EAST TIMOR COFFEE

AN INDUSTRY OVERVIEW

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Foreword

The Division of Agricultural Affairs, East Timor Transitional Administration, is pleased to present Mr. Moreno’s report on the current status of the coffee industry in East Timor. The report does not paint a picture of a healthy industry. However, it does illuminate areas of potential and promise for this activity, the most important of Timor’s income earning crop’s.

The report raises a number of priority and critical challenges facing the coffee industry in East Timor and makes a series of recommendations for implementation to revitalize and strengthen the industry. It is the hope of the Division of Agricultural Affairs that these will be seriously considered by all sectors of the industry as a precursor to discussions on a collaborative and complimentary framework for restructuring the coffee industry so that it best serves the needs of the East Timorese people.

In the main, the Division of Agricultural Affairs accepts and endorses the overall findings of the report. In particular we agree that the future viability of the coffee export trade rests on its ability to provide a high quality and organically produced product. We also accept that revitalization of the industry will best be achieved by a sector whose structure and activity is primarily industry driven. This means that the government should not be a primary player in the mechanics of production or trade. We also accept that the State has a critical role to play in writing the script for the restructuring of the industry and providing a policy and regulatory framework for its development. We also see enormous potential for a range of agroforestry development for both economic and sustainable natural resource management to occur under a spearhead of a vital and healthy organic coffee export industry.

The Division of Agricultural Affairs is taking this report seriously. We have already moved to place coffee under the Forestry Unit, reflecting coffees place at the center of future agroforestry development. As the country’s priority export crop, coffee will and must play a strategic role in any future integrated land management system for East Timor.

I invite all members of the industry – growers, harvesters, processors, exporters, donors and governance – to peruse the following pages carefully and to make comment on their contents. I look forward to debating the future shape of the industry with you all in the near future and reading your comments posted to untaetagri@yahoo.com.

Serge Verniau
Director
Division of Agricultural Affairs
1. Introduction

Coffee is East Timor’s primary cash crop and must be considered one of its primary industries. The September 1999 incidents which took place in East Timor have not only marked the beginning of a new era for the nation but have also created a different scenario for the coffee industry. This scenario, however, is marked with numerous constraints that make normal development a difficult task for this activity. The very nature of the East Timor coffee industry is different from others around the world.

In East Timor coffee production is not really a “farming activity”. It is characterized by being only a coffee harvesting one. The people involved in it are not engaged in cropping or farming coffee and do not relate to typical coffee production principles. They can be referred to as farmers as their involvement with the crop basically starts and ends with the harvesting season. To understand why these farmers have not evolved as coffee farmers per se it is necessary to look into the nature of the events surrounding the coffee scenario.

Farmland ownership has been an ongoing debate. First, the Portuguese established themselves and started developing the industry. Then the Indonesians took possession of the fields and hence government became a key player and regulating entity. Former Portuguese farm workers then became guardians of coffee fields and derived income from gathering coffee from these. East Timor declared independence from Indonesia resulting in a total halt of the country and of this sector. The widespread violence and the forced fleeing from the country have added a new and complicated dimension to the land ownership issues.

For people involved in the coffee activity, the only concern is in being able to harvest the crop. Cultivating the land is a foreign concept. The shade trees that were established 80 years ago as part of a coffee cropping system have now become a primary high canopy forest with an underlying secondary growth denominated “coffee”.

The coffee industry has not evolved as such because there is no driving force behind it. There has been no growth attributable to an increase in yields or to an increase in new coffee plantations or to an improvement in cropping practices. Total coffee output per hectare, if compared to yields in the 1950’s has been greatly reduced from 600 to roughly 100 kilos of parchment coffee per hectare.

East Timor coffee has to compete in the international market. Successful marketing of Timor as a prime coffee origin will be dependant on a strong private-sector driven approach and on the structural organization of the industry. Coffees from East Timor do have tremendous potential, as there are some unique character traits that clearly differentiate these coffees from others produced around the world.

