

## **A study case on Timiz (Piper Capense)**



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*Piper capense* is named *timiz* in Amharic, it means curly as a reference to its special shape. *Timiz (Piper Capense)* known as long black pepper is an endemic plant of East Africa found in wet highlands, it is produced traditionally for human consumption and medical use. It is also popular in the Islamic regions of North Africa where it has been introduced by Arab traders. *Timiz* is essentially found in the Bonga's coffee forest of the South West of Ethiopia. It is linked to Ethiopian culture in several different aspects: it is gathered in a unique ecosystem, transformed in traditional ways, and the fact that it is used in many national dishes...

## 1. Several names for one spice:

Area	Name	Others Ethiopians Names
Local area	<i>Turfo</i>	<i>Turifo &amp; turfo</i> (kefinya)
Regional area	<i>timiz</i>	<i>timiz</i> (Amharic)
National level	<i>timiz</i>	<i>Tunjo &amp; turfo</i> (Orominya)
International	Long black pepper	<i>Tinja</i> (Dawrigna)
Botanical Latin	<i>Piper capense</i>	<i>Tonjo</i> (Tigrinya)

**Tableau 1: Several names for one spice (Edwards S & al.,2000)**

In this report, we will speak about two kinds of long black pepper whose Amharic names have a very similar consonance. So, to avoid confusion, the long black pepper locally produced (*Timiz*) will be named « *abesha timiz* » and the Indian long black pepper imported (*Temist*) “*farenji timiz*”. Names given by traders in Addis Ababa's Merkato.



Illustration 1: Farenji timiz & Abesha timiz (Avril, 2008)

## 1 Description and distinctiveness of the product :

On Ethiopian markets, the main appellation used for the *piper capense* is *timiz*. Sometimes a reference to the production site is made ( Bonga area o Dawero area). Confusion between *kororima* and *timiz* is also made because of similar taste. Strangely, the *timiz*' volume is not in correspondence with its reputation. Indeed, the quantity of *timiz* produced in Bonga area is around 150T (personal estimation) and it is possible to find *timiz* all over the country. Perhaps this can be explained by the way *timiz* is used. In cooking, housewives just need a few amount of *timiz* to have a strong taste, so 1kg of *timiz* can be enough for one year.

### 1.1 TIMIZ AND THE INDIAN LONG BLACK PEPPER.

The *abesha timiz* ( produced in Ethiopia) is sometimes referred to the *farenji timiz* (Indian long pepper: *Piper Longum L*) which is mostly found in tropical Asia (India, Malaysia, Nepal, Sri Lanka, Vietnam, South of China) (Edwards S & al., 2000). Very famous in Indian cooking and Islamic regions, is more expensive on the Ethiopian markets so Ethiopian people prefers to buy *timiz*. Because of very high importation's

taxes, *farenji timiz* is found in markets at very high prices. Consequently, cheaper substitutes have been researched and produced. One is the *piper capense* referred to as *timiz*. It is said to have different flavor and aroma than Indian long pepper. The flavor of *timiz* is described as less strong in ‘pepper taste’ but with different aroma.

## 1.2 EUROPE AND THE LONG BLACK PEPPER.

Long pepper probably came to Europe before the now dominant black pepper. It was highly priced during the Roman Empire– about three times the price of black pepper. With its pungent and sweet taste at the same time, it was perfect for Roman cooking, especially fond for these two sensations. In our days, long pepper is nearly unknown and sometimes hard to obtain.

## 1.3 DESCRIPTION OF THE PRODUCT.

### 1.3.1 BOTANICAL DESCRIPTION

From the numerous different species of piper known in Africa areas, four are found in Ethiopia: *P.umbellatum*, *P.guineense*, *P.nigrum* and *P.capense*.

<b>Embranchement</b>	Spermaphytes
<b>Sous embranchement</b>	Angiospermes
<b>Classe</b>	Magnolopsides
<b>Sous classe</b>	Magnoliidae
<b>Ordre</b>	Piperales
<b>Famille</b>	Piperaceae
<b>Genre</b>	Piper
<b>Epithete spécifique</b>	Capense

**Tableau 2: Taxonomy of piper capense (Kochhar SL, 1998)**

*P. capense* L.f(1781)

- type: South Africa, *Thunberg*.s.n.

Shrubby herb 1-2m high, possibly sometimes subscandent, base semi-woody, much branched above, stems glabrous. Leaf: petiole 2-6 cm long; leaf-blade broadly ovate, (7-) 9.5-15.5 x (6-)8-14.5cm, base cordate, upper leaves sometimes obliquely truncate (to cuneate outside Flora area), tip acuminate, 7-9 veined from base, hairy at least on veins below; stipule 1.5-2 cm long. Spikes solitary, leaf-opposed, peduncle up to 3 cm long, rachis shorter at anthesis, 2.5-3 cm long in fruit, covered with white ovate bracts when young. Flowers only slightly protandrous; stamens with anthers about as long as filaments; stigma on distinct style, 2-lobed. Drupe sessile, globose, c 4 mm in

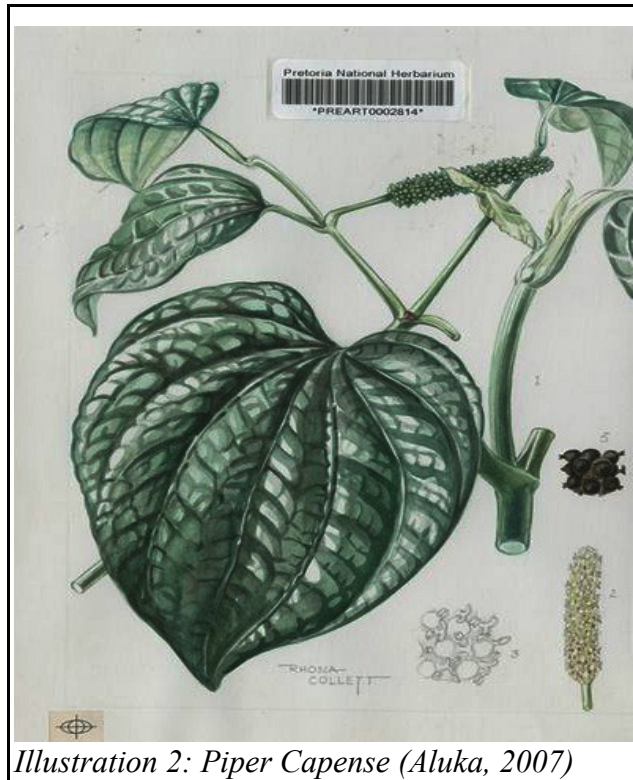


Illustration 2: *Piper Capense* (Aluka, 2007)

diameter, translucent greenish white, very fleshy; endocarp compressed, c 2x2 mm, smooth, reddish-brown. (Edwards S & al.,2000)

Fruits are made by little white closed berries of 8 cm. These berries turn to light green when it is harvest time. On average, farmers can gather from 2 to 4 kg of fresh fruit per tree.

According to farmers, there are female and male *timiz* but there is no relation with the reproduction of the specie, dioïque.

The female *timiz* is smaller and fatter. When it is dried it gives a better fruit than the male one which is taller but thinner.



*Illustration 4: Female timiz according to farmers (Avril, 2008)*



*Illustration 3: Male timiz according to farmers (Avril, 2008)*

### 1.3.2 CHEMICAL DESCRIPTION:

*P. capense* contains less essential oil than its relatives (about 1%).

The essential oils from *Piper capense*, from S. Tomé e Príncipe were investigated. They were analysed by GC, GC-mass spectrometry and  $^{13}\text{C}$  NMR. Monoterpene hydrocarbons were the main group of constituents in the sample of *P. capense*.  $\beta$ -Pinene (32.5%) and  $\beta$ -caryophyllene (12.6%) were the major compounds in the volatile oil of *P. capense*. The oil was found to be rich in hydrocarbons (>58%).

Since terpene components are missing in its aroma, long pepper cannot be substituted by ordinary black pepper. Information found in “Essentials oils from four *Piper* species” (Martins.P.B; Salgueiro.L & al, 2000)

## 1.4 QUALITY AND ORIGIN SEEN BY THE VALUE-CHAIN ACTORS.

In this paragraph, quality is described according to actors of the value chain. These actors will be presented in details in part 6.

*Timiz* is one of the three species of ear's pepper (Piperaceae) found in Ethiopia. In the Bonga's rain forest we can find the *piper capense* which is actively picked, and also the *piper umbellatum* L which comes from South America but it is not locally consumed. The third spice is the *piper longum* L which comes from India. It is an importation's product and can be easily found in market. (Roussel B, Verdeaux F, 2003)

### 1.4.1 QUALITY CONCERNS:

According to the International Standard (Spices and condiments-Botanical nomenclature) Reference number: ISO 676:2002 (E/F), there is no international norm which gives specifications on the quality of this product.

Botanical Name	Family	Common name of the spice in English	Common name of the spice in French	Name of the part used as spice
Piper Capensis	Piperaceae	Long pepper	Poivre long	Fruit

**Tableau 3: Piper capense referenced by ISO (ISO, 2000)**

The Ethiopian Standard is based on the International one, so there is no specific norm related to *timiz*. There are standards for black pepper that could be adapted to *timiz* if it is required by markets.

According to the *Ministry of Agriculture*, there are no certifying organizations in charge of *timiz*'s quality control along the value chain. Due to a lack of formal control institutions, the *timiz* quality is hard to certify.

*National factories* use a little amount of *timiz* in powder preparation. They do not really care if it is sun dried or smoked, they just ask for clean *timiz*. According to them at



present time it is very difficult to find clean and without moisture *timiz*. When they make a reference to the origin of the product, most of the time Bonga is the first name given.

**Exporters** have exported for the first time this year; so they did not think about the quality, but for the next year they will prefer to buy the one which has less moisture and best presentation. When they export *timiz*, the reference about the production site is Ethiopia and Kaffa zone.

**Housewives** prefer to buy the *farenji pepper* than the *abesha pepper*, because of the lack of attention given to the product, this gathered product is often badly dried and thus made moldy as well as covered with various residues. But price being very high so, in the *abesha timiz*, they prefer the sun-dried one for its smelly taste, better presentation with light brown color than the smoked one, black. Most of the women does not know where *timiz* comes from but some of them refer to Jima.

**Wholesalers** and the **broker** in Addis Ababa make quality differences. First in the way of drying (smoked or sun dried) and also in the origin. They always ask for sun dried *timiz* but most of the time, they just receive smoked one or mixed one. For them, a good *timiz* must be heavy, brown to black, without white point which shows moisture. Wholesalers mostly say that the origin of *timiz* is Bonga, Kaffa and also Jima. They explain that often they tell to consumers that it comes from Jima because this town was before the new political organization, the capital of Kaffa area. In Bonga area, it seems that the *timiz* from Wush Wush is less tasty and has a poorer quality than the one from Chiri. So, they can buy it 2ETB/kg less than the last one but it is not systematic.



According to wholesalers, broker and also small shops in Merkato:

Production area	Characteristics
Chiri area	timiz is little(female) full and fat, very smelly
Bonga area	Timiz is full and fat, very smelly
Wush Wush area	Timiz is tall and very dried, no good presentation

**Tableau 4: Timiz Characteristics according to traders (Avril,2008)**

The difference of quality can be considered as an instrument to differentiate the product according to its geographical origin. As, there is no official quality control nor traceability, retailers and consumers need to trust wholesalers for information about quality and origin.

Most of the *timiz* come from Bonga area but there is a little pond of production in Dawero near Jima. So in Merkato, we can sometimes find mixed *timiz*. According to *site production's wholesalers*, the different qualities are mixed and transported to Addis in same bags at same prices. They also prefer to buy sun dried kind but most of the time, they have only smoked one. They say that they have asked farmers to change their way of drying to sell *timiz* at a better price but there were no answers from farmers about quality changes . According to local wholesalers, the best quality comes from Chiri because this town receives *timiz* from three *kebeles* who produce the best *timiz*: Agaro Bushi, Boba, Muti.

*Farmers-collectors and urban collectors* make an effort to finish the drying process by sun drying but most of the time they collect non well smoked *timiz*.

*Farmers* know the demand and know that people prefers sun dried *timiz* but they



*Illustration 5: Roasted timiz (Avril,2008)*

explain that smoking *timiz* is easier and faster because of climate conditions. Also,

according to them , there is no price difference between smoked and sun dried timiz, so why to use the most difficult way of drying? It is possible also to find roasted even if it is rarely. Farmers can use this technique to reduce the drying time to 5h, but this way of drying reduces lots of qualities, there is no more aroma and flavor.

Prices vary from year to year depending on the amount and quality of products and demands.

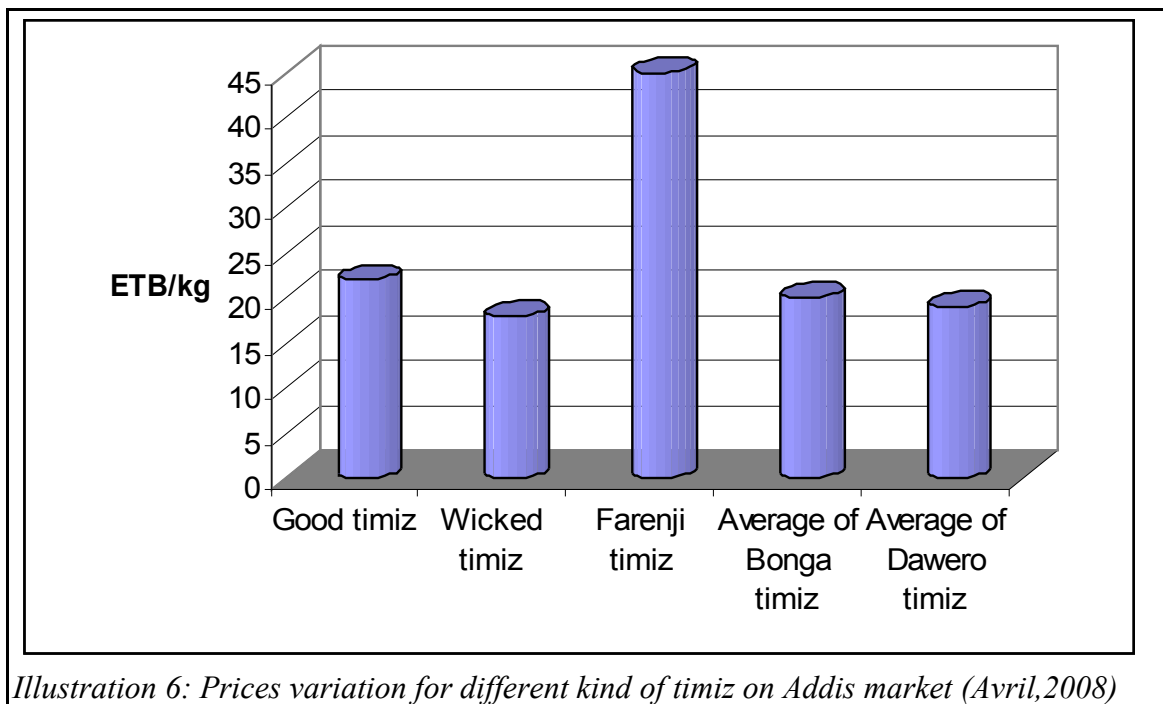


Illustration 6: Prices variation for different kind of timiz on Addis market (Avril,2008)

#### 1.4.2 DEMAND FOR QUALITY :

The differences in prices between local good and poor quality as well as *farenji timiz* lets think that there is probably different markets. One with high quality ( *farenji timiz*) for people who can afford the price and an other for poorer people with lower quality (*abesha timiz*).

