

BREAKING THE VICIOUS CIRCLE IN COFFEE

Results from a Value Chain Analyses
of the Coffee Industry in Yemen



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Abstract

This study was designed to look into possibilities for business development projects that could substantially improve the social and economic situation of coffee farmers and can strengthen the coffee industry in Yemen through innovative business partnerships along the value chain, based on an analysis of the existing value chain for coffee in Yemen.

It was conducted during January and February 2008, under the guidance of SMEPS, the Small & Micro Enterprise Promotion Service, a subsidiary agency of the Social Fund for Development in Yemen.

The study received financial support from GTZ (German Technical Cooperation), under contract no. 81100729, Project processing no. 07.2031.8-001.0, Section/Division 3130



Acknowledgements

The successful conduction of this study would not have been possible without the strong support from the SMEPS office and the assistance of the two local experts, Mr Saeed A. Al-Sharjabi and Mr Tawfiq S. Mohammed contracted to assist during the field visit, in necessary translations and contacts to Government agencies.

My special thanks go to Mrs Mervat A. Haider, the Coffee Project Officer at SMEPS office who did not get tired of assisting me in all kinds of matters and was crucial to make this study possible and to make my stay in Yemen a pleasant one.

Thanks also to all the other staff at SMEPS office, and Mr Wesam Qaid (Executive Director) for their welcoming kindness and their willingness to help and support whenever needed.

| |
|---------|
| Content |
|---------|

| | |
|--|----|
| Executive Summary | 4 |
| General Facts and Figures – the Coffee Value Chain in Yemen | 7 |
| Actors along the Value Chain of Coffee | 12 |
| Field visit insights | 13 |
| Findings as per group of Actors | 15 |
| Conclusion and Perspectives | 20 |
| Macro Level | 21 |
| Micro Level | 22 |
| Annex | 25 |
| Guiding Terms for the Study | |
| References | |
| Flow Chart – Work Schedule, Notes from Activities and Meetings | |

Executive Summary

Yemen coffee has a long history and a very unique reputation through its special character and particular flavour – all of which seem forgotten amongst the global coffee community.

Only few people really know more about coffee from Yemen and how a very famous coffee sold in Europe decades ago (and still well known especially in Austrian Coffeeshouses) called “Mokha” – was named after the sea port of Al Mokha in Yemen, the place where it had come from. It was only later in history that “Mokha-Coffee” was blended with coffee from Java/Indonesia (a milder type of coffee) to better suit changing consumer demand.

Today coffees from all kinds of origins are called “Mokha – Coffee” as a brand, completely ignoring the history of the name relating to a particular origin, Yemen, as the historically producing country of this type of coffee.

Based on these facts, and together with the current consumer trend in many countries going for more single origin coffees and for coffee specialities of various kinds, it should be possible for Yemen to make itself recognised again as a coffee producing country with at least an equally long and exciting coffee history as Ethiopia, and with a very distinct flavour that is unique and highly valued by those who know it. Especially the example of Ethiopia becoming a highly reputed producer country for specialty coffee during the last years has clearly shown that these facts do matter to the global coffee community.

However, over all those years of dormancy the coffee production in Yemen has gone down, and not much effort seems to be given to this valuable cash crop, despite a whole number of attempts over the last 5 years of researching and assessing the coffee realities in Yemen.

There are quite a few very detailed research reports and lists over lists of recommendations for what needs to be done to improve coffee production, its processing and marketing and to bring Yemen coffee back to where it once was.

At the end of my time looking at the value chain for coffee, and after some brief insight into realities at the various actors along the coffee value chain I must admit that with regards to mapping realities and existing problems I have nothing new to add to what has been said over and over again during the last years about existing problems in the coffee value chain – let it be the coffee workshop in September 2004, organised by the Ministry of Agriculture and Irrigation, Plant Production Department, or the assessment from US-AID “Moving Yemen Coffee forward” in December 2005, and surely quite a few more.

There are problems all along the coffee value chain, none of which is new, but not much seems to have happened after all these assessments and workshops – all problems remain as they were, and there are many.

“A chain is as strong as its weakest part” is an idiom widely used. How strong can the coffee value chain in Yemen be, if there are problems at all parts? And can it

become stronger if I improve one part of the chain, whilst the other parts remain as they are? It seems like a vicious circle. This for me also seems to be one of the core reasons why not much was/is happening to improve the situation.

Real improvement in the wider sense will probably only be possible when the whole coffee value chain is considered, and when joint efforts are undertaken by the different actors and together they can provide support for improvement as from their area of expertise and knowledge (let it be traditional knowledge about plant protection, production techniques to improve quality, a better pricing system to encourage quality production, the introduction of quality standards along the value chain, or to make Yemen's voice heard again in the global coffee community).

My assignment was related to the question whether there are opportunities to develop new business lines for coffee from Yemen, and therewith focusing on the micro level, rather than the big country-wide picture (the macro level in this context). During my assessment and all the visits and meetings we had, I have come across some good opportunities and encouraging initiatives that should be developed further.

Speaking about potential export market lines, there are some areas that would qualify for further consideration and investigation, namely

- The speciality coffee market in a number of countries (USA, Japan and Europe), to reach the gourmet market again with the original Mokha from Yemen
- The rapidly growing "sustainability market" with Organic and Fair Trade as the leading systems.

But also at the micro level the same applies as mentioned above – the whole chain from the coffee production at the farmer up to the exporter and beyond needs to be considered, and the emphasis should clearly be on making each part of the chain as strong as possible, whilst not leaving the whole chain out of focus.

