

# Distribution and Marketing of Bananas in Southwestern Uganda

## The Impact of Commoditization of Bananas on Local Farmers

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**ABSTRACT** Humid zones in southern Uganda are famous for cultivating a unique banana cultivar subgroup, the East African highland banana. Within a conventional cropping system, it has extremely high productivity and supports local people in an area with high population density. Areas that produced bananas and supplied them to cities in Uganda have drastically changed in the last half century. This paper describes the distribution and marketing of bananas in southwestern Uganda, currently the main banana-producing area in Uganda, based on the case of a village of Nkore people. Whether local farmers make adequate profits from banana sales is considered, along with analysis of the banana supply chain and comparison with previous studies. The effect of commoditization of bananas on changing types and diversity of cultivars is also discussed.

### INTRODUCTION

Bananas are cultivated across all humid and tropical zones around the world. Currently, there are two cultivation types. One is cultivation at large-scale plantations for export to Europe, North America, Japan, and other countries. The other is small-scale cultivation for self-consumption and domestic market use. Uganda is an equatorial inland country in East Africa and the ninth largest producer of bananas<sup>1)</sup> in the world (FAOSTAT), the majority of which are produced in the humid zones of the south. Uganda also consumes almost all the bananas it produces.

The characteristics of banana farming in Uganda are as follows. Mainly banana cultivars belonging to the East

African highland banana subgroup are grown, and their farming is very intensive. East African highland bananas have two standard uses: steamed and mashed bananas for the most important starchy staple foods, and for making beverages (beer). Steamed and mashed bananas, generally known as *matooke*<sup>2)</sup> in Uganda (Karamura et al., 2012b), are widely eaten by city-dwellers as well as those in banana-farming areas. The intensive farming system supports the highly and densely populated area of southern Uganda (Sato et al., in press).

The main site of banana production in Uganda has shifted from central to southwestern Uganda. Presently, bananas are used as a cash crop as well as for self-consumption in southwestern Uganda, including in Rukungiri District, the research area of this study.

There are many and various studies on bananas in Uganda, especially on cultivars and farming systems (Sato, 2011; Karamura et al., 2012a). There are also a few studies on distribution and marketing of bananas in Uganda. Good (1970) analyzed the banana trade in southwestern Uganda in the late 1960s from an economic anthropological viewpoint. Yoshida (2008) studied food supply to people in cities such as Kampala, the capital of Uganda, in the early 2000s and analyzed the distribution of crops from the viewpoint of traders and consumers in cities. The most important food crop for people living in Kampala is cooking bananas. Ngambeki (2006) also studied the banana trade in Uganda in the early 2000s. However, the farmers' share in the banana supply chain shown in Yoshida's (2000) study is quite different than in Ngambeki's (2006), and it is unclear whether farmers

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obtained an appropriate profit from banana sales.

The banana distribution in Uganda has increased with the population growth in cities. Circumstances of the banana trade have rapidly changed with the spread of mobile phones (Muto & Yamano, 2009). In this paper, whether local farmers make adequate profits from banana sales and whether local banana farming has changed with the commoditization of bananas are discussed.

## BRIEF HISTORY OF THE BANANA TRADE IN UGANDA

Ngambeki (2006) described the brief history of the banana trade in Uganda. The banana trade in Uganda from the 1870s (the kingdom era) to the 1920s (the colonial era) involved bartering, in which bananas were exchanged for fish, beans, milk, meat, knives, axes, and salt. In the 1930s, coffee and cotton were introduced, and the cash economy gradually began spreading in Uganda. Between the 1940s and 1950s, the banana trade in southern Uganda expanded rapidly. At that time, trade of coffee and cotton was well-organized and supervised, whereas there were no formal facilities for the handling, processing, transportation, and storage of bananas and other food crops. In the 1950s and early 1960s, farmers' cooperative societies were established in the rural areas to serve as the primary collection centers. In 1968, the government of Uganda established a produce marketing board to promote the commercialization of the subsistence sector. The produce marketing board provided channels and regulations for marketing grains and beans, but these did not apply to the marketing and handling of bananas (Ngambeki, 2006). This was probably because banana was a perishable crop, so storage and management are difficult (Yoshida, 2008). Between the late 1970s and early 1980s, the produce marketing board and the farmers' cooperative societies collapsed, causing many large-scale private entrepreneurs to join hands for the marketing of bananas. When Ugandan exports of coffee and cotton also collapsed, most farmers in southern Uganda resorted to growing and marketing bananas, sweet potatoes, cassava, and maize. The liberalization of the Ugandan economy in 1993 gave a boost to the private sector. A system of large- and small-scale private entrepreneurs emerged, comprising local traders and transporters, dealing with both small- and medium-scale farmers (Ngambeki, 2006). Thus, the banana trade evolved and developed to its present state.