Most wholesalers and retailers do not offer several types of local *timiz* but they have “*abesha timiz*” and “*farenji timiz*” at different prices and different quantities. *Timiz* is sold by grams and not at the unity so people can not choose *timiz* ears, they can just

check the quality offer in general.

*Timiz* prices are variable, according to the season, the harvest and the demand which fluctuate during the year. A table is presented in part 6.

Consumers have been interviewed at local and national level. According to rural consumers, they are aware of qualities differences and urban people are not always able to make a difference in quality for the *abesha timiz*. The main criteria of purchase in Addis is the price. So, urban people who can afford it, prefers the *farenji timiz* because according to them, it is cleaner, gives more taste with a smaller quantity. But, with the increase of prices, a kilo of *farenji timiz* is between 45 ETB to 90 ETB according to the place of sale. This price is widely above the *abesha timiz* one which is sold at the same time from 20ETB to 45ETB.

Selling places for individual consumers in all Ethiopian towns are only in market places ( in small shops or street vendors), you can not find *timiz* in supermarkets. There is no individual packaging like in tea spice or *mitmita*.

Problems mentioned about *timiz* quality:

Problems	Fresh harvested fruits	Processing problem	Transport and storage problem
Moisture		x	x
Loss of weight		x	x
Dirt	x	x	
Small fruits	x		
Taste of fruits	x	x	x
Heterogeneity of fruits	x	x	x
Colour	x	x	

**Tableau 5: Problems on *timiz* quality (data:actors, prod Avril,2008)**

Each actor has his criteria and his way of selecting *timiz*. The next table presents the mains criteria checked by actors along the value chain.

Actors	Selection criterion
Farmer	Fruit is full and fat, green to yellow
<div data-bbox="437 349 1157 770" data-label="Image"> </div> <div data-bbox="437 775 1125 808" data-label="Caption"> <p><i>Illustration 7: Fruit ready to be harvested (Avril,2008)</i></p> </div>	
Farmer-collector	Brown, heavy, with out moisture. Take it in his hand and timiz must be hard to crash because of dryness. He smells it to check if it is smoked or sun dried. Smoked ones have a stronger smell.
<div data-bbox="408 1090 1166 1509" data-label="Image"> </div> <div data-bbox="408 1514 1125 1585" data-label="Caption"> <p><i>Illustration 8: Wicked and good timiz at the purchasing time (Avril,2008)</i></p> </div>	
Urban collector	Brown, heavy, without moisture. Take it in his hand and timiz must be hard to crash because of dryness. He smells it to check if it is smoked or sun dried. Smoked ones have a stronger smell.
Zonal Wholesaler	Brown, heavy without moisture. he

Actors	Selection criterion
	crushes timiz in his hand to check the humidity level. One well dried will be reduced in powder easily. One not well dried will be hard to reduce. He smells also to check the odor.
Addis Wholesaler	Checks in the same way as the wholesaler in the production site.
Retailer	Verify the dryness of the product to avoid reduction during storage time, crashing the fruit or just seeing it
Street vendor	Look at the shape and the dryness
Rural consumer	He smells it and sorts good ones
Urban consumer	He smells it and trust in the vendor

**Tableau 6: Selection criterion explained by actors (Avril,2008)**

### 1.4.3 WAY OF SELLING TIMIZ:

*Farmers* sell *timiz* in bulks.

*Farmers-collectors, urban collectors, wholesalers* in Bonga area and Addis sell *timiz* in bags of 50kg. Sometimes, it is confusing because they use old bags with a 100kg sign on it. So, they can speak about one quintal because of this 100kg written but the true



*Illustration 10: Shop in Merkato (Avril, 2008)*



*Illustration 9: Street vendor (Avril, 2008)*

weight of *timiz* inside the bag is 50kg. For them, *timiz* take too many volume for its weight.

For general consumption *timiz* is sell by grams from *small shops* or in a mix with others spices by *street vendors* . In regions where Muslim religion is significant, they sell 4 or 5 ears of *timiz* together in a little plastic bag or the contents of a concentrated tomato pot ( $\pm$ .25g)



*Illustration 12: little plastic bag with timiz (Avril,2008)*



*Illustration 11: Measure unit on market 2ETB/dose (Avril,2008)*

Packaging used is well adapted as the purchasing power of the population, but also as ways of consumption.

## **2 Area of production**

The *timiz* value chain from the farmer-gatherer to the final consumer is relatively informal. Different operators can interfere at different levels with very few controls from authorities, so traceability is sometimes difficult.

There are two supply channels in Ethiopia for *timiz*. The one from Dawero near Jima is very small in quantities and operators, so we did not focus on this one but rather on the one that starts in South Western Ethiopia in Kaffa zone, more precisely in Bonga Forest.



The *timiz* production is made in Bonga area thanks to unique pedoclimatic criteria but stays distant for consumption's centers. The consumption is delocalized in Addis Ababa and in other parts of Ethiopia as well.

*Example of a timiz trajectory :*

From the production site in the mountains to an urban center:

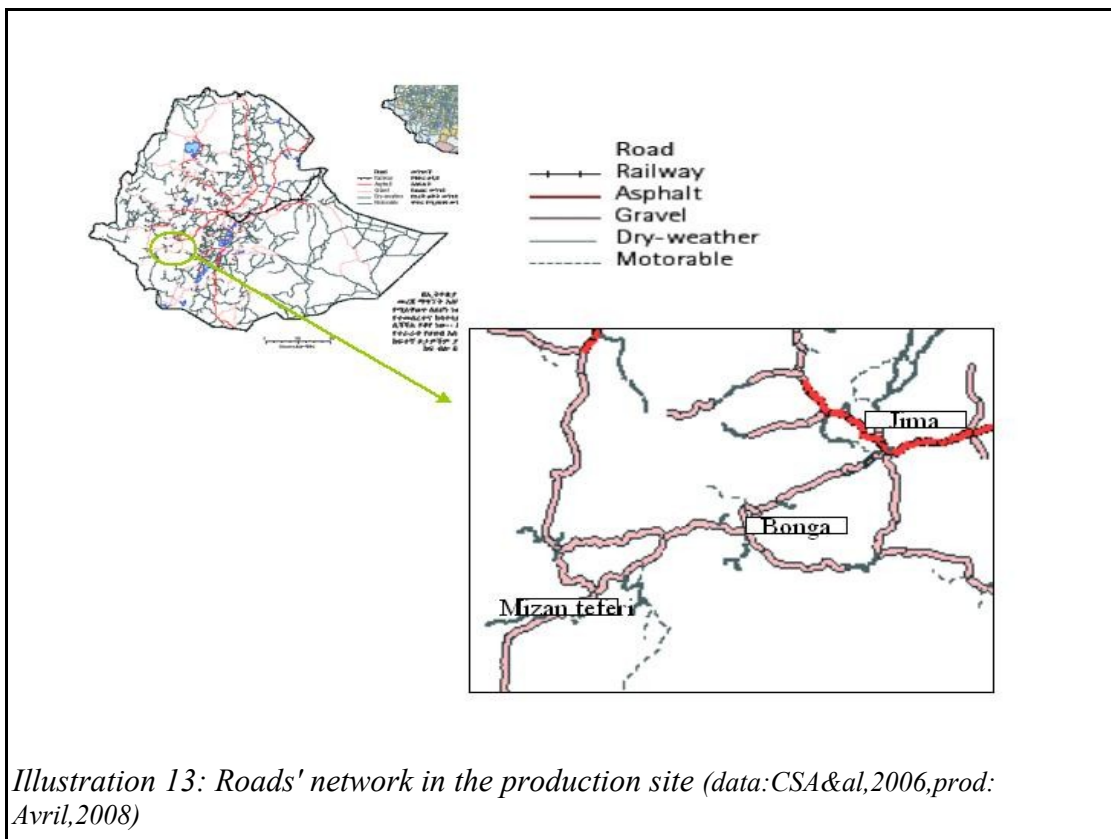
Farmers have to walk from one to ten hours with charged mules in very sloppy and muddy way, specially in the rainy season.

Then, *timiz* is put in 50kg bags and sent to Addis by Isuzu's, on a long trip:

Jima –Bonga : 3h30-4h30 for 105km on a non asphalted road

Jima- Addis : 6-7h for 345km on an recently asphalted road since august 2008.

*Timiz* is redistributed and has to travel very long distances to reach its final destination.



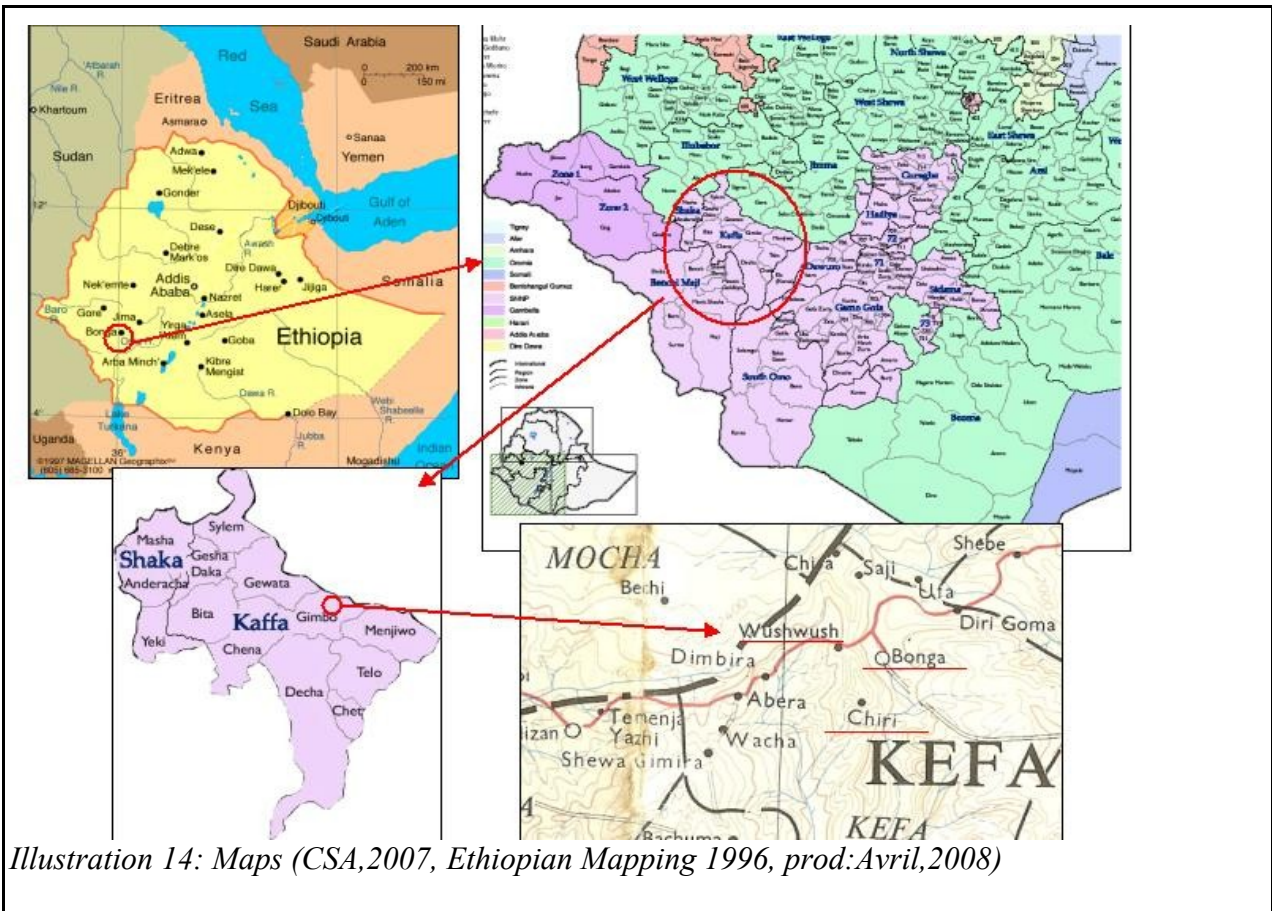


*Timiz* is not a perishable commodity, so distance between production site and consumption center is not a problem if we refer to the CLD (consumption limited date) but can be a problem because of roads' conditions in the rainy season. Moreover, this part of Ethiopia does not receive a dense road network and travels' conditions can be very difficult.

## **2.1 ADMINISTRATIVE UNIT : REGION, ZONE, WOREDA, KEBELE**

The area of production is found in SNNPS, in the Gimbo and China *woredas* and more precisely in the *kebele* of Bonga, Chiri, Wush Wush, Gopa. The most important productions come from Agaro Bushi, Muti, Wush Wush and around Bonga Town.

## **2.2 MAPPING**



### 2.3 CULTURAL CATEGORIZATION OF SPACE: LOCAL DIVISIONS OF SPACE:

*Timiz* is mostly found in the *Kubo* forest (described in the part 4.1.2: The Bonga forest) at the wild state. But nowadays, farmers start to domesticate the *timiz* plant. So, we can find it but in a very little quantity, just a few plants in gardens (*daado*) and also in forest's borders. Excluding one exception, *timiz* is not found in field (*goye masso*). But, some farmers told us that they are going to increase this production and want to plant some *timiz* trees in their gardens and fields.