Many things would need to be done to improve coffee production and marketing in Yemen – and at the end of my assignment I am convinced that it also can be done. In order to demonstrate that change is possible, entrepreneurs are needed along the value chain - people who are willing and ready to break this vicious circle, and to try out something new.

During my visits I could speak to a number of people (farmers and traders alike) who in my eyes clearly qualify for such a title - and these are the ones suggested as partners for pilot projects through the SMEPS office.

Such partnership projects (or joint ventures) will need to be established in a way that all related actors are closely connected and have agreed to jointly run this project, with the support of the SMEPS office as a facilitator. Necessary specialist support and assistance for improvements in cultivation, processing and/or marketing (and promotion) should be brought in from the various actors involved with such measures whenever required.

At the same time, the overall situation in coffee (the macro level in my survey) will not improve by itself or through some pilot projects. Pilot projects can only support (or sometimes stipulate) joint efforts for the bigger picture.

Actors along the value chain of coffee are acting in a very isolated way and so, new developments with the potential to change things to the better are not really spreading amongst the coffee community in Yemen (see i.e. the wooden dryer developed by the Research Unit in Taiz).

Some pressing issues are not taken up at all, whilst others are being duplicated by different actors without knowing about each others efforts.

To overcome such a situation my feeling is that a national coordinating body for coffee is needed; a place, where all efforts to develop the coffee industry are pooled and coordinated amongst the different players, and joint strategies are developed.

Such a national body (or stakeholder forum) should comprise of innovative and dynamic people from all parts of the value chain – from the farmer to the export agent – as well as related agencies like the Ministry of Agriculture and related entities (Research, Export Council, Chamber of Commerce, etc).

Such a national forum (you could also call it the national round table for coffee) should be the place to discuss how best all actors can contribute to solid improvements in the coffee sector.

In addition to efforts on the national level, Yemen needs to re-appear as an important coffee producing country on the global platform for coffee – which is the ICO, the International Coffee Organisation, the UN body for coffee as a commodity. This is the place where the global coffee community meets, talking about market developments, needs for assistance and support, etc.

If people feel that yes, Yemen has a long history of producing unique coffees, and has an exciting story to tell the world about this history, then this is the place to go and to speak up for Yemen coffee, to let the global coffee community know about this history and the unique quality of coffee from Yemen.

This is why I would strongly support the Yemen Government becoming a member of the ICO, as well as any effort to establish a national stakeholder forum for the coffee community in Yemen.

Additionally, strong links should be established to the existing Specialty Coffee Associations to make Yemen coffee known again to those dealing with coffee specialities from around the world.

General Facts and Figures – the Coffee Industry in Yemen

Note: Given that the Coffee Industry in Yemen has been assessed and documented by various studies conducted during the last years, with very detailed descriptions about the more general facts on coffee production in Yemen, this section will be quite brief on these issues, except for the export market – in order to avoid duplication of work and/or reciting again, what has been documented already. For more details and further reference please see the list of documents in the Annex.

Coffee production in Yemen has been on a constant decline over the last decades, and despite the fact that the last statistically documented year (2006) has seen a somewhat surprising progress with high increases in volumes and yields respectively (for which the underlying reasons are not really clear and numbers are somewhat contradictory), they still are far below where they used to be some 40 – 50 years ago.

Chart 1 - coffee production total over the years

| | 2002 | 2003 | 2004 | 2005 | 2006 | 06 vs. 02 |
|---------------------------------|--------|--------|--------|--------|--------|-----------|
| Land used for coffee (ha) | 33,545 | 33,662 | 28,354 | 28,821 | 32,260 | -3.83% |
| Production of dried coffee (MT) | 11,499 | 11,608 | 10,260 | 11,331 | 17,292 | +50.38% |
| Average yields kg/ha | 342,8 | 344,8 | 361,9 | 393,2 | 536,0 | +56.39% |

Chart 2 – coffee production in core regions

| | | 2002 | 2003 | 2004 | 2005 | 2006 |
|--------|------------------------|--------|--------|-------|-------|--------|
| Sana'a | Land used (ha) | 9,093 | 9,112 | 9,165 | 9,180 | 10,211 |
| | Production (MT) | 2,738 | 2,752 | 3,375 | 3,626 | 6,147 |
| | Average yields (kg/ha) | 301,1 | 302,0 | 368,2 | 394,9 | 601,9 |
| | Prices paid (YR/kg) | 600 | 630 | 800 | 950 | 960 |
| Dhamar | Land used (ha) | 245 | 253 | 630 | 655 | 712 |
| | Production (MT) | 58 | 66 | 246 | 259 | 391 |
| | Average yields (kg/ha) | 236,7 | 260,8 | 390,1 | 395,4 | 549,2 |
| | Prices paid (YR/kg) | 590 | 660 | 870 | 1,100 | 1,153 |
| Ibb | Land used (ha) | 1,226 | 1,228 | 922 | 946 | 990 |
| | Production (MT) | 355 | 362 | 310 | 369 | 572 |
| | Average yields (kg/ha) | 289,5 | 294,7 | 336,2 | 390,1 | 577,7 |
| | Prices paid (YR/kg) | 570 | 670 | 846 | 1,110 | 1,131 |
| Taiz | Land used (ha) | 1,275 | 1,279 | 78 | 90 | 450 |
| | Production (MT) | 326 | 331 | 30 | 35 | 234 |
| | Average yields (kg/ha) | 255,6 | 258,8 | 384,6 | 388,9 | 520,0 |
| | Prices paid (YR/kg) | 595 | 670 | 835 | 1,000 | 1,100 |
| Hajjah | Land used (ha) | 2,268 | 2,232 | 2,253 | 2,370 | 2,542 |
| | Production (MT) | 795 | 799 | 829 | 926 | 1,372 |
| | Average yields (kg/ha) | 350,5 | 357,9 | 367,9 | 390,7 | 539,7 |
| | Prices paid (YR/kg) | 620 | 680 | 831 | 1,150 | 1,150 |
| Sadah | Land used (ha) | 13,446 | 13,451 | 2,266 | 2,390 | 3,412 |
| | Production (MT) | 5,182 | 5,215 | 835 | 932 | 1,689 |
| | Average yields (kg/ha) | 385,4 | 387,7 | 368,5 | 389,9 | 495,0 |
| | Prices paid (YR/kg) | 589 | 630 | 790 | 1,060 | 1,100 |