Banana-producing areas kept changing during that period. While central Uganda was the main production area in the early 1960s, banana production there decreased from the 1970s to 1990s, whereas banana production in southwestern Uganda rapidly increased. The main factors causing decline in central Uganda were decrease in labor force, increased incidence of pests and diseases, and soil degradation, among other problems. The decrease in production in central Uganda and the rise in banana demand caused by population growth in cities such as Kampala promoted banana production in southwestern Uganda (Gold et al., 1999; Gold et al., 2002; Yoshida, 2008).

## METHODS AND STUDY AREAS

### 1. Methods

We conducted field research at Kagyevo village, Kebisoni Sub-County, Rubabo County, Rukungiri District, in August 2016 (Fig. 1). We recorded observations and interviews about the farming system of bananas and other crops, banana cultivars, and cooking and other utilization of bananas, as well as distribution and marketing (Sato et al., in press). Observation and interviews were recorded from banana markets in the neighboring towns and markets in Kampala.

### 2. Study Area

We provide only a brief description of the study area. Detailed information of the banana farming system, cultivars, dietary habits, and banana uses in the study area are shown in Sato et al. (in press).

Kebisoni Sub-County has an area of 79.2 km<sup>2</sup> with a population of 27,600 (Rukungiri District, 2014), amounting to a very high population density of 348.5 persons/km<sup>2</sup>. The village of Kagyevo is located approximately 3 km northeast of the town of Buyanja (Fig. 2). While a paved road passes from Buyanja to Kampala, there is an unpaved road from Kagyevo to Buyanja. There are 94 households and around 460 people in the village (Sato et al., in press). The main ethnic group is Banyankore (Nkore in this paper).

Historically, until about 1900, banana farming had not been popular in the Nkore area except in select suitable areas, and bananas were mainly used for making beverages. In the western periphery of the Nkore dwelling area, including our research site, it is believed that the Officer of Ganda (the largest ethnic group in



Fig. 1. The study area.

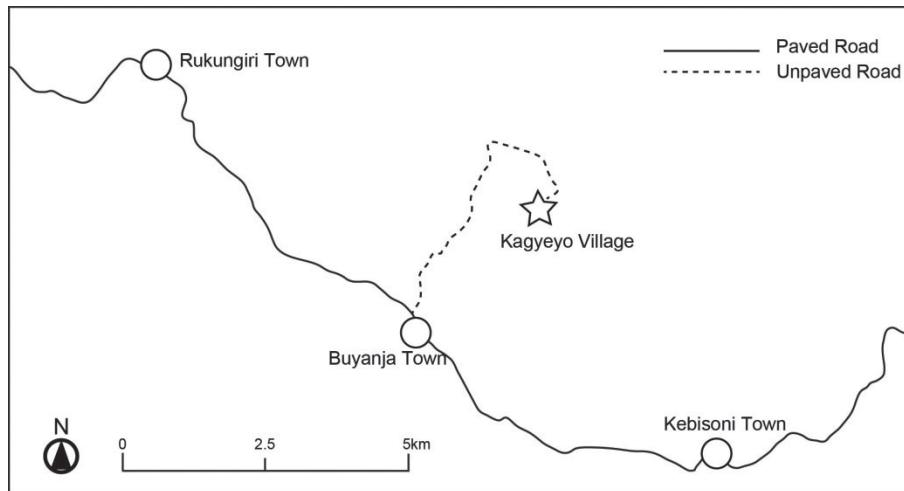


Fig. 2. Kagyeyo village and the neighboring towns.