### 3 Environment and biodiversity

#### 3.1 GENERAL DESCRIPTION OF THE ENVIRONMENT.

In Ethiopia, *timiz* is mostly found in Kaffa zone, in Gimbo Woreda, in Bonga area. At the national level there is no information on the land coverage and *timiz*'s production. In the wild, *timiz* is found between 1500m and 2500m. It requires the same ecological conditions as wild coffee but can be found in higher places. Its location is in the Bonga forest which is located in Kaffa zone of the SNNPR which is found within the southwestern plateau of Ethiopia. The original forest area covers 161 424ha and lies within 07°00'-7°25'N latitude and 35°55'-36°37'E longitude, stretching across five woredas: Gimbo, Menjiwo, Tello, Decha, Chena. The altitude of the area is from 1000 to 3350 m consisting of a highly dissected plateau with flat to moderately undulating terrain on areas above 1500m.

The annual rain fall ranges is from 1710mm to 1900mm in Bonga Station, in one long rainy season, starting from March to October. Over 85% of the total annual rainfall, which means monthly values are in the range of 125-250mm occurs in the 8 months long rainy season. The average temperature is 19.4°C at Bonga while it is 18.1 °C at Wushwush station, which is located 200m higher than Bonga ( Ersado M, 2001).

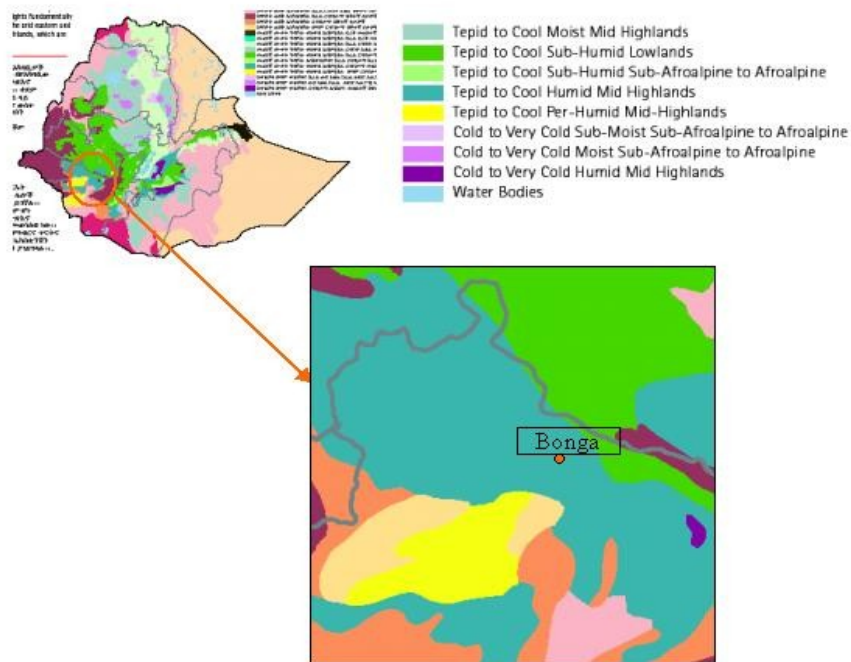


Illustration 15: Agroecological conditions of the production site  
(data: CSA&al,2006, prod Avril,2008)

In addition to these general climate conditions, timiz requires shadow and humidity. However, the Bonga forest is considered as a perfect biotope for timiz, whereas some special *woredas* are more suitable than others. Gimbo and Detcha are the two main *woredas* that produce timiz.

### 3.2 RELIEF

The region of study is a hilly region, average height 1900 m. Interfluves are relatively short. Their hillsides are convex. They are largely separated by valleys in V. Talwegs run in permanent or temporary streams forming in rainy season. Some valleys have a wide flat and wet bed which shelters a swamp to Carex. The region is tilted by the northeast towards the southwest: of the mountain massif which peaks as height as 2 400 meters, in the hydromorphe zone in 1 600 meters, with an average slope of 6 %. All

the streams which cross the zone of study does not follow this slope. Only the West of Wushwush is drained by streams converging on a river which throws (casts) itself into the hydromorphe zone. Other streams join two brooks which pass by from west to east and join just before Bonga. Wushwush is a part of the pond overturning of Omo which takes its source in the Ethiopian mountains on the West of the capital, crosses the Ethiopian southwest and finishes its running in the lac Turkana on the border with Kenya. This relief is the fruit of a basalt volcanism arisen from the tectonic movements of the Service industry at the origin of the formation of the Rift valley East-African.

The basement of the region is thus constituted by basalt rocks which appear in the top of certain hills or appear in a cutting, and of tuffs, rocks stemming from the consolidation of volcanic ashes. The layers of basalt and born volcanic ashes overlap irregularly. The basement, organized in layers, is covered with a geologic formation of the Quaternary stemming from the degradation of the underlying rocks. Grounds are rich in clays and in organic matter, particularly deep and largely drained well. They are considered as the most fertile grounds of Ethiopia. (Bareaud M,2007)

### **3.3 THE BONGA FOREST & BIODIVERSITY ASSOCIATED WITH THE TIMIZ:**

Forests are omnipresent in the landscape. According to farmers, there are two types:

- *Guudo* (Kef), the dense forest which is a little anthropised. It has a difficult access because of the vegetation and creepers. It is composed by different strates. The higher one (25-30m) is composed by *Olea africana* and *Cordia africana*. The inferior one (15-20m) by *Shefflera abyssinica*, *Albizia schimperiana* and *Millettia ferruginea*. The shrub one is rich in *Coffea arabica*. The last one is an herbaceous one. The government considers this kind of forest as a reserve. (Azene Bekele-Tesemma & al.1999).
  
- *Kubbo* (Kef), it is the one used by farmers. There is a continuum of anthropisation of this forest which is the result of the exploitation of non timber

forest product (coffee, spices...). The structure of the forest is simplified to improve shade, development of production... It is a place of hunting and gathering for the original population, nowadays often marginalized.

- Coffee plantation in woody areas. Some forests are very anthropised, the structure in striates is simplified and the cover is glade. Underneath the trees, in the shady area are planted some coffee trees with a higher density than in coffee forest.

### **3.4 HISTORY OF THE ZONE & DEMOGRAPHICAL DATA:**

- The medieval kingdom of Kaffa, whose name is immortalized as the derivative of the words 'coffee' and 'café', lay to the southwest of Jimma in what is now Kaffa-Sheka zone of the SNNPS. The people of Kaffa are part of the Ghibe ethno-linguistic group, and speak their own Kaficho language. A credible oral tradition states that Kaffa was founded in the late 14<sup>th</sup> century by the Minjo dynasty, and was originally ruled from a town called Shada, of Bonkatato, the royal capital shifted to the extant town of Bonga, which retained its importance into the 1880s, when Paul Soleillet, the first European visitor to Kaffa, regarded it to be the largest settlement in the region, and reported that a palace was still maintained there.

Kaffa, though it lay outside the Christian empire of the highlands, appears to have fallen under its sporadic influence. Oral traditions indicating that Emperor Sarsa Dengal's 16<sup>th</sup>-century expedition to western Ethiopia resulted in the limited introduction of Christianity to Kaffa are backed up by the presence of a monastery dating to around 1550. Kaffa was too remote to be affected by the *jihad* of Ahmed Grag, and it withstood the subsequent Oromo incursion into the western highlands by digging deep protective trenches around the major settlements. Kaffa remained an autonomous state from its inception until Emperor Menelik II conquered it in the late 19<sup>th</sup> century, and imprisoned its last king at Ankober. (Briggs P, 2006)

The “South”, country « *without monuments* » in contrary to the “North”

( Gascon, 1995) is the country of the conquered people. During one century, farmers of the south were highly taxed on their brute production and their labor's force to have a precarious access to land and others means of production in benefit of the Northern aristocratic elite. Frees from these relations since the revolution of 1974, farmers have seen the 1975 radical agrarian reform to be diluted because of the power centralization and the intervention of the social regime of Mengistu. As a result, farmers had to practice growing systems very extensive in labour because of the little height of the farms. (Planel, 2003 et Cochet, 2007). Inside of these systems, there is the *enset* which has a good caloric yield. So people from this region consume a lot of *kocho* to the detriment of *tef*. So these population non-amharic and non amharised are despised by others parts of the country.

Consequently, the diet is very simple, a piece of *kocho* and coffee will do. They do not use a lot of *tef* because of the production's difficulties. In all dishes made with *kocho*, the use of *wet* is really weak. This can be explained because in the production area people do not use their resources and prefer to sell it to others regions where *wet* with *injeira* or *wet* with spaghetti are the mains dishes.

*Tukuls* are farmers' habitation and for most of farm, the animal stalling with different kind of domesticate animals. Far from the urban influence of towns center (Bonga-Chiri-Wush Wush), *tukuls* are dispersed in the landscape. However, these huts are rarely situated in foot hills but more in top hills. Farmers have little access to land and also to building wood resources.

The Agricola census made in 2001 talks about 77 000 persons in the Gimbo Woreda area with a density of 85 hab./km<sup>2</sup>. The density in forest is around 78 hab./km<sup>2</sup> and about 182 hab./km<sup>2</sup> out of the forest. In 5 years, the population increased 22% in all the area.

### **3.5 ECOLOGICAL DISTRIBUTION AND REQUIREMENT.**

According to farmers, *timiz* can be found from 1300m to 2400m. It requires the



ecological conditions as coffee but it can be also found in higher place. Coffee needs around 35% of shade but *timiz* needs more, so it is easily found in dense forest.

## **4 Production:**

### **4.1 PRODUCTION PROCESS AND ACTORS.**

#### **4.1.1 GENERAL DATA ON PRODUCTION.**

*Timiz* is mostly a gathering product collected by smallholders in forest with non timber forest products like *kororima*, honey...

*Timiz* is considered by farmers as a cash crop and can represent an important part of farmers' income. The production is the occupation of smallholders; just recently a company (Apinec) started to think about collecting *timiz* to export it in a goal to favorite the protection of biodiversity in the area.

So as a consequence, when *timiz* is cultivated it is produced without fertilization nor irrigation and on very small areas from a few plants to 3 angus ( 8 angus=1ha), excepting one farmer.

#### **4.1.2 PLANT DEVELOPMENT**

At wild state, *timiz* multiplication is realized by seeds. In the forest, some farmers manage *timiz* plants and made a vegetative multiplication with seedling. The vegetative multiplication permits to cover an important surface in a few time and this method is more suitable to increase the production.

Farmers have never tried to domesticate *timiz* in their fields or home gardens since the last two years. But the surface still very little from a few plants to 3 angus with an exception of 2ha.

The labor to domesticate *timiz* is not important and consists to clean the piece of

land with slash-and-burn field. There is no labour and transplantation directly from the forest or by seedling. There is no plant selection. The only maintenance work is to clean the plant with a '*guejeira*' (machete) to refresh the place. From 10 to 30 minutes every 3 months.

To enter in production a *timiz* shrub needs 1 to 3 years. The pick of production is after 3 or 4 years and the life of a *timiz* plant is around 8 to 10 years.

*Timiz* requires together shadow and light for an optimal development. Direct sunshine reduces the development of the bush and burn leaves. The wild coffee forest offers the best conditions to the development of *timiz* but no association is more recommended.

Fruits are produced all around the year but the most important pick of production is from September to December.

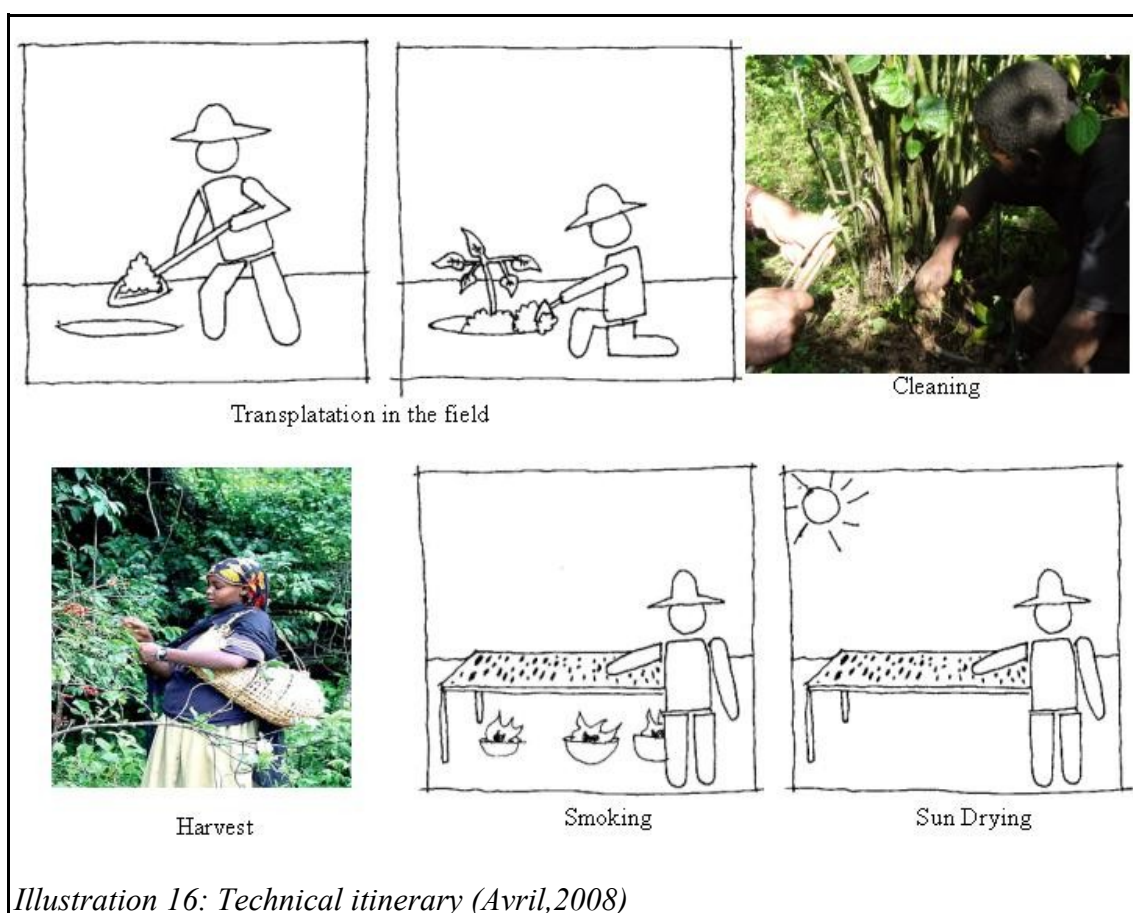
Gathering *timiz* has a lot of advantages. First, workers' time is reduced, farmers keep space on fields for other crops and they harvest *timiz* when they go to the forest for other preoccupations like collecting wood or looking after beehives. Locally, *timiz* is not really used as a spice for *berbere* or *wet* but more as an easy cash crop, so when they need money, they just go to the forest and harvest a couple of kilos.