| | | 2002 | 2003 | 2004 | 2005 | 2006 |
|-----------|------------------------|-------|-------|-------|-------|-------|
| Al-Mahwit | Land used (ha) | 1,695 | 1,698 | 3,178 | 3,050 | 3,160 |
| | Production (MT) | 319 | 321 | 1,039 | 1,214 | 1,390 |
| | Average yields (kg/ha) | 188,2 | 189,0 | 326,9 | 398,0 | 439,8 |
| | Prices paid (YR/kg) | 590 | 645 | 810 | 1,100 | 1,100 |
| Lahj | Land used (ha) | 415 | 516 | 504 | 550 | 560 |
| | Production (MT) | 299 | 306 | 197 | 211 | 258 |
| | Average yields (kg/ha) | 720,5 | 593,0 | 390,8 | 383,6 | 460,7 |
| | Prices paid (YR/kg) | 670 | 710 | 848 | 1,130 | 1,200 |
| Abyan | Land used (ha) | 2,056 | 2,063 | 517 | 520 | 740 |
| | Production (MT) | 919 | 925 | 202 | 215 | 414 |
| | Average yields (kg/ha) | 446,9 | 448,4 | 390,7 | 413,4 | 559,4 |
| | Prices paid (YR/kg) | 670 | 720 | 835 | 1,110 | 1,100 |
| Amran | Land used (ha) | 0 | 0 | 1,019 | 1,120 | 1,140 |
| | Production (MT) | 0 | 0 | 367 | 436 | 490 |
| | Average yields (kg/ha) | n.a. | n.a. | 360,1 | 389,3 | 429,8 |
| | Prices paid (YR/kg) | n.a. | n.a. | 846 | 1,170 | 1,200 |
| Raimeh | Land used (ha) | 0 | 0 | 6,742 | 6,850 | 7,122 |
| | Production (MT) | 0 | 0 | 2,429 | 2,671 | 3,703 |
| | Average yields (kg/ha) | n.a. | n.a. | 360,2 | 389,9 | 519,9 |
| | Prices paid (YR/kg) | n.a. | n.a. | 808 | 1,000 | 1,100 |

Source: Agricultural Statistics Year Book 2006; General Department of Agricultural Statistics and Documentation, Ministry of Agriculture and Irrigation

Interpretation of the data

As from the data in the statistics there was a strong increase for 2006 both in land used for coffee production and in yields per hectare, which in itself can be seen as a very good sign.

However, there is no clear explanation for this increase, whilst the field survey did not provide us with any evidence at farmers or collectors level for such an increase of more than 50% in volumes produced (17, 292 to against 11,331 tons in 2005), and increase of yields by over 36% - in just one year (or 56% compared with 2002), whilst on the other hand the total use of land has not even reached back the level from the years 2002 and 2003.

Additionally, data received from different sources at regional level sometimes show substantial deviations from these statistics.

One reason might be that the way of collecting and compiling data is somewhat unclear, and so my feeling is that all these numbers should be taken as a broad reference point only, and not as absolute and fully reliable numbers that reflect realities as they are.

About Coffee production in Yemen in general

Comprehensive hard facts about coffee are not easy to get – and the only indication about how many farmers are actually involved in growing coffee comes from a census in 2004, where the counting brought about slightly below 100,000 farming families that were growing coffee. Whether this has changed and to what extent is unknown.

What is known however is that agriculture in total only contributes with 14% to the overall GDP of Yemen, and that the social situation of the farmers in general is not very good (they seem to belong to the bottom of the society and are only slightly better off whenever relatives from the family go abroad for work and send money back home).

Another surprising factor is that coffee prices are very high compared to other producing countries (on the domestic market as well as for export), whilst coffee farmers remain poor.

Coffee is grown in the mountains (usually between 800 and 2,000 m above sea level). In Yemen one can find coffee in the mountain valleys (Wadi) as well as on terraces along the mountain sides (sometimes at 2,200 m and above).

Coffee cherries are harvested three to four times during the season; the cherries are then dried on the farm premises, usually on the roof top of the farm house. The dried cherries are later sold to collectors at the regional market places who often just store them and sell the bags on to coffee companies in Sana'a.

Only a few collectors do quality sorting and husking, using the minor qualities to be sold on the local markets.

There are a number of different varieties of coffee that is grown, combined with a multitude of different names in use – a very confusing situation.

We learned about a coffee typology exercise started at the Ministry of Agriculture which still is not finished but had to be stopped due to funding problems. But we also learned about new efforts being started at the Yemen Authority for Standardization & Metrology and Quality Control to define quality standards for coffee within the coming two years.