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1 Information provided by Mr. Cornelio Madeira Esposto, former SAPT plant manager in Fatubessi.
2. Coffee Industry Overview
Produced in many places around the world, coffee has evolved into a complex and standardized business. This business is driven by the ability to produce, buy, and sell a quality product, as a commodity item under free-marketing principles. Participants of the coffee industry each have a responsibility to derive a business from the industry.

2.1 Growers
Growers or farmers produce a quality product by implementing well-planned cropping techniques. The purposes of these techniques are to maximize yields, maintain plant vigour, protect and maintain the farming ecosystems, and above all, to produce and harvest a quality coffee cherry. Coffee cherry market values are determined by quality and international market price fluctuations.

2.2 Processors
The processors’ responsibilities are to transform cherry beans to green coffee beans maintaining all intrinsic characteristics of the product by engaging in different processes and sequences including: de-pulping, fermentation, washing, drying, de-hulling and grading.

The processors business is derived from the transformation of the product. They sell a service from which income is based on the quality and efficiency of their service. They can provide this service to individual growers, grower groups or to exporters.

Growers can also be processors. However their ability to add value to the product relies on their capacity to correctly perform all these processes. The product, whether it is parchment coffee or green bean coffee, dictates the degree of processing achieved and hence an added value market-price according to this level.

2.3 Exporters or buyers
Exporters purchase coffee at the different processing levels; be it cherry, parchment, or green bean. In many cases the exporter, in the quest for quality and quantity, decides to become the processor as well. An exporter’s business is unique in the sense that it involves the purchase of a product in a local market but sale of it in an international market governed by commodity marketing principles. The ability to purchase a quality product will improve the ability to market it in a very competitive scenario.

2.4 Importers
The importer serves as a middleman between the exporter and the roaster. Their responsibilities are also twofold. Importers work for the exporter on a commission basis to guarantee finding a buyer or roaster. In most cases they act as payment collectors as well, however they seldom take possession of the product. They can also work for the roaster on a commission basis to guarantee supply of quality coffee beans. Importers will be involved in the promotion of specific country origins as part of their success depends on the ability to source and offer uniform and consistent varieties of these.
2.5 Roasters
The roasters transform a green bean by performing a roasting operation in which the bean characteristics of aroma, body and acidity are enhanced. They develop a market for the coffee and the origin. Roaster success depends on everyone in the chain: grower, processor, exporter and importer. Roasted coffee is sold to a retailer such as a coffee shop or supermarket. In many cases the roaster will also be a retailer. Very few roasters are direct importers of an origin as they tend to rely on the importers.

2.6 Retailers
A retailer transforms the roasted coffee into a beverage or sells whole roasted or ground coffee in smaller weight units. Their marketing approach commonly involves developing a brand name by origin and/or by estate, or through a particular expertise in beverage elaboration.

Thus, there are many players in the coffee industry, each one assuming a quality product as the same business starting point. It is a well structured and a complex business through which many different business combinations have evolved. The best scenario for vertical integration is one in which the grower has become the processor, exporter, importer, roaster and retailer and is thus deriving a business at each stage. They then capitalize on the added value at all business levels.

3. The East Timor Scenario

3.1 Organic Coffee Production
Organic coffee production is a condition established in the East Timorese coffee industry by default. This condition is unique and seldom found naturally in other coffee producing countries. Organic culture is present mainly because of the absence of ag-inputs but also because of the absence of farmer involvement in any of the cultural practices typical to a true coffee farming activity. The lower yields of these are not due to their organic condition but rather from poor management.

With proper guidance, however, these organic units can successfully carry on with the coffee activity and increase bean quality and yields.