Uganda, living in central Uganda (Nzira et al., 2011)) first introduced bananas for cooking and beverages around 1912. It seems that banana farming at the research site started with a small farm and was mostly for self-consumption (Langlands, 1966).

However, farming of cooking bananas gradually increased from about 1910, and they eventually replaced the diet food of finger millet. In the 1940s, production of cooking bananas rapidly expanded (Langlands, 1966). It is supposed that a banana-centered subsistence system emerged in the first half of the 20th century. As

mentioned above, banana production in southwestern Uganda grew further in the latter half of the 20th century. At present, banana gardens occupy approximately 40% of cultivated areas in Kebisoni Sub-County (Rukungiri District, 2014).

Cultivars observed in the village are shown by Sato et al. (in press), so we briefly explain local categories of banana cultivars and their frequencies.

In the study area, East African highland bananas are divided into two types: one, called *Enyamwonyo*, is used as a starchy staple food, and the other, called *Embire*,

is for beverage purposes. In addition to these, there are other bananas that can be used for beverages, dessert bananas (*Ebyeminekye* or *Ebyeinekye*), and plantains (*Gonja*) (Sato et al., in press).

East African highland bananas, especially East African highland cooking bananas, are important to farmers. During the interview, our source at Kagyeyo village revealed that 22 banana cultivars are farmed. Fourteen cultivars are East African highland bananas, and nine are East African highland cooking bananas. Among seven cultivars whose frequencies are “very common,”<sup>3)</sup> six are East African highland bananas, and four are East African highland cooking bananas. The most frequently planted cultivar, other than the East African highland banana, is *Kabaragara*, a famous cultivar in Uganda, which has another name, *Sukali Ndizi*. It has multiple uses, such as a dessert banana, beverage, and the base material of a pancake dish called *Kabaragara*. *Bogoya* is a large dessert banana, whose popular trade name is Gros Michel. Its frequency is “common.”

## DISTRIBUTION AND MARKETING OF BANANAS

We describe banana distribution around the research area, based on Sato et al. (in press). We interviewed at Kagyeyo village, and banana markets at Kebisoni and Buyanja. Kebisoni and Buyanja are located along the paved road from Ntungamo to Rukungiri (Fig. 1, 2).

There are two distribution channels for banana distribution: local distribution and distribution to cities such as Kampala. Bananas sold at the Kebisoni banana market are generally distributed locally, whereas the Buyanja banana market serves as a collection point for transporting bananas to Kampala.

We explain the local distribution of bananas based on the case of the Kebisoni banana market. Farmers generally sell bananas to bicycle traders who bring bananas to the banana market by attaching four to eight banana bunches to their bicycle. The undulating topography around the research area has steep slopes, making their work very hard. Motorcycles are occasionally used to transport bananas to the banana market. The Kebisoni banana market has a building with a tin roof without walls. The unit of sale is a bunch, and bunches of bananas are arranged on the floor. We observed 20 or more bunches, almost all of which were East African highland cooking bananas, with only one bunch of *Kabaragara*. Bananas for beverages were not

traded. At the market, consumers and retailers directly purchase bananas, and occasionally, transporters to Kampala buy them when they cannot obtain enough bananas from other markets or collection points.

We describe distribution of bananas to Kampala, according to the case of the Buyanja banana market. The actual state of the Buyanja banana market should be regarded as a collection point (Yoshida, 2008) or collection/loading center (Ngambeki, 2006), rather than a market. Bicycle traders brought the majority of bananas to the Buyanja market, whereas pickup trucks, owned by large banana farm owners, are occasionally used for transportation, similar to motorcycles. While most bananas are East African highland cooking bananas, *Bogoya* and *Kabaragara* are also found at the market. Bananas for beverages are not traded. There is a warehouse at the Buyanja banana market for storage of bunches of East African highland bananas, *Bogoya*, and *Kabaragara*. In the open space in front of the warehouse, market workers divide bunches into hands, then hands into fingers, then pack them in large sacks. A sack contains fingers from ten bunches. Only the East African highland bananas are packed this way. Transporters from Kampala come to buy bananas with trucks.