According to earlier attempts to classify different coffee varieties¹, there are 4 main varieties of traditional coffee trees that are common in Yemen:

Dawhiri, Udaini, Burra'i and Tufahi

Additionally, you can find 3 main regional origins called

Mattari, Ismaeli or Harazi,
which can be any of the four varieties.

Two main limiting factors can be found when considering ways to extend coffee production. They are 1) the arable land available in the mountains and 2) the lack of water.

Over the last years, a third factor has become more and more prominent, and this is the production of Qat (mildly stimulating/narcotic leaves from a tree, chewed by many men in Yemen and considered a highly important cultural habit for socialising).

Qat production has seen high growth rates over the last years, and with high prices paid for the Qat leaves, no farmer can actually be blamed if he changes to Qat as a cash crop, therewith earning about 5 times more than with coffee (quote from a farmer in Bani Qais).

¹ "Surveying and Classifying Coffee in Yemen", Ali Mukrid Qaid, 1993 – from US-AID study 2005

Chart 3 – Production figures for Qat (Source: Statistical Yearbook 2006)

| Qat | 2002 | 2006 | Growth rate |
|-----------------------|---------|---------|-------------|
| Production (to) | 103,942 | 147,444 | + 41,85 |
| Land used (ha) | 110,293 | 136,138 | + 23,43 |
| Factor to coffee (ha) | + 3,29 | + 4,57 | |

Marketing of Coffee

As per statistical material available not much of the coffee produced is actually going into export. From the 2006 production figures of 17, 292 tons of dried coffee, only 3,355 tons went into export, which represents only 19.4% of the total coffee produced.

Domestic Markets

Most of the coffee seems to be consumed locally and in various ways, by separating the beans from the husk and the beans being roasted and grinded for brewed coffee, whilst the husk (Qesher) is used as an infusion type drink.

In some cases the dried beans (before husking) are roasted and grinded – and brewed together as one.

Currently, the domestic markets seems to move away from Yemen coffee and Qesher and local people tend to drink more tea, or instant coffee that is imported – due to changes in drinking habits amongst mostly urban consumers.

Besides this, there is a lot of dispute about (illegal) imports of cheaper coffees from other countries (Brazil and Ethiopia are named here), that are mixed with Yemen coffees and sold as Yemen coffee at cheaper rates – both for domestic and export markets, therewith making it even more difficult for pure Yemen coffee to sustain on the market.

Export Marketing

According to figures received from the High Export Supreme Council exports of coffee have gone down for 2006, despite the increase in production volumes due to extended land use for coffee and seemingly much better yields than the years before.

Chart 4 – Coffee Export in total figures over the years

| | 2002 | 2003 | 2004 | 2005 | 2006 |
|-----------------|-------|-------|-------|-------|-------|
| Exports in tons | 3,799 | 4,549 | 2,627 | 4,598 | 3,355 |
| Imports in tons | 190 | 112 | 341 | 538 | 320 |

Looking at the numbers for 2006 in more detail, the following picture appears:

From the total of 3,355,094 kg of dried coffee exported
the volume for coffee beans was 2,834,875 kg,
the remaining volume of 520,219 kg was husk – Qesher
The Qesher was exported to Saudi-Arabia and other Gulf countries.

The volume of coffee beans of 2,834,875 kg again divided into
 Green beans (un-roasted) 1,857,373 kg and
 roasted coffee 977,502 kg

The export value for coffee in 2006 ranged from 3.33 US-\$ per kg (Saudi-Arabia) to 7.97 US-\$ per kg (Japan and Europe); Qesher was sold for 1.18 US-\$ per kg.

Chart 5 – Export destinations for coffee (green and roasted)

| Country | Green Coffee (in tons) | Roasted Coffee (in tons) | Total (in tons) | Percentage of total |
|----------------------|---------------------------|-----------------------------|--------------------|------------------------|
| Saudi-Arabia | 1,106,4 | 866,6 | 1,973,0 | 69,6 |
| Qatar | 38,5 | 0,0 | 38,5 | 1,4 |
| Jordan | 1,6 | 1,5 | 3,1 | 0,1 |
| United Arab Emirates | 16,6 | 0,0 | 16,6 | 0,6 |
| Egypt | 2,0 | 0,0 | 2,0 | 0,1 |
| Other Arab countries | 1,8 | 0,1 | 1,9 | 0,1 |
| USA | 598,4 | 91,0 | 689,4 | 24,3 |
| Japan | 86,0 | 18,3 | 104,3 | 3,6 |
| Germany/EU | 6,0 | 0,0 | 6,0 | 0,2 |
| Total | 1,857,3 | 977,5 | 2,834,8 | 100,0 |

Interpretation of Data

Despite the statistical increase of coffee production in 2006, the volumes going into export declined somewhat drastically compared to 2005 figures (-27%), which does not really match with the downward trend on the domestic markets mentioned to us during our survey. According to the statistical figures, domestic consumption of Yemen coffee during 2006 must have more than doubled within just one year (by calculating domestic consumption from the total production minus export).

Looking at export destinations, there are two countries that take 93.9% of all exported coffee from Yemen – Saudi Arabia and the USA (with Starbucks seemingly being the most important buyer for the USA).

Other destinations remain rudimentary in comparison – hence on the flip side bear a lot of potential for the future, especially with regards the uniqueness of Yemen coffee.

Actors along the Value Chain of Coffee

Looking at the coffee value chain in Yemen it appears that 4 main groups of actors are involved along the value chain, 3 of them are directly involved (see diagram below) and 1 group of actors has a more indirect connection to coffee.