However, this wild production has also some limits. Firstly, the competition with animals like baboons whose love this product. Secondly, the less of managing do not permit an important harvest, so yields still small. From 25 to 35% less than when *timiz* is domesticated. Thirdly, *timiz* grows in remote areas so farmers are not always in the good place at the exactly gathering time. Even if there is not private land property in Ethiopia, in most villages farmers have some access and use rights over the commons. In principle, this could ensure an access to *timiz* for the different holders of rights but because of the good value of this spice, theft can be quite tempting in these remote areas. Farmers are often led to collect green *timiz* or at least not fully ripe berries so as to secure their income when they need it the most. This practice has dreadful consequences on the final product, the processing methods being unable to hide poor quality of raw material. Another problem with wild *timiz* is that, even if required agricultural practices are not so intensive, it is still hard to ensure an appropriate level of shading and weeding

in a forest, even in a “managed” forest.

For all these reasons, farmers start to look for alternatives ways between wild production and *timiz* growing. So they manage the *timiz* in forests’ borders which has the advantage to be closer to farms lands, easier to protect.

The main actors of this production are *smallholders, women, children and manjhos people*. This is an individual production because there is no association specialised on spices and also because the labor does not need so many hands.



#### 4.2 TYPOLOGIES OF THE PRODUCERS.

*Timiz* production does not take reference in a specific type of producers presented in typologies made by Maieween Bareaud in 2007 at the time of her agrarian diagnostic on the Wush Wush area.

Majority of farmers gathering or cultivating *timiz* are **smallholders** with a few or no land or with a difficult access to land and non cultivable in coffee. They form the most important group. They grow spices as diversification products on small areas (home gardens, borders of forests...) or they collect them from wild. Even if forests are often considered as common or collective property and have been owned by the regional governments since 1974, previous institutional framework and traditional management systems that used to define access and use rights are still implicitly working and they are tolerated in most areas (Stellmacher, 2005). As a consequence, forests are divided among the households living in the area. Individual plots are managed by households, individually or in groups. Products are harvested by householders that hold rights over the plot but these rights are more or less exclusive. Common products are generally commonly harvested; whereas high value products tend to be appropriated on a more exclusive basis by specific people. Spices are often considered as private resources, even on common lands. That shows the importance of this product in local livelihood. It has also consequences on the management of the “wild” areas where they grow or on the access and benefit to these “wild” products by local population. Smallholders mostly use traditional farming methods. They do not use fertilizers for spice production, especially because of their price and their lack of access to credit. They are still using local varieties only. Research centres are not releasing improved varieties of spices. Farmers producers of coffee are not really interested in the growing.

**One farmer** seems to be innovative for this growing. Because of a difficult access to his high and far land, too high for coffee plantation, he started four years ago to expand his field of *timiz* to 2ha. It is the unique farmer who grows *timiz* at a big level. For him, *timiz* is more interesting than coffee because it can be collected all around the year. For the harvest time, he is used to work with the *gaboo* system (exchange of working days). One person in 4 hours can collect 10 kg of fresh *timiz*. The production is around 700kg of dried *timiz*/year.

**Coffee investors** installed yet on the area want to work in a way of biodiversity respect and consequently let the *timiz* present yet on the farm, growing. Harvest is made by employees and **women** whom keep the income. At the farm level, *timiz* is not considered

as production with high potential so they focus on coffee production. In Bonga area 14 investors are installed, two owners were thinking about increasing the production to export it to their partners countries but the benefice derived is largely inferior as the one from coffee, so *timiz* is considered as an « extra » and as a mean to show the biodiversity wealth of the zone.

**Women and children** have also an important role in the harvest. They are the ones with **manjhos people** who are going to the forest to gather wild *timiz*.

### 4.3 DRYNESS PROCESS :

The most important part of the processing chain is the drying of fresh *timiz* because of all the impacts on physical and organoleptic conservation and on the income.

There is two different process of drying *timiz* (sun-drying and smoking) and they are applied depending on the way of commercialization.

The most common is the smoking one of the fact of weather conditions. After been cleaned, *timiz* fruits are put on a bed made with wood and bamboos branches and places above the fire. The drying process takes between 3 and 4 days. So, fruits are dark with a strong smell of smoke.

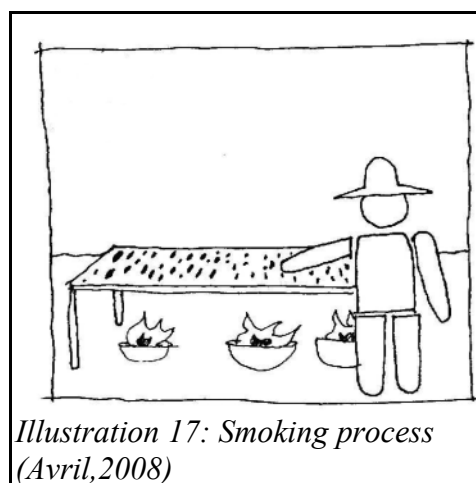


Illustration 17: Smoking process (Avril, 2008)

The sun-drying process is longer than the precedent. Fruits are put on a plastic in the sun. They are turn regularly and transport into the house every night and during rainfall. This way takes between 10 to 20 days, depending of the number

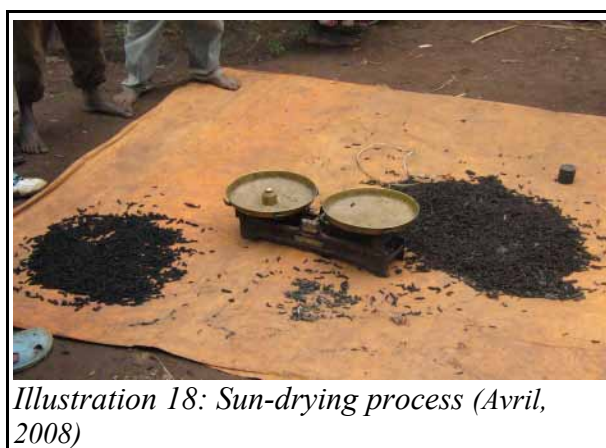


Illustration 18: Sun-drying process (Avril, 2008)

of sunny hours and intensity of sunlight. At the end of the process, fruits are clearer, of one brown color which can show some points of mold.

Farmers said that the first method is easier, takes less time and permits to earn money quicker. But, sometimes they have to use the second method because of the high demand of sun dried *timiz* which is described as better and easier to conserve.

The second method is mostly used by farmers who are in association and want to sell their production to private investors. Because these last ones want guaranty of good quality.

Sometimes, farmers used both drying process. The yield is very little because for 100 kg of fresh fruits, after the drying process, just stay 50kgs.

#### **4.3.1 ACTORS OF THE DRYING PROCESS:**

The drying process is carried out at the first stage of the supply chain. Most of the time farmers dry themselves the fruit before to sell it to farmers-collectors or to urban collectors but they do not dry it completely. So the first intermediary has to collect all the production from different farmers, select the fruit, eliminate the moldy and broke one. Then they put the selected fruit in the sun to finish the drying process.

*Farmers:* They dry the harvest at home directly after harvesting. Certainly, drying process takes time and space but permits to add a good value to the production. Indeed, fresh *timiz* is paid 2 ETB/kg less than dry *timiz*.

*Farmers-collectors* or *urban collectors:* they can gather the *timiz* but most of the time in adds of their collect, they buy neighbors-farmers' production to have a big amount before to sell it to wholesalers. Some collectors buy fresh *timiz* to dry it themselves and to increase the added value.

*Wholesalers, small retailers* and *consumers* never do the drying process.

#### 4.4 IMPACTS ON QUALITY:

The phase of drying is the most important one of the value chain because it conditions the quality, quantities as well as prices. Even if, at the purchasing time no difference of price is made on quality. If the *timiz* was harvested before the harvest time and the fruit is very little, they can buy it one or two ETB/kg less than for good fruits but it appears rarely.

Drying the fruit can mask the poor quality of it, especially after smoking because all the fruits are dark and it is difficult to determine if they have been harvested green or ripe. Only, the waist of the fruit can be an indicator.

Dried *timiz* is sold by weight, so some farmers find it more profitable to sell non completely dried fruit that still with water and also heavier. Of this fact, there is a loss of weight along the value chain during stocking periods but also loss of quality and apparition of moisture on fruits. At the purchasing time, there is no control of dryness and there is no definition of maximum residual moisture.

Advantage of the different methods:

Methods	Characteristics of the fruit	Common features	Advantages	Drawbacks
Sun-drying	Brown No smell of smoke	No difference in taste and appearance	Respect of natural smell	Intensive labour Space taker Possible appearance of moulds
Smoking	Black-dark smell of smoke	No uniform drying	Less labour interesting during rainy season smoked smell	Need resources (wood...)

#### 4.5 ORGANIZATION OF PRODUCERS

There is no associations of producers like cooperative specialised in spices and even less for *timiz*. However, two local NGO's Farm Africa and SoS Sahel International are



working together in a project called “Participatory Forest Management Programme” (PFMP) This program aims at achieving environmental sustainability and biodiversity conservation through supporting the development of innovative participatory forest management plans that secure rights, revenues and responsibilities of forest users. Producers are organized into cooperative to protect the biodiversity of the Bonga Forest. So, producers have training periods on bee-keeping, coffee management with some points on *kororima* and *timiz* management. In the project, one section is concentrated on commercialization NTFPs of Bonga Forest: spices of Bonga. (Farm Africa, Sos Sahel, 2004)

The Kaffa Forest Union Coffee (KFUC) in Bonga had started a program on biodiversity and in the first optic, *timiz* was one of the spices important to protect and develop. But because of a short of money, they do not deal more with *timiz*.

#### **4.6 CATEGORISATION OF THE RESOURCES**

-

From four modalities of access to forest, two come from the past.

- *exclusive usufruct*: only one person can have access to this forest. All resources can be used without restriction: spices and coffee gathering, wood and cutting trees... access to this forest is regularised by the tenant for life. Often, he enlarge the access to his family, neighbours. But if a stranger enter without permission, he is qualified as a thief..
  
- *partial usufruct*: governmental forests non distributed are used by farmers who have fields just next to the forest. Owners of these fields have an officious right for utilisation. They can gather coffee, spices, wood but they can not cut trees.
  
- The new government strengthen the forest conservation. In the area, it helps the NGO Farm Africa “participatory forest management program”. Farmers are grouped in cooperative with the goal to protect the biodiversity.

Farmers work one day for the cooperative in the forest and they need an authorisation to collect building wood. This program fix one of the ways of lands' access: the *participative one*.

- The government improve a politic for the development of coffee production. It encourages the plantation in forest by giving large lands of forest to investors for a limited time and with conditions. Investors can manage the forest for 40 years. In this way it is not permit to cut trees, but there is no interdiction about planting spices, others trees like eucalyptus or beehives. These land were before used by partial usufruct but there were considered as wrong managed.

#### **4.7 ECONOMIC DIMENSIONS AT THE FARM AND LOCAL LEVEL**

- *Timiz* is considered as an easy cash crop by smallholders. For some farmers is the only resource of money. Further, in Ethiopia, farmers have to paid government taxes in money, so *timiz* can be indispensable in some cases. According to the interviews, *timiz* incomes can represent from 10% to 60% and more of the general income. The production of *timiz* still small in comparison as *kororima* production but some trade have been created. Thanks to this production, farmers with a little treasury can afford to buy to others and create a little saving with the resell. Most of this *farmers-collectors* were illegals and last year the government has wished to regulate the situation but today farmers-collectors mostly still illegals.

## **5 Tradition and innovation**

### **5.1 CULTURAL INSCRIPTION: THE HISTORY OF THE PRODUCT, USES, PRACTICES**

Rather remarkably, long pepper is well known and popular in parts of Africa,

namely in the Islâmic regions of North and East Africa. Therefore, long pepper is important in the Ethiopian's cooking, where it is usually found in the traditional meat stews (*wet*).

Before the Derg, Ethiopians were used to use Indian long pepper. In 1979, Mengistu rallied the sovietique group and the unique word was “working together”. So cooperatives of production are created at *kebele* level at the same time as selling cooperatives. After 1984, thanks to the selling cooperative, there is a demand for *timiz*. So gathering in forest starts. The production is sold in Addis Ababa and locally, the consumption stays weak.

The 80's are the start of the *timiz* production and progressively prices increase.

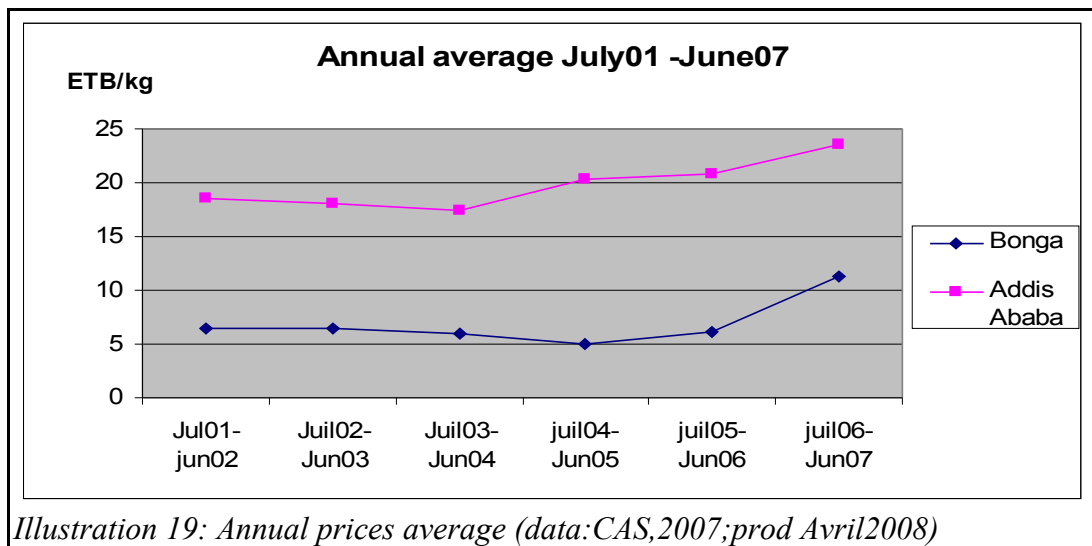


Illustration 19: Annual prices average (data: CAS, 2007; prod Avril 2008)

Data were available only from 2001. But the graph shows an evolution on prices.