The number of bananas traded at the Buyanja banana market is significantly larger than that at the Kebisoni banana market. As Yoshida (2008) indicated, most of the distributed bananas are transported to big cities such as Kampala, whereas locally distributed bananas occupy only a small part.

The farm gate price of a standard sized (24.5 kg) bunch of East African highland bananas for cooking at the research site was 6,000-7000 shillings<sup>4)</sup> at the time of this research, although it has seasonal fluctuation. The price of a bunch of East African highland cooking bananas increased to 15,000 shillings in December. The prices of East African highland cooking bananas are independent of their cultivars, but only their size, mostly a visual observation, seems important. When workers packed banana fingers into sacks at the Buyanja market, they did not seem to be concerned with cultivars, and fingers of various cultivars were included in a sack. According to local farmers, cooked bananas with soft texture are evaluated better, and textures vary between cultivars. However, this evaluation is not considered in banana trades and does not influence the price of bananas.

The price of a standard sized bunch of East African highland banana at the Kebisoni banana market was 10,000 shillings, and that at the market in Kampala was 25,000 shilling in August 2016.

## DISCUSSION

### 1. Does Commoditization of Bananas Offer a Profit for Local Farmers?

In this section, we consider seasonal fluctuation of banana prices and the supply chain of bananas in order to clarify the relationship between commoditization of bananas and profit for local farmers. Hereafter, we focus on the distribution to cities such as Kampala because most bananas sold are distributed to large cities.

One of the characteristics of the banana as a staple crop is its perishability. Although farmers use various techniques to supply bananas throughout the year (Sato, 2011), the banana supply in Uganda and northwestern Tanzania tends to decrease around December (Maruo, 2002; Ngambeki, 2006). According to the informant, the yield from September to December decreases, then increases in February and is maintained until September. The reasons for seasonal fluctuation can be attributed to less frequent flowering from July to October than during other seasons and frequent lodging caused by unfavorable windy conditions. This fluctuation affects banana prices.

Previous studies indicated the fluctuation of banana prices, which increased mainly in December (Yoshida, 2008; Ngambeki, 2006). As mentioned above, local farmers in Kagyevo village reported that banana prices rose towards December.

In addition to the reduced banana supply, the rise in banana prices in December reflects the increased demand in the cities, probably due to holidays such as Christmas and New Year's. Yoshida (2008) describes that even poor people in Kampala seek cooking bananas that are more expensive than other starchy foods. This strong preference toward cooking bananas generates high demand, thus, price increases in Kampala.

The fact that the price reflects the balance of supply and demand indicates that a comparatively free and competitive banana market exists. This would favor farmers' interests. If the retail price of bananas rises as banana production declines, and if fluctuation of farm gate price reflects the retail price, farmers can obtain comparatively stable incomes throughout the year.

Farmers would not be concerned about the retail price

but farm gate price is key, which may affect farmers' motivation to cultivate bananas for future sale. We examined whether farmers obtain an appropriate share in the banana supply chain in Uganda, comparing previous studies.

Two studies that analyzed farmers' share in the banana supply chain, Yoshida (2008) and Ngambeki (2006), are based on research in the 2000s. Their results, as well as those of this research, are shown in Table 1. The agents in the supply chain of Yoshida (2008) are different from those of Ngambeki (2006). The large share of "Stage Brokers" in Ngambeki (2006) is remarkable. "Stage Brokers" purchase bananas from "Bicycle Traders" who buy bananas from farmers and bring them to the banana market, and sell them to "Transporters" who transport them by truck to the cities. The reason why "Stage Brokers" take large shares is that they monopolize the information in the banana trade (Ngambeki, 2006). Therefore, the farmers' share is quite small. In the supply chain studied by Yoshida (2008), "Transporter/Wholesalers" who transport bananas from rural areas to the cities purchase them directly from farmers. Therefore, "Stage Brokers" do not appear in Yoshida's supply chain. The farmers' share is quite high as seen in Yoshida (2008).