Value chain actors - Diagram
(The three actors that are directly involved)

| | | | | | | |
|-----------------------------------|---|--|---|---|---|---------------|
| Farmer | → | Regional Collector | → | Coffee Company | → | Export Market |
| | | ↓ | | ↓ | | |
| | | Local Market | | Domestic Market | | |
| Activity: | | | | | | |
| Harvesting and drying of cherries | | Mostly buying and selling dry cherries, some hulling | | Hulling, cleaning, grading, roasting, grinding, packing | | |

It is indeed striking to see that quality measures seem to only appear at the last group of actors along the value chain, and not before.



The indirectly connected group of actors is clustered as “supporting/surrounding actors”, and includes Ministries and Agencies related to the Government, all the science related places where coffee is on the agenda, as well as organisations like the Agricultural Cooperative Union.

All groups of actors are explained and assessed in more detail further below in this report.

Field visit insights

The field visit was scheduled in order to allow for at least a glimpse at existing realities for coffee production and marketing, and so to eventually find out where the potential might be to promote Yemen coffee through new business lines in the future.

The tour started with the Haraz and Taiz area, where producers and collection markets have been visited, followed by Bajel, Burra and Yafee. Finally, producers, nurseries and collection markets in the Al Mahweet area have been visited.

In addition to the growing and collecting area, a number of coffee companies in Sana'a haven been met, as well as people from the various Ministries, Research Centres and Governmental agencies related to coffee.

Regional differences

Very broadly, the coffee growing areas that were visited during the field study can be distinguished into 4 regions, each with their own characteristics

- Haraz and Taiz region, with altitudes around and above 2,000 m, some on terraces along the mountain ranges. Here the competition from Qat is very high, also due to the scarcity of water throughout the year (and Qat being more drought resistant). Many of the farmer families do not fully depend on farming for their living (which is not possible), but have at least one member of the family emigrating for work.
Coffee production is also found in the Wadis, where yields are better due to slightly more water resources available.
- Burra region as a separate protected area and a natural habitat with coffee grown on terraces at altitudes around 1,200 m has a relatively good water supply situation based on springs. The coffee variety used here (Burra'i) usually stays smaller than other varieties and more bushy, with an ongoing fruiting cycle throughout the year.



- Yafee region, ranging between 900 and 1000 m, has bigger plots of land in the Wadi, maintenance of coffee fields seemed to work better than in other regions (root-pruning, mixed cropping). There is a particular interest in Gulf countries for coffee from Yafee, which can not really be explained from the coffees grown there – maybe the fact that many people from the region have relatives working in the Gulf countries (emigrant labour) has contributed to this.



- Al Mahweet region, where coffee is not grown on high altitudes along the roads (the place that is completely dominated by Qat production), but in the Wadis further away from the roads and lower in altitude. We have seen well maintained nurseries (public and private) and some interesting experiments with mixed cropping (combining Coffee with Qat and Sorghum).



Findings as per groups of Actors²

Coffee production – Farm level

Yemen belongs to the few countries where coffee is still grown and processed in traditional ways. Coffee cherries are harvested and dried in the sun, instead of using a pulping machine to directly separate the green coffee beans from the husk while the cherry is still fresh – as is done in many of the coffee producing countries these days to avoid damages of the beans.

Looking at the realities of a Yemeni farmer growing coffee however, this still seems to be the most appropriate way. Water belongs to the scarcest resources (and pulping needs water – cherries need to be soaked in water before pulping), in addition Yemeni farmers do not face the problem of having to deal with the contaminated water after the soaking and pulping process.

However, there is room for improvement in the way farmers dry their coffees (usually on the roof top of their houses), but let's start with the production itself.

Providing enough water to the coffee plant throughout the season is essential for good harvests, which at times poses a big problem to the farmers, especially during dry periods. In many regions purely rain fed agriculture does not work fully satisfactory, and irrigation systems are expensive, besides them also being quite inefficient in terms of appropriate water management (too much water at a time).

Here, the promotion of drip irrigation systems can help to make a difference, as one pilot farm from an earlier project (that we visited) clearly showed.



Disease control is another issue where farmers seem to have forgotten about traditional methods to deal with diseases in coffee and lose out on harvests – although some elder farmers in the village still remembered when asked about it.

Taking good care of the plants also includes pruning at times, as well as replacement of very old (and therefore very low yielding) coffee trees. This is an area where some

² More details about places visited and people consulted with can be found in the document "Flow Chart – Work Schedule, Notes from Activities and Meetings" in the Annex.

effort is given to run nurseries in the regions and to provide farmers with seedlings for replacement of their old coffee trees, often on a subsidised rate (40 YR, compared to 300 YR as the regular price). The nurseries visited in different regions are of differing quality, some are just nursing coffee seedlings, while others are also experimenting with other plants (i.e. olive trees) and/or growing systems (like mixed cropping).

Pruning at farm level is not consistently applied; only at some places could we see coffee trees that were pruned to a fully satisfactory level. Whereas in some regions coffee trees were growing taller and taller over the years without being cut, farmers in other regions use a pruning technique in which the coffee trees are cut shortly above the surface to stimulate multiple new branches to grow from there – leading to a very full and bushy coffee tree in the following years.

Hardly have we seen shade trees within the coffee plantations, and if so, these had become so dense that the coffee trees were actually suffering from too much shade. Totally unknown to farmers seems to be the use of nitrogen fixing plants within the coffee plantation as a natural fertiliser.