The main uses of *timiz* are in cooking and as medicine.

### 5.1.1 MEDICAL USE:

In Ethiopia, traditional medicines are very widespread. They still very important for rural and poor people who can not afford high prices of modern drugs and long distance from the hospital. *Timiz* locally known as ‘*turfo*’ can be used to cure both human and animal diseases like ‘*curtomat*’ (pins and needles in one's legs) ‘*wugat*’ (breathing

problems) '*kurtat*' (digestive problems).

The oleoresin fraction of pepper has bacteriostatic and fungistatic properties (Kochhar SL, 1998). The fresh *timiz* fruit is harvested, beaten into pulp and boiled in water. It is served like a concoction. For animal disease, they used *timiz* leaves boiled in water which can help to have a higher lactation.

#### **5.1.2 COOKING USE:**

*Timiz* has also some importance for the cuisine of Ethiopia, where long pepper is usually found in the traditional meat stews (*wet*), mostly together with black pepper, nutmeg, cloves and turmeric; the usage of turmeric exemplifies Indian influence in Ethiopian cuisine.

*Berebere* is a really hot mixture and traditionally used to spice mutton dishes; it is made by roasting dry chiles a few minutes until they darken and subsequent adding of long black pepper, ginger, coriander fruits, fenugreek. Sweet tones, which are essential for the cooking styles of all Arabic nations, are achieved by cinnamon, cardamom seeds, cloves and even all spice. Some recipes also ask for rue leaves or fruits. After a few more minutes of dry roasting, all the spices are ground together.

*timiz* can also be used to spice coffee, tea and butter especially. There is no precise measure in the spice use. Ethiopian people use spices in every dishes but always in a small amount. According to housewives one kilo of *timiz* is enough for from 6 months to one year.

Because of high prices of spices, Ethiopian people are used to buy little quantities of spices. For example, *timiz* is often sold in little box of concentrated tomato (15 to 25g).

#### **5.1.3 OTHER USE:**

*Women* are the ones who are generally going harvesting wild *timiz* on the forest. The income of this small quantity from 3 to 5 kg of dried *timiz*/woman serves to buy clothes and necessities for the house.

*Children*: also harvest wild *timiz* and use the income to buy school things.

Men generally harvest the managed *timiz* and cultivated *timiz*. The income serves to pay governmental taxes, *eudir* (contribution to help neighbors) and all the intrans for the farm functioning

## 5.2 PATRIMONIALIZATION: HERITAGE DIMENSIONS

### 5.3 RECENT CHANGES, INNOVATIONS

If *timiz* production stays a gathered level, since two years ago, innovations has been ascertained. Farmers are more and more careful with plants and imagine news techniques to increase the production like seedlings or they put some props to help plant to develop itself. Farmers start also to domesticate *timiz* and cultivate it in small quantities but we have the example of the farmer with two hectares who works in a collective way and thinks that others farmers are going to start cultivation.

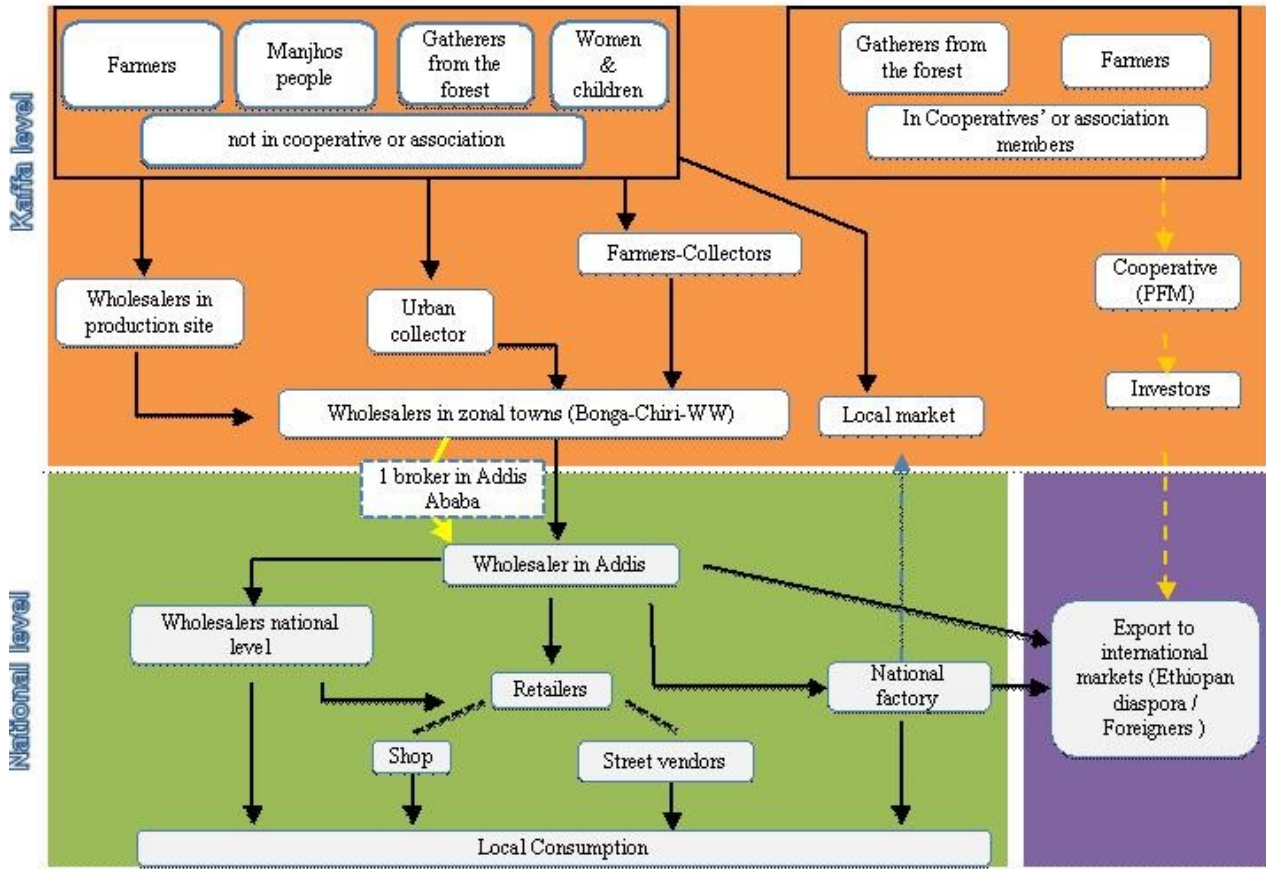
At this time, there is no genetic or technical researches made by Ethiopian research centers.



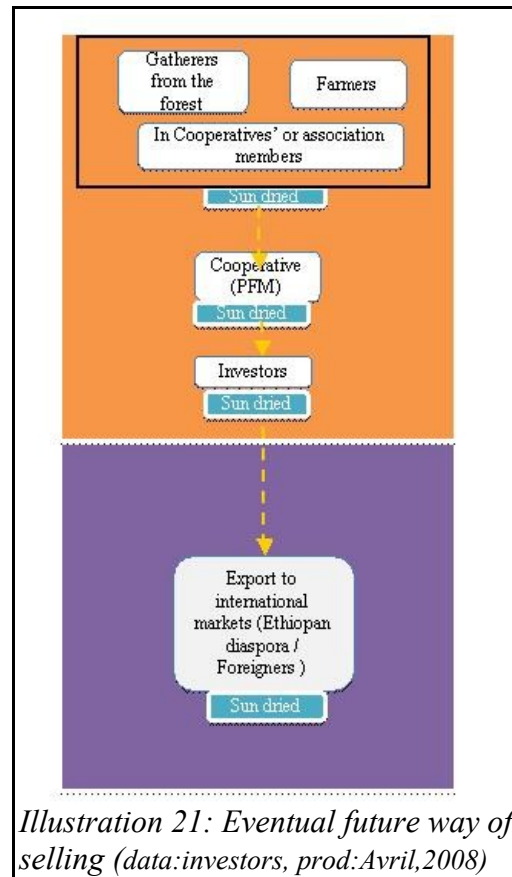
*Illustration 20: Managed timiz (Avril, 2008)*

## 6 Many operators in the supply chain for a little production:

### 6.1 PRESENTATION OF THE VALUE CHAIN



In the graph, we have presented an eventual new way of selling *timiz*, this according to investors or companies. We have described what they want to do and how they perceive quality. In majority, investors are working on coffee trade with a label of fair trade and in respect of biodiversity. Export *timiz*, will be a new way of promotion for the Bonga forest. Moreover, local people do not use this resource in their way of life, so it is a manner to not bungle a magnificent resource. Most of companies are not sure to realize this commerce because of small quantities and hard work, but the description is the way how they want to do it. The first project must not appeared before three years.



### 6.1.1 FUNCTION AND ROLE OF EVERY ACTOR OF THE VALUE CHAIN.

**Farmers :** They are on the value chain base and they do not keep well informed on the value chain working and on the final destination of the product. For them, *timiz* is an easy cash crop and even if this spice can be an important part of their income, they do not give a lot of attention. An example to illustrate this affirmation is the attention gave to *timiz*'s quality. More upstream in the value chain, actors prefer the sun-dried *timiz* because it keeps all the flavor and its' color is more attractive. This demand has been transmitted to producers but these ones do not pay attention because they dried fruits with wooden fire and price is the same and labor is less important.



*Wush Wush producer* : « For me it is better to smoke it because they (traders) buy it at the same price and it is less work”

**Farmers in PFM association:** They know that *timiz* production can be a good complement for their incomes and also to protect biodiversity of the area, but they prefer to focus on coffee which is a more important growing.

*Producer member of PFM.ass:* “Farm Africa gives us many training period and they tell us how to take care about biodiversity. But all the training are based on coffee management and *timiz* is just to preserve our resource. I prefer to focus on coffee but I know that I have to take care of *timiz*.”

**Women/children** : Mostly they go to the forest to gather wild *timiz* all around the year. For them, *timiz* is an important resource of money and often the only one. They know that they can bring just little quantity and they do not imagine the amplitude of the value chain. Women do not really use *timiz* in cooking and do not really care about quality.

*Housewife in Agaro Bushi:* “We never use *timiz* and I don’t want to use it. This for people from the city. Quality? Smoked is enough, like *kororima*! Why do you want to do something else?”

**Manjhos people:** These men and women considered as subhumans by their compatriots due to their life in forest, are important actors of the value chain. Thanks to their wild life, their plants’ knowledge is raised. As a matter of consequence, they are well informed on *timiz* management and shrub properties. They do not use *timiz* in *wet* but more as a medicine in an herbal tea. At the production level, they are the biggest pickers group of wild *timiz* but their limited access to forest does not always permit them to affirm this activity.

*Muti farmer* : « If you want to know about *timiz*, you need to ask the Manjhos! The ones from the forest because they know about all kind of plants you can find in forest!”

**Small vendors in zonal market** : Market take place three times per week in each little town. It is quite difficult to find *timiz* because everything is sold to intermediaries but some women can offer a little plastic bag of *timiz* and sell it by ears. Market is divided in small quarters. In the spice, peas and dried products quarter, the number of sellers varies in function of the day. Saturday is the biggest market of the week.

*Women market*: ‘I don’t have *timiz* because nobody use it here! And if you want to have it, you go to the forest, so why lost money in something you can gather?’”

**Farmers-collectors** : They have a strategic roll in the value chain. They are a strong link between producers and wholesalers. These last ones do not want to buy little quantities by little quantities and so need a middleman between them and farmers. Farmers have a strong trust in farmers-collectors because they belong to the same trade group. The level of transactions’ possibilities for farmers-collectors depend on their outset financial capital and also on the social capital. More he gives confidence and help producers more his custom will be big. Some farmers-collectors also advance money before the harvest time to some farmers. The harvest in normally paid cash. They are also a key for the transmission of information thanks to their strong link with the rural side. Most of the time farmers go the farmer-collector *tukul* to deliver their production, but this last one has also to take his mule in the mountain and has to go from properties to properties to collect *timiz*. Concerning quality, they give more attention to it and make a first selection fruits before to perfect the drying process with sun drying system and to deliver to zonal wholesalers. They are specialized in *timiz* trade and a lot of them have just started a few years ago.

*Farmer-collector in Wush Wush* : « I am also producer but being a farmer-collector is a profitable situation. I have increase my income. My custom is quite important because contrary to others I help my customers with sometimes an advance of money or also I go to their *tukul* to carry the *timiz*. I know every body from the zone. Some farmers walk with their freight 6 hours to come to my house because they trust me. They know I give the good price and I will help them, women and manjhos people particularly”

**Urban collector** : They are not numerous but they can have a key roll for the transfer of the material because out of the harvest season, they can buy little quantities of *timiz* and by this way help families in need. They never go to the production site. Producers, during market days ( from 2 to 3 per week) carry their production to the town. Urban collectors are not specialized in *timiz* commerce or spices in general. At the same level in the value chain as farmers collectors they drain smaller quantities.

*Urban collector in WushWush*: “we buy *timiz* all around the year but we don’t have enough quantity to sell to big wholesalers, so we need to sell to the little one. Most of the time we have to clean fruits and to put them 1 day on the sun to achieve the process. If we don’t do that then it will have moisture and it is not good for the business”

**Wholesalers in zonal towns** : The three urban centers of the zone ( Bonga – Chiri- Wush Wush) regroup around twenty wholesalers who have to regroup the production and send it to Addis. No one is specialized on *timiz* and only fews are just specialized on spices. Most of the time, they also buy coffee, grains, honey...At the origin, spices were send to Addis trough Jima which was a big commercial cross-roads. But recently,a lot of wholesalers had received their license and spices are directly send to Addis. *Timiz* is send by Isuzu (50 bags contains) as the same time as *kororima* but does not represent more than 10 bags. The wholesaler rarely makes the travel to Addis. The Isuzu charged, they call to a broker who has to find a buyer.