Arabica plantations in East Timor were established more than 80 years ago. The plants have literally been abandoned and are now growing wild. The loss of vigour associated with age is evident. The coffee canopy has grown to heights that make the harvesting activity rather difficult and in some cases, impossible. The shade trees are over-grown and can be casting excessive shade, which reduces photosynthesis and therefore a reduction in yields\(^2\).

There are no growers in this picture, only harvesters who have no knowledge of coffee production.

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\(^2\) Further research needs to be conducted to establish the correct shade combinations required for maximum yields in East Timor plantations.
3.2 Harvest

Coffee harvest in East Timor is a process in which no proper training or quality standards are currently being applied. Coffee maturity, for example, is a term which has a different meaning for each of the 44,633 individual farmers. Green coffee is mixed with ripe coffee; for the farmer it is just coffee. Green picked coffee is diminishing the net return to the farmer as these cherries have not completed their physiological development and therefore have less volume and weight.

It is typical for overripe cherries to also be mixed with the pick. This indicates that the harvest has not been as regularly as it should be or that there is a lack of workers to perform this duty. Dried cherries that fall to the ground are also mixed with the batch.

The combination of these poor harvesting practices greatly reduces the overall quality of the coffee.

3.3 Processing

Due to the absence of buyers for cherry, coffee farmers are forced to wet process their harvest. De-pulping equipment in most farms is rather rudimentary and does nothing to preserve the quality of the bean; in fact it deteriorates it. The harvested beans are collected daily and brought to the farm household where they are left to sit inside bags for long periods of times, sometimes even until the next day. This induces a heat build-up and an onset of fermentation prior to de-pulping that stains the parchment and destroys cup quality. This step, which follows fermentation, is not carried out with any set standard. Fermentation hours are not monitored to ensure a quality product but are carried out as just the next step without any specific controls. The result is an over-fermentation of the coffee bean which normally can only be detected after dry milling and cupping.

Washing after fermentation is done without specific methodology and is deficient. It does not remove all mucilage completely. Clean parchment is seldom achieved as floaters, partially de-pulped cherries, and cherry skins are all mixed together. This combination produces a fruity flavor in the bean which is clearly marked as a defect. In most cases water availability is also poor, which reduces the capacity to properly wash beans after fermentation.

3.4 Drying

The degree of drying is determined subjectively by each individual grower and is not monitored. A combination of under-dried or over-dried parchment is produced making it very difficult to produce a uniform product. Sun drying is done on many different types of surfaces varying from woven mats, old plastic bags, paved roads, or directly on barren ground.

3 Data Base Provincial Agriculture Department in East Timor in Indonesian Period, 1997; Land under coffee trees and production figures for 6 Districts (Aileu, Ainaro, Bobonaro, Ermera, Líquica and Manufahi)
3.5 Storage
Coffee should be stored in clean, odour free, well aerated, environments. Storage conditions in the field, in many instances, contributes to contamination from odours including gasoline, kerosene, smoke from the hearths, and manure. It is also common to find coffee that has developed a mouldy odor because it is being bagged and stored at moisture levels above 12% humidity.

3.6 Market
Under the Indonesian government local coffee market prices were regulated and most of the coffee was sold to the Indonesian market, which could be considered more of a local market rather than an export market. This local market was not based on a quality standard but rather on a quantity one. When the Indonesian market disappears the only market alternative left is an international export market. The absence of new buyers has caused a cash flow problem for the growers. Buyers have slowly started to become interested in East Timor coffees however they have been assuming that the product is up to standard with other coffees in the trade.

The lack of standards in the concept of coffee quality and the individual interpretation by each grower is causing a very difficult local market condition. Coffee prices are always determined by the international market fluctuations. It is assumed, however, that because coffee is a commodity item then the product is of a standard quality. When this quality is a merely subjective one, as in the East Timor industry, it is very difficult for both growers and buyers to agree on favourable terms to conduct business.