Also the way of harvesting coffee cherries leaves a lot room for improvement. It seems regular practice that farmers collect all cherries at one time, whether they are still green (and unripe), yellow (half-ripe), red (fully ripe) or black already (over-ripe).

Harvesting good quality coffee would require to only collect the fully ripe red cherries at a time, which then of course would require more harvesting rounds and more efforts for separate drying and storage.

Improvements in this field will require a solid and transparent quality system with valuable incentives for better qualities to be given to the farmer – which currently does not exist, and only some collectors pay different prices for different qualities.

As for the drying process itself, better training and the introduction of newly developed drying technologies (wooden dryer) at low cost level to farmers would certainly help to make a difference in coffee qualities – but also here such efforts need to be honoured by the next actors along the coffee chain to be successful.



Whenever the coffee is dried, it is stored in bags of around 50kg – only rarely some sorting of the dried beans is done at farm level. Commonly in use for storage and transport are plastic bags that have been used for other, imported goods (i.e. tea). Plastic bags as such are not adequate for coffee storage (Jute bags would be most appropriate), the smell in the used bags remaining from the earlier product will certainly affect the quality of the coffee.

For this, the same applies as for other elements of quality production mentioned above, as long as there is no quality incentive, willingness to take better care of coffee as a quality product will remain very limited.

Farmers were also complaining about non-existent or in-efficient extension services to help them with their problems in the field.

But we also saw some very positive examples, leaving us with the impression that change can actually happen if people are ready to go for it.

- At farm level this was true for the initiative of women farmers forming an association, seeking outside support for their efforts to improve coffee production on their farms (i.e. arrange for a training about disease control provided by the university). They are now about to establish their own processing facility in the wadi so that they can themselves produce good quality coffee of various kinds.
- Similarly interesting is the drip irrigation system at one farmer visited, and his interest in maintaining a pesticides-free agriculture (hence an interesting partner for the organic markets).

Coffee collection (and some processing)

The place where farmers usually sell their dried coffee is in the next bigger town (the regional market place), at traders who are most often just buy and sell dried coffee, and work together with agents (or sometimes are agents) from the coffee companies based in Sana'a.

Whenever coffee is processed at regional level, this is done at a very basic technical level, using grain mills for husking (resulting in many broken beans), and very poor sorting and grading measures, if at all.

What is sold locally then usually is of very mixed (and poor) quality, at some places the coffee is roasted and grinded – but very often local consumers prefer to buy coffee beans (even un-husked) and do the roasting and grinding themselves according to their particular taste.

The most prominent problems seen at this stage of the value chain were related to different weights and measurements in use (due to history), which makes comparisons across regions extremely difficult, as well as the fact that hardly any quality incentives were found to encourage quality production. One trader whom we had asked why he was using plastic bags for the dried cherries that had been used for imported teas, clearly stated that as long as the coffee companies were not willing to pay more for better quality measures along the chain, why should he invest money without any return for such effort?

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| Coffee processing and marketing |
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It is at the level of the coffee company, where finally quality starts to matter – but without any real means of influence at that (almost final) stage of the value chain.

During our visit at one of the coffee companies in Sana'a we were shown a very impressive (and sad) collection of all kinds of materials (stones, metal, etc) that have been sorted from the coffee bags during the cleaning process. The loss occurring through such can vary from 25% up to 75% of the volume.

These companies are running full-fledged processing facilities for husking, cleaning and grading of the coffee – and additionally for roasting, grinding and packing, according to respective sales destinations.

There is a big concern about some traders importing cheaper coffees from other countries and blending these with Yemen coffee to increase their profit margins, whilst still claiming that their coffees were 100% Yemen coffee. This can happen especially since there is no quality standard for Yemen coffee and so even for export this is not looked at by the various agencies involved – the usual export document required (Certificate of Origin – CoC) currently only certifies that the product comes from Yemen, and not that it is actually produced/grown in Yemen.

The coffee companies visited during the study have all a good understanding about global market trends for coffee and would be keen to do more in the field of exporting Yemen coffee to the world.

However, because Yemen coffee is hardly known in the global coffee consuming world, and whilst no promotion activities are carried out for it, this is a difficult and expensive undertaking for a profit-oriented company.

What stood out positively at this stage of the value chain is the high interest at all coffee companies met to bring Yemen coffee back to the global coffee community, and to protect the name of "Mokha" for coffee produced in Yemen only, relating to the fact that this originally was the name for coffees coming from Yemen through its sea port of Al Mokha – a clear indication for a denomination of origin that should be followed up more directly, and be supported by the Government.

Two of the companies visited are members of the newly formed Yemen Coffee Association (YCA), a place where coffee traders have come together to jointly work towards improvements in marketing coffee from Yemen.

One company owner was also particularly interested in getting into the field of selling certified organic coffee from Yemen.

Another company has introduced a completely and very interesting new system of purchasing their coffee at farm level (either fresh or dried), using an incentive system whereby farmers will receive a higher price per kg of coffee if they produce more. This is closely monitored by the company, who has all the related data in their database (name of farmer, number of coffee trees, etc). A tracing system has been established to follow the coffee from these farmers all the way through the processing and grading.

Hand sorting is practised at two stages (dried cherries and green beans after mechanical grading), to produce high quality coffee. It almost goes without say that

this company immediately replaces plastic bags received from farmers with more adequate Jute bags.

Supporting/Surrounding Actors

There are a number of actors that are not directly involved with the value chain of coffee, but still play an important role according to their general objectives.