*Wholesaler in Chiri* : « For me *timiz* does not represent a big resource but we started a few years ago and it is not so bad. The only problem is on quality, we told to farmers to sun dried them but they don't care. [...] I have a broker and I trust him, I know he is correct.

**Broker** : He is indispensable in the good working of the value chain how it appears today. There are two brokers trading with *timiz*. One is going to take his retirement and just trade with two wholesalers. The other one, a young man responsible of the goods of the 20 others wholesalers of the zone. All wholesalers without exception go through him. It reigns a very strong confidence climate between them because when the broker has found buyers, goods are sent to Addis from Bonga area. The broker recovers the money and transfers it by mandate thanks to the commercial bank. The wholesaler, thus prevented goes to the local commercial bank and takes his money. This avoids to take to many risks during traveling time. He is the only one in *timiz* trade, so he has the monopole of the transaction. This 25 years old man knows how to create relations and develop his social capital. The fact that all wholesalers go through him is surprising and there is no reason in the familial red because all his family comes from Addis. It is just thanks to his work and his enterprising personality that people trust him.

*Broker in Addis* : « I am the only one working on *timiz*. People trust me because I am always clean. I started in this business when I was 14 years old so I know a lot of people. If I make a mistake or steal money every body will know it I will lost all my custom, so better for me to be right!!”

**Wholesaler in Addis** : Most of wholesalers in Addis are regrouped in a special spices area in Merkato. They buy the production before to redistribute it to wholesalers from any parts of the country. They also send to small shops or private consumers (hotel, restaurants...) and also processing firms but only in 50kg bags. *Timiz* represents a lowest part of their income and mostly they buy more it to complete their scale than for

a real financial interest. These wholesalers are generally specialized in grains, coffee and spices. They do not buy others raw materials.

*Wholesaler in Addis* : « I don't buy *timiz* to make money but I am trading with spices, coffee, maize... so is it to show that I have a very large scale of products and that you can find everything in my shop!"

**Retailers** : They are the last sellers of the value chain and they have an indispensable roll because thanks to them consumers can find *timiz* every where. There are two kind of retailers: shops and street vendors. Most of shops are situated in Merkato, retail many different spices, produced in Ethiopia or imported, along with peas or other dried products. They buy through the broker directly from production site or from Addis wholesalers. These retailers have just-in-time strategies: they never store more than one or two bags of 50kg and they do not not speculate on *timiz*. They sell by grams or kilo to direct consumers, retailers from others parts of the country. Street vendors buy to shops little quantities of different spices, no more than one kilo and sell little mixed spices.

*Merkato retailer* : « we are directly in contact with consumers so we know what they want, and for *timiz* they ask for a better quality. We know that the *timiz* comes from Bonga but the Indian one is better because it is cleaner. It will be good if farmers can make an effort"

**Exporter** : These last ones are just two.1999EC it was the first time that data on export were registered by the Central Statistics Agency (CSA) for the modest quantity of 11T. The two destinations are Israel and Yemen. These exporters permit *timiz* to travel and to the Ethiopian diaspora to keep its identity.

*Addis exporter* : « I am used to export a lot of different spices. I have one license for all different kind of spice. Some friends in Israel asked me for *timiz*, so I send them *timiz*! But comparing to *kororima* or ginger it is nothing!"

**National factory:** Two national factories are working with *timiz* but in very little proportion. They make powder with different kinds of spices. They buy it from Merkato and they are not really interested in the value-chain. Whereas, in Bonga area it is difficult to find the dried *timiz* fruit, you can easily buy these powders.

*Merkato factory:* “we do not really care about *timiz*, it is just a very little amount but we need for our preparation.”

**Consumers:** There is two kind of consumers. Rural and poor consumers who does not really care about quality and origin, and urban consumers who can afford high prices who want a better quality for *timiz* and if there is an effort made on it, they ready to make an effort to promote the labor.

*Urban lady:* “I use sometimes *timiz* and I like the taste but it is not so easy to find good quality of *timiz*. Most of the time, you have moisture, very strange things! If they make an effort, I want to buy more and I am not afraid to pay more!”

### 6.1.2 PURCHASING MOTIVATION AND IMPORTANCE OF THE ORIGIN FOR THE ACTORS OF THE VALUE CHAIN.

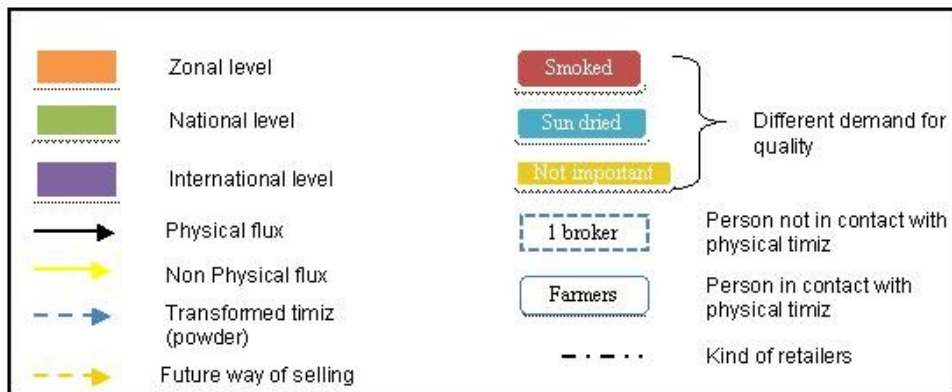
Actors	Purchasing motivation	Importance of the origin
Farmer-collector	Possibility of a new job, endemic spice from Bonga, Promotion of the zone	Selection in Bonga area. The others peppers do not have the same taste, so the <i>Kaffa</i> one is the best one.
Urban collector	Possibility to complete their income.	Do not care. Better to check quality

<b>Actors</b>	<b>Purchasing motivation</b>	<b>Importance of the origin</b>
Zone Wholesaler	Complete the spices' scale, Promotion of the zone facilities for conservation	The only place of production is Bonga, so important to be proud of our biodiversity and its products. At zone level, origin of production site may make a difference. Some site are more esteemed.
Addis Wholesaler	Better scale, different prices, interesting spice, facilities for conservation	The <i>abesha</i> one is good and cheaper as the <i>farenji</i> one because of taxes. They are not really interested on origin. The most important is quality.
Retailers	Good demand and good price, interesting to have to diversify the shop. Easy to sell in big quantities	Bonga is the biggest production and the best, so for the same price better to have the best quality
Street Vendor	Cheaper than <i>farenji timiz</i> , nice taste in tea or wet demand from consumers	Do not care about.
Rural Consumer	Spicy and less expensive, essential for cooking preparation	It is Ethiopian and this is the most important
Urban Consumer	Nice taste, something different as black pepper. Prefer the sun dried as the smoked one because of the burned-smoked smell. Easy to find.	It is not the same taste and interesting to promote our culture and be proud of our products, because they are good products. But most of consumers just know it as <i>kaffa timiz</i>

Each actor of the value chain has his proper motivation to purchase *timiz* and no actor have the same interest. Concerning, the importance of origin in the purchase, it is important to remember that nobody talk by himself about the origin. It is not something they improve to sell more. After a few questions, actors can make a reference. The product's origin is not perceive in the same way agreeably to person. Some people do not care about, others make reference at a national production and some at a regional

production.

The principal factor pointed out during the purchase is the quality. But this answer is not general. Moreover, traders do not have necessarily several qualities and the purchasing power of the population does not allowed everybody the choice.





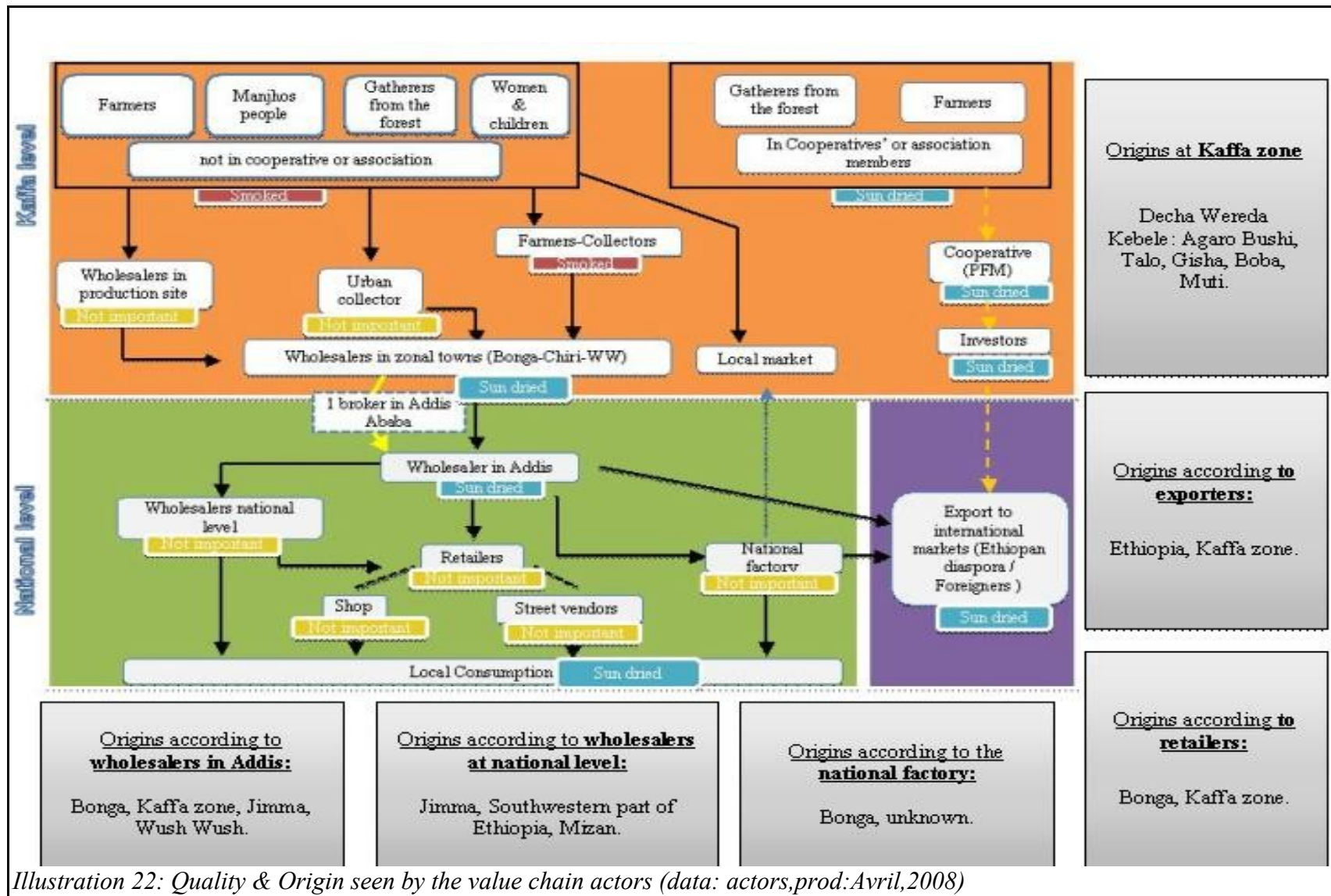


Illustration 22: Quality & Origin seen by the value chain actors (data: actors,prod:Avril,2008)

Actors are not agree on quality aspects. For example, consumers want sun dried *timiz* and producers dry it with smoking process. So, there is a miss understand between actors. This difficulty can be easily overcome if actors try to transmit the information. But, in the actual value chain, there is not enough communication between actors. Wholesalers say that they told producers but these last ones say the contrary. So, with more communication and meeting this problem can be easily resolved. Information must be transmitted and a technical help can be established. Farmers prefer to keep their time and material for further activities more fairly profitable.

### **6.1.3 ORGANIZATION OF THE MERKATO, THE BIGGEST MARKET OF AFRICA.**

Merkato is the point of convergence of production from every Ethiopians' regions, so it seems important to describe this market where billions of tonnes of aliments, spices and others productions go through every year.

The mass of stalls, produce and people may seem impenetrable, but on closer inspection the market reveals a careful organization with different section for different products. It is possible to find everything from Kalashnikov to camels going through vegetables, honey, spices. The market is made by millions of little sheet-iron shops at the side of little muddy ways.

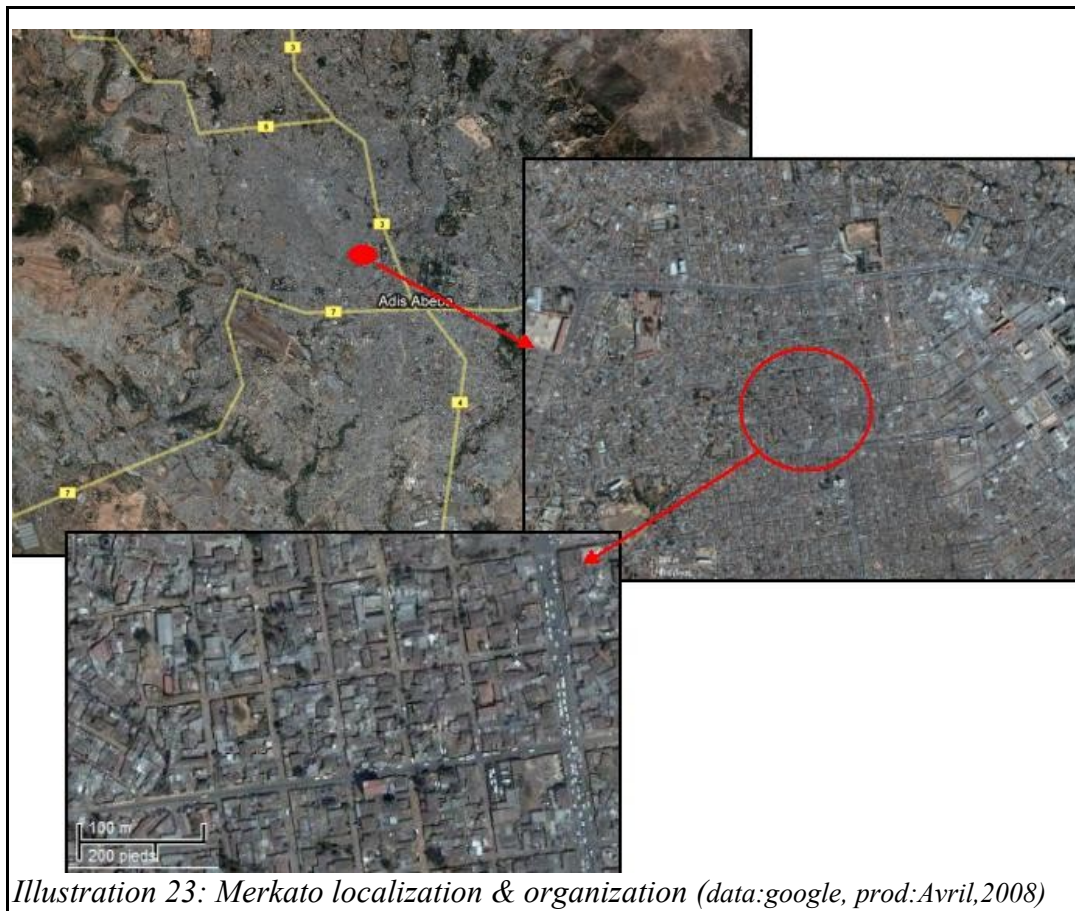
The spices quarter is in the center of Merkato and the access can be difficult for trucks because of the crowd who is here from 6 in the morning to late in the night.

