawai, Yafei
Dhale'	Yafei', Lodeas Madhghood and Hawla Madhghood
Raymah	Raymi, Dawairi, Bura'ae, Kubari, Tufahi, Udaini
Al Bayda	Yafei'
Marib	Essaei

Methodology for DNA Mapping & Certification of Coffee Origin System



Support could be provided to the ROYG to establish an independently verifiable system that certifies origin.

This system could be financed by fees paid for the DNA mapping services by green coffee exporters and buyers in the international specialty coffee market.

Specific production areas and coffee genotypes could be differentiated and marketed as unique products.

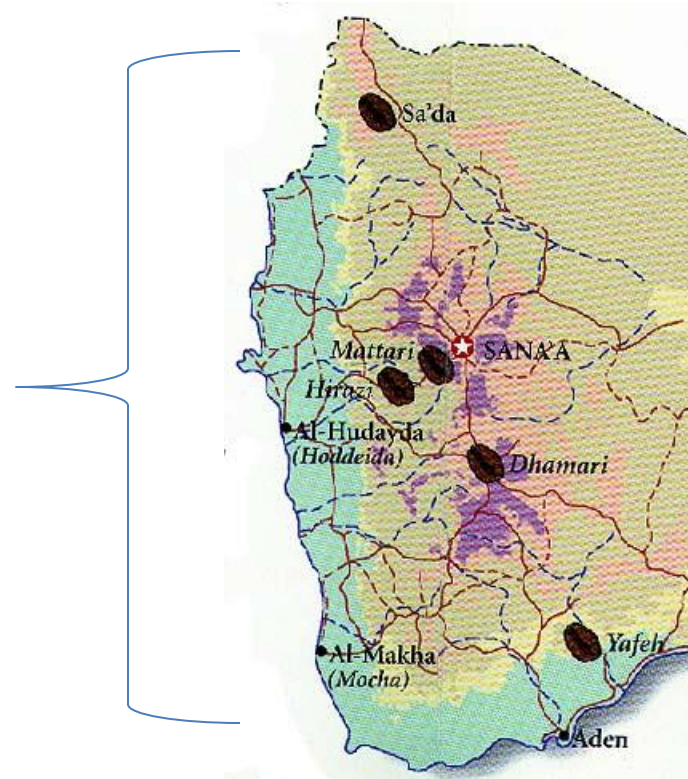
Source: "DNA Traceability for Variety Purity in Nespresso Product," Morel, E., Bellanger L., Lefebvre-Pautigny F., Lambot C., and Cruzillat D., Nestle Research Center, France

Pilot Program



Coffee terraces at 2,100 meter elevation in Yemen. Source:

http://www.dgiovannucci.net/docs/Yemen_coffee_Giovannucci.pdf



Select one area (e.g., Haraz) and partner with a green coffee exporter to provide a certification process for that area. Establish DNA mapping benchmarks for specific production areas, link quality and origin of small farmer production to specialty markets in high value micro-lots (8,000 lbs – 10,000 lbs each). Market as premium, very unique origin coffee -- \$30 - \$40/lb green coffee.

Potential Next Steps

Create Business Model

Seek Resources for “Proof of Concept”

Seek Venture Capital

Questions?