Amongst those visited were the Ministry of Agriculture, Coffee Department; the Government agency for standardisation; the Export Supreme Council; an Agricultural Research Unit, and the Agricultural Cooperative Union.

At some places important work is done to improve the situation in coffee production (like i.e. the development of the wooden dryer for coffee at the research unit, or the program to define quality standards for coffee).

At other places, nothing much can be done due to massive budget restrictions and the lack of qualified staff.

What all those agencies have in common is the fact, that they seem to work very isolated and without any connection to other actors in the area of coffee.

Two examples that stood out shall be reported here to reflect realities in the field of supporting agencies for the coffee industry in Yemen.

- We learned about a governmental experimental disease control program that was conducted by the University during 2004/05, but could not get any details about the results of this program, it was widely unknown even to direct actors along the coffee value chain.
- The one Research Institute visited was explaining to us that they were constantly working at all levels along the coffee chain, and after now having developed a new wooden dryer to be tested in the field they will do extensive surveys in all regions of the country about marketing. Talking about how they will distribute their results we learned that they will right a report and give it to the Ministry – for me this seems like “the ivory tower of science”, without any connection to those people that they are actually serving.

Whereas the Ministry (here their coffee department) is constantly short of budget and can not really provide any extension service to farmers (which would be the core responsibility as from my point of view), the Agricultural Cooperative Union (with 3 out of 428 of their societies being coffee farmers) has spent a lot of money to establish 3 processing facilities in the coffee growing regions, of which unfortunately none is used, for various reasons mainly relating to management problems; hence the processing facilities remain un-used since more than 2 years already, and all the investment seems to be a full loss.

There are also positive aspects at this group of actors, which clearly stood out – amongst it is the development of the wooden dryer for coffee and the emphasis that some of the staff at nurseries (private and public) put into not only providing good coffee seedlings to farmers, but also nurse other trees that could be used to support coffee production (as shade trees, as partner crop in mixed cropping systems, etc).

Conclusions and Perspectives

There are problems all along the value chain of coffee, and hardly any part of the chain is free of such problematic areas. Accordingly, there is no one answer that can be given.

Comparing our findings from the field survey and from the meetings with different actors along the value chain for coffee with work done earlier, we found that all the problems have already been reported and documented in various study reports over the last years, and recommendations have been drawn up to address these – but nothing substantial has actually happened until today.

Asking ourselves for the underlying reason for such a phenomenon we found that whenever somebody had tried to address one particular issue along the value chain (like disease control measures, better drying methods, more adequate packaging materials, etc), it did not really bear fruit – because such efforts were not honoured by the next actor along the value chain (see the example above at the collector about using more adequate jute bags for storage of the coffee).

All areas along the value chain are so closely connected and inter-linked - so it looks like a vicious circle where single efforts at one part of the chain can not be successful, hence the willingness to invest time, energy and money is very limited.

But what would be able to create an environment that supports initiatives to improve the situation in coffee? How to best break this vicious circle?

It appears to me any attempt to change things to the better will have to consider the whole value chain and has to make sure that efforts can actually pay off.

For such to be successful, and in line with the terms/objectives of this study, a distinction is made between two levels of necessary interventions, namely

- the macro level – in the context of this study this refers to the national level and the overall picture for coffee in Yemen,
- and
- the micro level – the level where single actors (entrepreneurs) can be supported to try out new ways to improve coffee production and marketing.

In both cases the keywords will be networking, coordination and joint efforts. And it means entrepreneurial spirit that is required to drive this process forward and to finally break the existing vicious circle.

It is obvious that quality concerns as one key factor need to be brought back along the value chain and need to be taken care of at the farm level already, and then going all the way through up to the trading companies.

In this report main emphasis will be given to the micro level and options seen for the SMEPS office to get involved to establish new business lines, following the overall logic as mentioned above (focus on whole chain, joint efforts).

Therefore, my recommendations for the macro level will be quite brief. But still, both levels are of high importance for successful improvements in the coffee sector of Yemen.

Macro Level

Quote: "Every related entity acts independently and without any coordination to form an integrated marketing mechanism to provide efficient and successful guidance to farmers, traders and exporters." – This was stated by the local experts involved with the US-AID study conducted in 2005 in their (local) report.

Nothing really has changed since, so these words still hold true.

To overcome this situation, the keywords for me would be

- Networking amongst all parties interested in change,
- Bringing in actors at their respective field of expertise (i.e. disease control),
- No duplication of efforts or activities,
- No competition amongst different actors
- Joint efforts

It seems clear that this will not come about just by itself - somebody needs to take the lead here, and maybe a national forum/round-table of all actors (especially those directly involved – farmers, collectors, traders) could stimulate the formation of a coordinating body for coffee, and might be a process through which efforts can be linked more closely, better coordinated and one joint strategy can be developed to improve the coffee sector in Yemen.

Issues that would need to be addressed at the macro level are

- Defining Quality Standards for Coffee (that are acceptable to both the direct actors in the country as well as the global coffee community)
- Start the process to get protection for the name "Mokha", possibly under the Denomination of Origin (DOC) system
- Bring Yemen coffee back to sight at the global coffee community through becoming a member of the International Coffee Organisation (ICO) and by promoting Yemen coffee at global level (as the unique coffee that has at least as long and exciting a history as other currently very prominent coffees)
- Establish coherent and transparent systems for coffee grading and quality incentives all along the value chain
- Find a workable solution for income disparities between Qat and Coffee
- Consider additional incentives for farmers who grow coffee (i.e. full tax exemption).