The access for pedestrian is possible but not so easy and not everybody want to adventure himself in this place to find spices.

These shops are the victualing place for all shops in Addis Ababa and others towns.

For trucks, there is no parking.

The first time, Merkato seems to be very disorganized and easy to be lost. But after a few time, the construction of the market appears clear to the consumer. So, it can be not so difficult for consumer to find what they want.



*Illustration 23: Merkato localization & organization (data:google, prod:Avril,2008)*

In Addis, there is more than 10 markets and the most important are Shola, Gergi, Asko... Shopkeepers buy *timiz* at Merkato wholesalers and big retailers. They sell it either to end consumers or to street vendors who buy *timiz* by grams. These are often old people owning small *suk* (Amh) or street merchants who have a small stall with from 10 to 20 plastic-wrapped products. Sometimes, they buy on credit and mixes spices in little 1 or 2 ETB heaps. Agreeably to the situation of the market, prices vary and can be an indicator of consumers' type. Depending on their location and on the demand, traders adapt their supply and can have only one *timiz* or a wide range of products ( *abesha timiz*, *farenji timiz*, mixed for tea, butter...) people usually buy *timiz* only once or twice a month and not always at the same shop.

Most consumers as well as market retailers are women. The large-scale business (transport, bargaining, processing) are controlled by men.

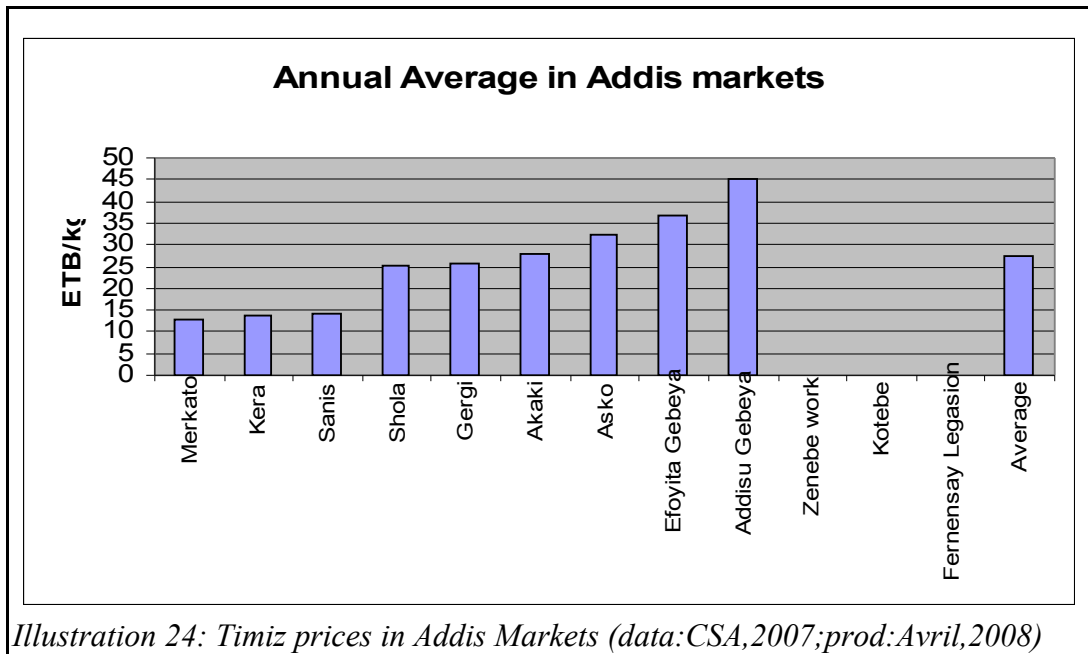


Illustration 24: Timiz prices in Addis Markets (data:CSA,2007;prod:Avril,2008)

Prices in Addis markets depend on the location of the market place and also on the consumer profile.

For example, in Merkato 1kg is 13 ETB and in Addisu Gebeya it is 45 ETB.

Most of people have a little idea about origin of *timiz*, links to quality and specificities.

Origin can be a purchasing criteria.

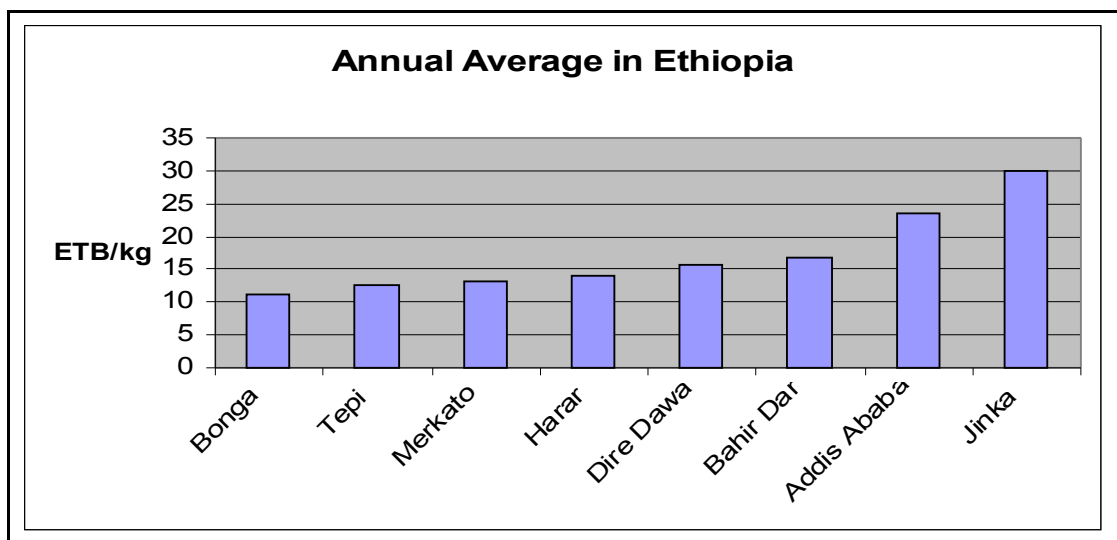
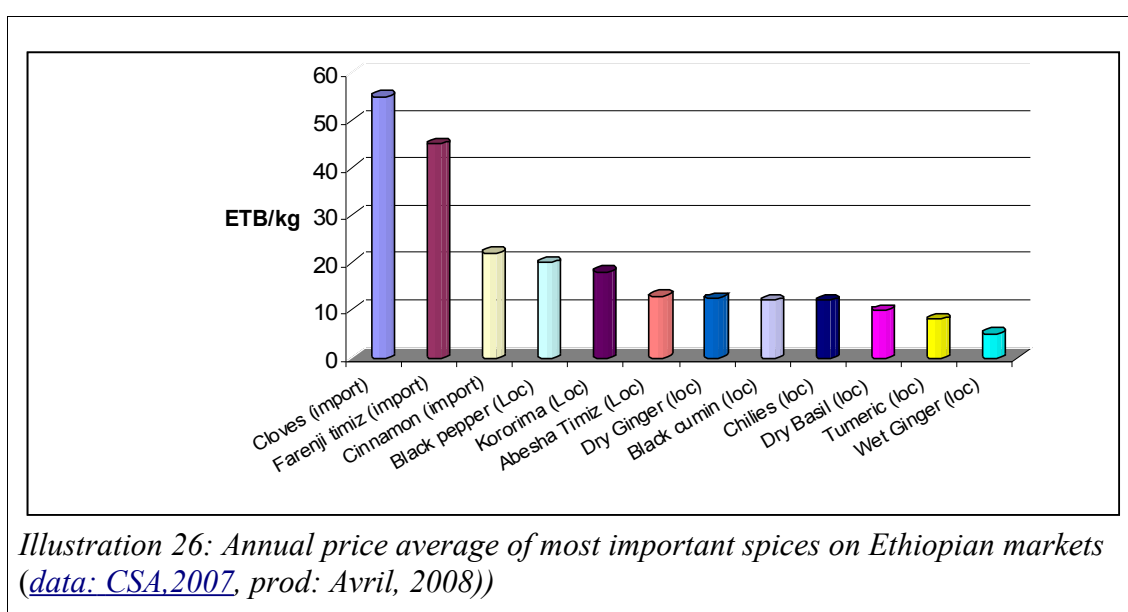


Illustration 25: Timiz Prices in different towns of Ethiopia. (data:CSA,2007;prod:Avril,2008)

Prices increase with the distance. But, prices in big consumption area like Dire Dawa or Harar (15ETB/kg) are less important than in little consumption area like Jinka (30ETB/kg).

## 6.2 PRICES AND VARIATION.

Speaking on prices, *timiz* is at the average of spices prices. It is the third most expensive local spice. (CSA,2007)

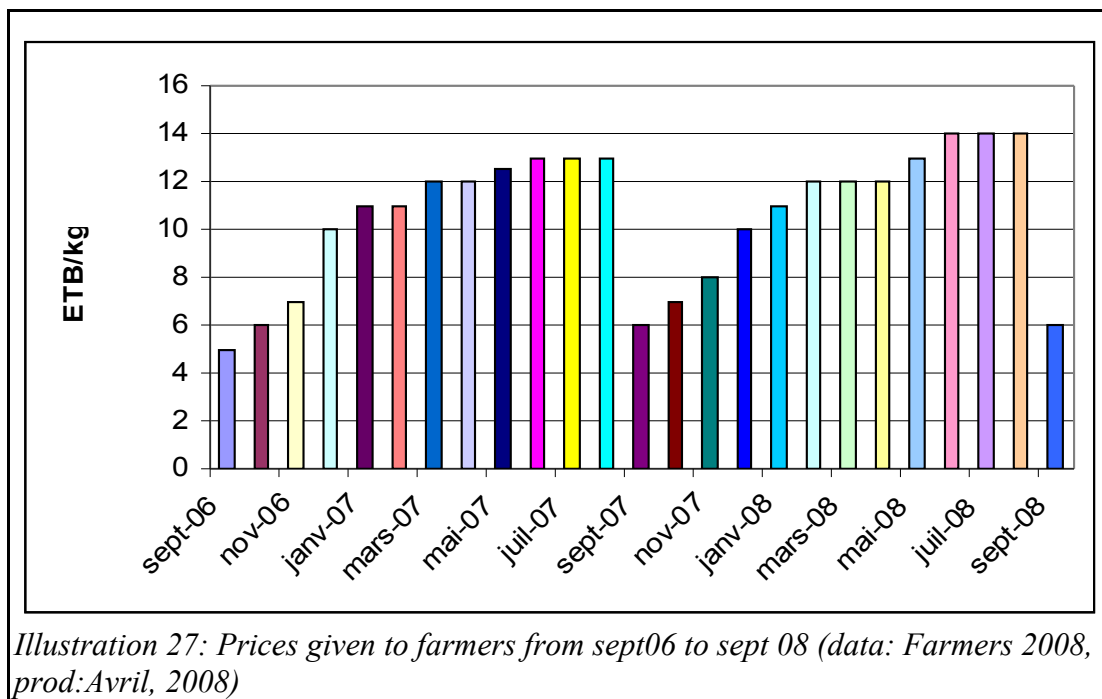


Volume of trade is not as large as the *kororima* one because of the gathering criteria. But at its level, *timiz* has an economic significance due to the income it generates at various levels, from local farmers to big wholesalers. Even if volume is small, most of spices traders work with *timiz*.

## 6.3 PRICES FIXATION AND ORGANIZATION OF THE COMMERCE.

At the beginning of the harvest, the wholesalers' professional organization has a meeting and decided the price director for one kilo. This price will be the one they will buy from local wholesalers. So they transmit the price and wholesalers adapt it before to tell it to farmers.

*Timiz* can be gathered throughout of the year in small quantities but the main harvesting period occurs from September to November. Price of *timiz* is strongly linked to this seasonality . As showed by the graph below, the selling price in Bonga is low during the harvesting period and increase slowly from November to August.



### 6.3.1 THE VARIATION OF THE PRICE IS LINKED TO THE HARVESTING SEASON, SO WHY FARMERS SELL IT AT THIS TIME?

*Timiz* price during the harvest time is low and farmers do not keep their production to wait a better season, because during the harvest time of *timiz* it is the end of the ensët reserve and farmers start to bridge the gap so need cash crop to buy some food. It is also in this period, they have to pay governmental taxes.

In December and January and also in April demand is high because of numerous religious ceremonies. So wholesalers prefer to buy *timiz* in the harvest season and stock it.

It is possible also to gather *timiz* all around the year thanks to the long raining season but quality and quantities are lower and just permit to earn fews birrs.