The core problem has obviously been the lack of buyers in the picture and the very deficient processing technique currently in the hands of growers. The distribution of pulpers to the growers, although initially well intentioned in providing some type of processing infrastructure, will unfortunately not solve the problem. It will actually aggravate it as poorly processed parchment coffee has literally no commercial value. Coffee processing is a very intricate and detailed operation if one wants to guarantee a standard quality, and growers seldom have the proper understanding of the quality issues that need to be applied in processing.

3.7 Policies to be adopted
Coffee has to become a national priority. The government’s role should not be to regulate the activity but rather to promote it. There is no room for government controlled prices for coffee as these are determined, not by local market conditions, but from international market ones. Agriculture itself is a risky business as there are many factors that can not be controlled such as weather and climate. The role of government must be to help farmers minimize these risks by developing policies, providing them with business tools and sound investment environments. These policies will need to involve:

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4 Accurate moisture determination in the field and for the small holder is difficult as this requires the use of moisture meters if it is to be done correctly. Biting into the bean, if one has experience, can provide for a rough estimate of the moisture level although this method is only utilized as a point of reference and not as an accurate measurement.
Support and recognition of industry structural development which might include: associations, cooperatives, joint-venture groups, etc.,

- Facilitation of the development of market information services,
- Facilitation of access to markets by improving road infrastructure, port facilities and telecommunications systems,
- Capacity-building for Department of Agriculture staff to develop expertise in technical areas of coffee processing and general production, post harvest handling, market penetration, quality assurance, as well as community facilitation methodologies,
- Policy and resolution of land tenure issues,
- Cabinet approval of National Organic Standards and Regulations,
- The development of a Timor Organic Coffee Growers Association as an industry body to co-ordinate the development of the coffee industry in Timor,
- Development of an appropriate organic certification system for Timor,
- An overall coffee industry development programme that will encourage and provide direction for private sector investment to increase capacity of wet and dry processing facilities,
- Support for capacity-building initiatives to build expertise in production and community organization (co-operatives) management,

3.8 Developing an industry structure

Introduction of an organic certification program will require the organization of all industry key players in order to audit the system and provide certification. It will also provide a template structure through which technical assistance can be delivered.

Organization at the grower level is the first step to be achieved and the most time-consuming one because of sheer number of growers involved. Ideally, organized individual coffee grower groups could come together under one district grower organization. For example, if the approximately 25,000 growers in Ermera could be organized into 20 different grower groups they could come together under an Ermera District Coffee Grower Association. All district associations could come together under a Timor Organic Coffee Association. The Timor Organic Coffee Association would need to be private-sector driven as it would be represented by the district grower groups and specialized industry groups, such as processors or buyers and roasters. This would provide an open forum in which industry stakeholders can network and discuss coffee industry specific issues. Government would have an outside role and it’s areas of involvement would conform to those needs dictated by the industry. (See Diagram on Timor Organic Industry Structure)

3.9 Market Logistics

In order for Timor coffee to compete in an international market it is necessary to develop a strategy that will differentiate Timorese coffees from the rest. There are certain aspects of the current industry situation that currently imply disadvantages but can really be turned into advantages. These include:
All Timor coffee is produced organically. This is a default condition established through neglect. A misconception exists that associates organic coffee with low quality and low yields. Proper management of organic farming principles will, in fact, increase current yields and coffee quality. A national organic certification program could allow certifying to the world that all coffees produced in East Timor are organic. Timor would then be the only coffee origin in the world with an entire coffee industry being organically certified. This is unique and would become its strongest marketing tool. There are many organic coffees available but none in which the entire origin is certified as such. The quantity of coffee produced is irrelevant provided the quality is improved. If the demand for quality East Timor coffee is developed successfully the limit to quantity will give it a premium on its own.

The “Hibrido de Timor” variety planted can be considered as a heritage hybrid from which all rust resistant ones have developed. This is unique in the sense that most coffee producing countries have introduced new genetically developed hybrids into their production programmes. Timor still relies on the original variety that could be said to be a precursor to the development of new generation genetic rust resistant hybrids. “Hibrido de Timor” is a result from a cross between the heritage varieties of Coffea arabica and Coffea canephora.