All these recommendations are clearly outside the scope of the SMEPS office and are meant for the wider audience of actors within the coffee value chain. They need to be taken up at the national level.

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| <h2>Micro Level</h2> |
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This is the area for SMEPS interventions, where new routes can be tried out together with interested actors along the value chain for coffee, to improve the situation and possibly to demonstrate to others that change to the better is possible.

QUALITY SELLS

should be the keyword when developing new business lines.

But quality is determined in many ways, and can mean different things at different places along the chain;

for marketing however, quality is determined by

- the quality of the product (high ranking in international standards)
- its distinctiveness (unique flavour)
- the story coming with the product (coffee history, Al Mokha)

Especially the latter (the story) has got a high value these days, as the example of the success story for Ethiopian Coffee, claiming to be the historical origin of coffee, clearly demonstrates.

Potential Areas for SMEPS intervention

Trying to break the vicious circle that seems to exist in the coffee sector in Yemen, with all its problems along the value chain, will require true entrepreneurship and people that are willing to go for change.

Such people do exist at various places along the value chain as seen during the study, and those are the actors that will need to be brought together (i.e. the Women Farmer Association, farmers trying out innovative new techniques and systems, as well as traders that are keen to promote Yemen coffee in the world as the unique Mokha Coffee).

However, what is true for the macro level – the whole country in this context - also applies to the micro level: for every new business line, the whole chain from production to market has to be looked at (and problems found there need to be addressed), and all actors along this line need to work together jointly to be successful.

So the way forward should be to define Joint Ventures with those different actors along the chain – by using an integrating approach.

Reaching out for niche markets would be the keyword for marketing strategies to be developed. It is obvious that due to its limited volumes and its relatively high production cost, Yemen coffee will never be able to reach the mass market.

The new business lines suggested to be implemented as pilot projects are in the first place meant for export of Yemen coffee, especially to destinations that have a huge potential to be successful (mainly Europe and Japan, but also USA).

The suggested new business lines are

- The Speciality/ Gourmet coffee markets
Mostly single origin coffees with an interesting story and based on high product quality are always in demand in many countries of the coffee consuming world.
Here, single line coffees from the different varieties in Yemen could be tried out (i.e. Burra'i from the Burra region), offering coffee of high quality in terms of processing and grading, and together with its respective unique flavour, its historical context should be used as an additional quality measure (i.e. Burra as a protected area).
- Organic (certified) coffee
The market for organic products is a fast growing market in many countries nowadays, while consumers are getting more and more concerned about the health- and environmental quality of the food products that they are buying. Most of the coffee in Yemen seems to be "organic by default", because hardly any pesticides are used, nor any chemical fertiliser.
However, in organic agriculture the whole farm is considered an eco-system with a multitude of cross-cutting issues to be looked at when it comes to organic certification.
Potential partners are clearly seen from amongst the group of entrepreneurs in Yemen (i.e. the group around the farmer using the drip irrigation system, as well as Yemen Coffee Company as the trading partner respectively).
- Fair Trade (certified) coffee
This is a somewhat different system, the underlying philosophy is to use Fair Trade as a tool for development of disadvantaged farmers in developing countries, by guaranteeing a fair price and fair trading conditions (including pre-financing measures) to the farmers group, by paying an extra Fair Trade premium directly to the farmers group for their development projects in the community, and very often by providing additional support to assist the group in their development (according to needs on the ground).
This is the market with the highest growth rates over the last years (up to 40% per year) in many consumer countries and it bears a high potential especially for farmers groups like the Women Farmer Association (gender issue).
There are a number of potential trading partners in Europe and America, as well as in Japan and other countries (i.e. Australia), and establishing the necessary processing and trading line with partners in Yemen (at least until they have their own processing facility up and running) should not be too difficult.

Keeping in mind the above said about first addressing the export markets to Europe, Japan and the USA, it is also true that i.e. organic starts to receive consumer demand in the Arabic countries, and the same might apply for the domestic markets in Yemen itself over time (looking at high end speciality shops, the big hotels in the country, etc).

On the technical side, positive and innovative systems found during the study should be taken on to improve production and quality along the value chain of these joint ventures, and issues to be looked at should include

- The promotion of a drip irrigation system at farm level
- The use of nitrogen fixing plants and supportive shade trees within the coffee plantations (i.e. consider olive trees)
- Train farmers in adequate pruning and harvesting techniques
- The promotion of the wooden dryer from the research unit for direct use at farm level
- Train farmers in adequate handling of harvested coffee (storage in jute bags, dry and dark places, etc)
- Encourage quality measures to start at the farm – establish an incentive system for quality together with the processing/trading partner (study the system used by Al-Ezzi to find out how suitable this could be also for other places).



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| Annexes |
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Guiding Terms for the Study – Terms of Reference
(Separate document)

References

- Agricultural Statistics Year Book 2006; General Department of Agricultural Statistics and Documentation, Ministry of Agriculture and Irrigation
- Jo Brian, D. Robinson: Coffee in Yemen, a practical guide
- Moving Yemen Coffee forward; US-AID study December 2005
- Preliminary Coffee Production & Marketing Assessment Report, by Saeed Al-Sharjabi & Bakr Al-Akwa'a, October 2005
- Planning Matrix for suggested activities in Coffee as a Strategic Crop 2005-2009; prepared by the participants of the workshop on "Current Status and Future Prospects of Coffee Crop", held in Sana'a, September 2004

Flow Chart – Work Schedule, Notes from Activities and Meetings
(Who was visited and spoken to) – Separate document