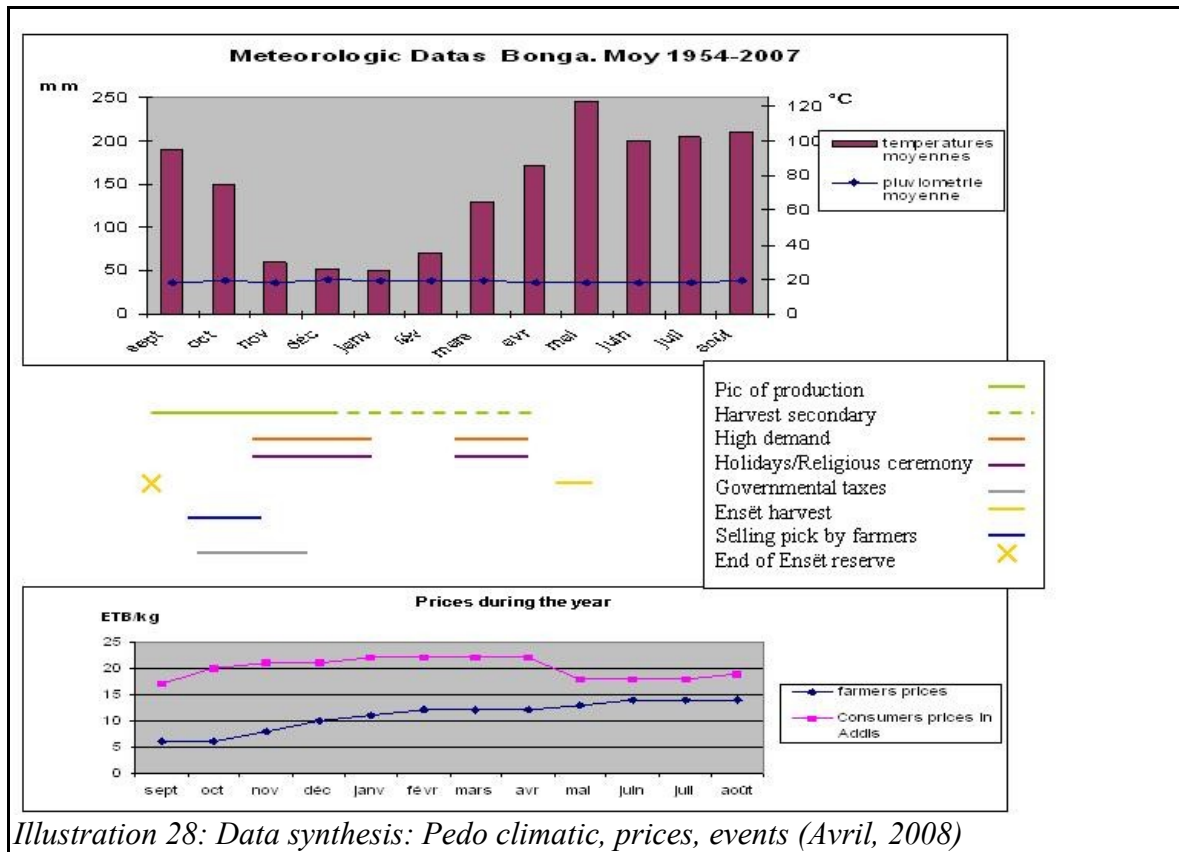


Illustration 28: Data synthesis: Podo climatic, prices, events (Avril, 2008)

### 6.3.2 EVOLUTION OF PRICES ALONG THE VALUE CHAIN

We have seen the evolution of the price during the year and we are going to take one example to show the fluctuation along the value chain.

So, in October a farmer sell his *timiz* from 5 to 7 ETB/kg to the farmer-collector or urban collector. The last one will sell it to wholesaler in the production site from 8 to 10 ETB/kg. Whom will sell it to wholesaler in Addis one kilo from 13 to 15 ETB/kg. In Addis, they sell it to retailers from 15 to 18 ETB/kg. Consumers will buy it from 20 to 22 in Merkato retailers and to 50ETB/kg in others places.

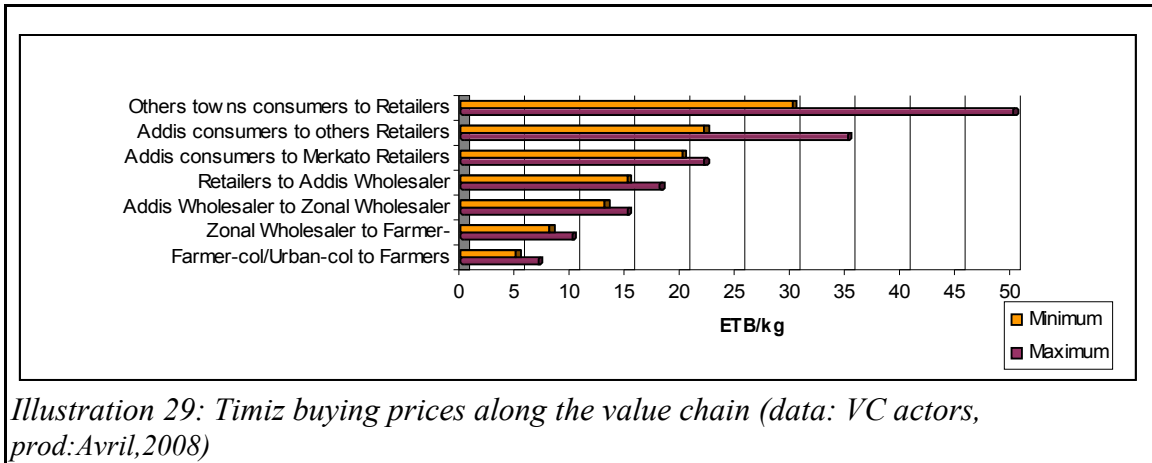


Illustration 29: Timiz buying prices along the value chain (data: VC actors, prod:Avril,2008)

Broker's salary comes from both parts (buyer and seller) at contract price without reference at variation price. Each part gives him 2ETB/quintal. So for one quintal, he will earn 4 ETB.

All transport 's expenses from Bonga area to Addis are charged by wholesalers from the production area. Here is an estimation of their costs:

- Renting the Isuzu: 2000 ETB
- Fuel: 600 ETB
- Salary of an employee: 200 ETB/month
- Trade Taxes: 1400 ETB.

It seems important to remember that an Isuzu going to Addis is never full of *timiz*. It represents between 5 to 10% of the freight. So all these costs must be reparteed with *kororima* trade. If we make a prorate of costs only for *timiz*, costs should be between 200 to 500 ETB/ travel. Big wholesalers can have their proper Isuzu and make around two travels per month. Little wholesalers regroup them by three or four and rent an Isuzu. They make also one to two travels per month.

### 6.3.3 PAYMENT MEANS & COMPETITION

Most of transactions are made by cash excepted the transfer between the broker and wholesalers made by the bank. Generally, no advance by money is made, the only



case is between farmers-collectors and farmers in the production area.

Transparency on prices is subjective, but the Central Statistic Agency make report each month on prices evolution for every product. Reports are available at the library of the Agency. It seems important to note that reports contain numerous mistakes and so data on *timiz* are not so reliable. In the spice sector, *Timiz* can be subject to compete because of numerous spices found in Ethiopia. In the pepper branch, it is possible to find:

- black pepper in seed
- black pepper in powder
- *timiz*
- Indian long pepper.

Black pepper and long pepper do not have the same use. So, *timiz* from Bonga is in competition with *timiz* from Dawero but quantities are weak. So, the bigger rival is the *farenji timiz*. *Abesha timiz* has a strong advantage because it is not subject to such important taxes as *farenji timiz*. As a consequence, *abesha timiz* is well appreciate by consumers because of its price.

#### **6.4 A MARKETING SYSTEM TO BE IMPROVED**

A study on spice sector made by Caroline Brunet in 2007 gives general remarks on spice sector and they are transferable to the particular situation of *timiz*: farmers unaware about market requirements, too many middlemen for such a little supply chain, no quality control, no certification, no cooperatives, no research at all...the marketing system stills very informal and could be developed on several points.

However, *timiz* can have a particular place in Ethiopian culture. Found in a special environment (wild coffee forest), used in many main dishes. Most of associations or NGOs' interviewed for this study were interested even if it is not their first preoccupation, in promoting *timiz*, typical product from an unique ecosystem important to be protected. *Timiz* is not well known outside of Ethiopians' boundaries but with a

coherent step, the demand from foreign countries can be created, as we have seen with investors who are going to export it to Japan and USA. We can mention also, the new export step this year which can reflect a new demand and a new market.

There is no data on *farenji timiz* importations, so it is not possible to link the augmentation of local production to a decrease of importation.

## 7 ASSESSMENT OF THE PRODUCT AS A GI CANDIDATE

Aspects	Advantages	Weaknesses
<b>Biodiversity</b>	<ul style="list-style-type: none"> <li>-Timiz is gathered in a unique ecosystem (coffee forest)in only one place in Ethiopia.</li> <li>- Natural resource</li> <li>-Only local variety is available</li> <li>-Produced without chemical inputs</li> </ul>	<ul style="list-style-type: none"> <li>- Wild timiz do not always good quality</li> <li>- Domestication can break links with this unique ecosystem but can improve quality.</li> </ul>
<b>Production</b>	<ul style="list-style-type: none"> <li>-Local production with local variety</li> <li>-No expensive inputs are required</li> <li>- Traditional knowledge with recent experiences</li> <li>- Geographical areas of production can be easily delimit</li> <li>- Until now small production but most of fruits were wild, so possibility to increase production</li> </ul>	<ul style="list-style-type: none"> <li>- Farmers are not aware of consumers and market requirements</li> <li>- Production can be irregular and weak</li> <li>- Production highly depending of the season and climatic data</li> <li>- Small quantities</li> </ul>
<b>Processing</b>	<ul style="list-style-type: none"> <li>-Traditional processing made only by local people</li> <li>-Smoking process is typical from Kaffa area</li> <li>- Not expensive drying process</li> <li>- Possibility to generalise sun drying method</li> </ul>	<ul style="list-style-type: none"> <li>- Process is not made in the way consumers want it</li> <li>- No homogeneity in drying method (time, drying method...)</li> <li>- Farmers do not make quality differences between drying methods</li> <li>- Smoking method has not a very good reputation but farmers used it.</li> <li>- No research has been done on processing methods</li> <li>-Farmers of the zone do not use timiz so do not know the importance</li> </ul>

		of good quality
<b>Trade</b>	<ul style="list-style-type: none"> <li>- Cooperatives or association of persons are more and more promoted</li> <li>- value chain well organised for such small quantity</li> <li>- good trust between actors in little scale (in direct contact), possibility of discussion and amelioration</li> <li>- Possibility to find timiz in every Ethiopian towns</li> </ul>	<ul style="list-style-type: none"> <li>- No cooperatives specialised on spices</li> <li>- Farmers just start to trust in cooperatives</li> <li>- Farmers are not aware of market requirements (out of the value chain)</li> <li>- No quality standards and no quality control</li> <li>- No traceability</li> <li>- Poor infrastructures</li> <li>- No especially knowledge of the production area</li> <li>- No legal protection</li> </ul>
<b>Product</b>	<ul style="list-style-type: none"> <li>- Timiz is linked with national traditions</li> <li>- Used for years by Ethiopian people</li> <li>- Different use not only for cooking.</li> </ul>	<ul style="list-style-type: none"> <li>- Timiz is not linked with local culture and tradition</li> <li>- Not a high reputation as others products</li> <li>- Not easy to found outside of market places</li> <li>- No packaging</li> </ul>
<b>Domestic consumers</b>	<ul style="list-style-type: none"> <li>- Most of Ethiopian people no more or less the origin of timiz</li> <li>- Ethiopian people accept to pay a higher price for quality products</li> <li>- Ethiopian people recognize quality without certification</li> <li>- Interest in good products</li> <li>- Ethiopian people know about fair trade and organic labels</li> </ul>	<ul style="list-style-type: none"> <li>- Low purchasing power of most of the population prevents development of price premium.</li> <li>- Ethiopian people are not aware of GI notions.</li> </ul>
<b>Foreign consumers</b>	<ul style="list-style-type: none"> <li>- Possible potential for export</li> </ul>	<ul style="list-style-type: none"> <li>- Small quantity</li> <li>- Irregular quality and careful less on quality</li> </ul>
<b>General context</b>	<ul style="list-style-type: none"> <li>- NGOs are working on improvement of agricultural practices and value chain</li> </ul>	<ul style="list-style-type: none"> <li>- No interest by the Government on this product</li> <li>- No research has yet been done by the public sector (production, consumption...)</li> <li>- More interested by food security and export products (flowers, oilseeds...)</li> <li>- NGOs do not focus on timiz but more on coffee and kororima</li> </ul>

		<ul style="list-style-type: none"> <li>- Public persons have very limited knowledge on GI concept</li> <li>-No quality standard and control</li> </ul>
<b>Social</b>	<ul style="list-style-type: none"> <li>- Large scale of people dealing with timiz.</li> <li>- With such a little production, timiz can give good benefits and if it is not the first preoccupation of actors in the value chain, everybody have a little interest for this spice.</li> </ul>	<ul style="list-style-type: none"> <li>- Not enough production to interest more people.</li> </ul>

This summarizing table for possibilities to *timiz* to be a GI candidate shows advantages and weaknesses of the product. Most of weaknesses are not restrictive and can be easily overcome. But, an important work needs to be done.

After the description of the value chain, it is possible to say that the bottleneck seems to be in the production. There is a demand by consumers which lets think that the production can be increased and sold.

## Conclusion

The spice sector is small and poorly organised in comparison to others Ethiopian sectors. The *timiz* sector has small quantities, no processing factories, no cooperatives and also no research and support by the government. But it has high potentialities. *Timiz* is strongly linked to a territory and a special biodiversity as well as Ethiopian culture and people. It is a good source of income and a added-value sector. It makes sense to develop this product for domestic and also international markets.

However, some changes have to be done to increase the building capacities of various intermediaries but also in technical terms with a development of traceability and quality controls.

*Timiz* is a typical product, strongly linked to the area of production in terms of natural and human environment. The natural biodiversity of Kaffa zone and the specific conditions provided by the coffee forest is the natural environment for *timiz*. It is produced thanks to the Kafinian traditional knowledge and can be a representation of Ethiopian culture and tradition.

Economically, *timiz* supports an important part of the income of various people and is one of the most important spice of Ethiopia. However, the value chain present several weaknesses and stills badly distributed in terms of quality and quantity. Farmers' organisation are weak and informations about market requirements still limited. Amelioration's possibilities they could get from certification are not evaluated. Efforts are essentially to strengthen producers' organization and to improve the value chain. Few operators are aware of certification like organic or fair trade but nobody really knows about GI certification. Some consumers can be ready to pay premium for quality but it is not the general thinking. The commerce is based on trust and personal relations, what can permit a good transmission of informations.

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