East Timor coffee is produced on an island. World leading coffee production does not come from islands, so this is another unique condition. Apart from being an island it can also be considered as a far-away and exotic origin. For European and American markets this is a rarity. On the other hand for Australian, New Zealand and Japanese markets its unique geographical position gives it a competing edge against coffees from world leaders such as Columbia, Brazil, Mexico or Guatemala. The fact that coffees from Timor are produced at high elevations is unique considering the small areas available on the island topography. High altitudes are directly associated with producing the highest quality coffees.

The cultural and political situations are also unique to East Timor. Former Portuguese and then Indonesian influence adds a spice of history to this industry that is different from others in the world. The incidents that took place in September 1999 and the UN presence here are also providing a unique and one-off opportunity in which world awareness is being focussed on this location.

Forest grown coffee is another special factor about East Timor coffee. Coffee from most of the world’s origins are produced under shadeless conditions.

The large number of small growers is also unique. The producer industry is in the hands of 45,000 growers with an average of only one hectare each.

The combination of all the above character traits of East Timorese coffee, produces a one-of-a-kind product which is unique and different from other coffees around the world. It is precisely the marketing story behind a unique origin.
4. Recommendations

*Coffee requires a development policy rather than a problem-solving one.*

The terms of reference for this consultancy called for an assessment of the current situation of coffee production from cherry production to parchment in the hands of the small holder’s communities and co-operatives. It was to provide advice and technical training in improving processing techniques to improve processing quality for better selling alternatives for the small coffee shareholders. These terms of reference seem more a fine-tuning approach to an established industry.

Unfortunately, the solution for the East Timor coffee industry is not one of fine-tuning but rather one of long-term development work.

In essence, it is looking for a short-term solution to an 80-year old plantation that has now reached maximum life expectancy. The solution is straight forward ..... we must start all over again. This is precisely what needs to be done with this 80-year-old farm. It needs to be re-established in order to be able to fully develop its potential.

4.2 Develop an Education and Awareness Raising Programme

Coffee pruning is not the solution to re-establishing plant vigour. It requires coffee replanting. This is the best opportunity to teach coffee people about coffee farming, about quality harvest, quality processing and quality marketing. Delivery of technical assistance to do this, will require a structure to be developed first to deliver such assistance. It is hard to address 45,000 individual coffee growers effectively on a one-to-one basis.

4.3 Secure Donor Support for the Whole Industry

It is unfortunate that practically no budget has been allocated to this important sector and that donor participation is limited to USAID funding. USAID funding is only directed to a very small portion of the industry and specifically to an on-going project. This represents approximately 20% of the industry which leaves a big gap: 80% of the coffee sector with no donor funding support and, needless to say, no government budgeting. Efforts need to made to obtain donor funding for the entire coffee industry. Current USAID funding is insufficient and is addressing a only a small portion of the industry.

4.4 Remove the 5% Export Tax on Coffee

The current international coffee market prices are on a 6-year low. The current quality standards of Timor coffees on top of this do not market even or par to

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5 See Coffee “C” 25 Year Monthly Chart; Source: Best Investments Coffee Newsletter/Binews.com. Best Investments Coffee Newsletter
international board prices. Under the current circumstance the 5% export tax does not promote this activity; rather it is contributes in introducing yet one more constraint to an activity that desperately needs support and development.

4.5 **Develop a Model for Integrating Coffee and Reforestation Programmes**

Coffee needs to be established as a department of its own or to be developed together with the one that has similarities to it. Coffee and reforestation in a country like East Timor go hand in hand. Shade is needed to establish coffee land and under such systems it promotes development of a combination of forestland and a cash crop. There seems to be an availability of high-altitude land in which new coffee plantations could be established and hence solving an erosion control and deforestation problem. A model should be developed in conjunction with the Forestry Unit to promote coffee development and reforestation programmes.

4.6 **Resolve Land Ownership Issues**

Land ownership problems need to be solved. Growers need to have title to the land in order to justify investing and adopting new cropping systems. The Department of Agricultural Affairs needs to work together with the Land and Property Unit specifically to solve these issues.

4.7 **Promote Foreign Investment**

More foreign investment, in the form of buyers and exporters, needs to be promoted. In order for buyers to be able to purchase coffee they will need to install cherry wet mill processing equipment as well as dry milling infrastructure. This requires heavy funding with return in investment periods well beyond those contemplated in the current Temporary Land Use Agreements. The presence of more buyers or private investors will promote healthy competition, which will be of benefit to the grower by establishing an incentive for producing a better quality coffee. A business shift from parchment coffee to cherry coffee will also be observed as more buyers get involved in processing coffee. This will free the farmers from processing and in fact allow more persons to harvest coffee as there will be no need for someone to stay behind de-pulping and sun drying. The farmers’ cash flow will also improve as he will be selling and receiving cash on a daily basis as opposed to storing the product until someone shows up to buy it. The overall quality of coffee will improve drastically as buyers help educate farmers and introduce quality parameters that run parallel to international markets.

4.8 **Refurbish Coffee Processing Infrastructure**

Abandoned coffee processing infrastructure can be refurbished in some of the production areas. However the land tenure issues need to be resolved quickly in
order to give enough lead time to any investors interested in restoring these before the next harvest begins in 2001.

4.9 Review Department of Agriculture Structure

The Department of Agriculture needs to combine its human resources more effectively. There are government district structures which replicate the efforts of headquarters at the district level. Very little co-ordination exists between headquarters and districts which does not capitalize on the valuable human resource available. This does not contribute positively to establishing a flow of data and information on coffee development issues.

4.10 Promote an Industry and Market Driven Approach

There currently seems to be a strong inclination towards the need to establish a government-regulated coffee board. Coffee boards have practically been eliminated world-wide because they simply do not work and are very expensive to run. In an international market scenario, the driving force behind the coffee activity is an industry driven and market driven one. Government is not a key shareholder in the industry and should therefore not actively participate as part of it.

4.11 Develop a Timor Coffee Marketing Strategy based on Organic Certification

The opportunity to develop a marketing programme for East Timor is based on successfully establishing an Organic Certification System for the coffee industry. The objective is not to market coffee but rather to generically promote the origin. Individual coffee brands are developed and marketed individually by each coffee exporter. Regardless of the brand however they all have one thing in common, the origin. This is the reason why a generic origin promotion campaign enhances and benefits all of East Timor coffee exports.

4.12 Improve and Maintain the Roading Infrastructure

The harvest of coffee generates an enormous amount of volume and weight to be transported through the road infrastructure. As more coffee business is activated there will be an increase in this traffic which will inevitably contribute to further deteriorate road infrastructure. A 6000 ton green bean harvest for example implies that at least 36,000 tons of cherry beans need to be transported along the road infrastructure. Road maintenance therefore is crucial for further development of the coffee industry.

4.13 Seek Professional Assistance

There are no staff in the Department of Agricultural Affairs to help provide a follow-up to development issues for the most important cash crop for East Timor;
coffee. It is critical that the department address this lack of future direction and rapidly seek for professional assistance in the field.

4.14 Promote the Concept of Quality not Quantity

It is necessary to stress that better market opportunities for East Timorese Arabica coffee relies on producing an excellent and specialized quality rather than quantity. Current yearly production estimates of 4000 tons with a potential according to Indonesian data of 9000 tons of green bean is equivalent to 100 to 150 thousand 60 kilo bags. If compared to world production data— for 1999/2000 it can clearly be seen where the competition is and why quantity approach is not the most logical one.

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