Although the supply chain in this study is similar to that of Ngambeki (2006), the farmers' share in this study is larger than in Ngambeki's (2006). This might be because it is difficult to monopolize the information on banana transactions at present. Muto & Yamano (2009) analyzed changes in banana transactions with the spread of mobile phones. Their report indicates that rural farmers may be able to negotiate more advantageously with traders because they can obtain real-time price information in the cities, negotiate with multiple traders, compare their transactions, and secure better returns. Free and competitive banana transactions can be possible due to the spread of mobile phones, which would increase the farmers' share. This is one of the important factors that can increase farmers' motivation to cultivate bananas for future sale.

The other reason for increasing the farmers' share might be that the market of banana transaction is not monopolized nor oligopolized by large-scale trading agents, but many small- and medium-scale trading agents enter the market, based on the free and competitive market concept. One of the causes of difficulty in monopoly and oligopoly control of the banana market is

**Table 1.** Share of each agent in the retail price of the East highland cooking banana.

Ngambeki, 2006	Research period	Farmer	Bicycle Trader	Stage Broker	Transporter	Retailer	Total
	1998-2004	15%	11.75%	49.12%	17.30%	6.83%	100%
Yoshida, 2008	Research period	Farmer		Cost of Transport	Transporter/ Wholesaler	Retailer	Total
	September 2002	49.40%		34.50%	11.60%	4.53%	100%
This study	Research period	Farmer	Bicycle Trader	?	?	?	Total
	August 2016	28%	12%	-	-	-	100%

the perishability of bananas. Transportation and storage of bananas takes much effort, and large-scale management of bananas can only be made by multinational companies such as Dole, Del Monte, and Chiquita, which have special technologies and large amounts of capital.

## 2. Relationship between Commoditization of Bananas and Diversity of Banana Cultivars

In this section, we consider whether commoditization of bananas affects the change in banana cultivars grown and their diversity. We compared the number of banana cultivars from previous studies with this study. Two historically divided groups live in the East African highland banana area: one has concentrated banana cultivation for their subsistence, and the other has combined banana cultivation with cattle farming. The Nkore people, our research target, belong to the latter and the Ganda people, who live in central Uganda, belong to the former (Komatsu & Sato, 2016). Although the Ganda people had been more deeply dependent on bananas than the Nkore had, banana production in central Uganda decreased from the 1970s to 1990s, as mentioned above.

Gold et al. (2002) showed the number of cultivars in 24 villages throughout banana-growing areas of Uganda. They selected five farms in each village and checked cultivars. The average number of banana cultivars in five Nkore villages is 25.6, which is slightly higher than those in this study (22). As this study examined cultivars grown by one farmer, the results are consistent with that of Gold et al. (2002). The average number of banana cultivars in twelve Ganda villages is 26.0, which is similar to that of the Nkore. However, the number of cultivars varies in the Ganda area. Those in the southwestern part of the Ganda area are high (29.0), whereas those in the northern part are low (21.0).

Low cultivar diversity in the northern part of the Ganda area would be partly influenced by the decline of banana cultivation for subsistence and increase for cash income. The decline of banana production in the northern part of the Ganda area is more severe than that in the southwestern part (Gold et al., 2002; Yoshida, 2008). According to Gold et al. (2002), some farmers replace the East African highland cooking bananas with *Kayinja*, a cultivar for beverages. As production of cooking bananas is low, partly because of diseases, farmers grow *Kayinja*, a drought-resistant cultivar, for which they can get instant cash by selling banana beer.

Although commoditization of bananas is progressing in Kagyevo village, their main purpose of cultivation has still been self-consumption, which is the reason why cultivar diversity is maintained in the research area. However, cultivars suitable for sale might have been increased and introduced. The most frequently planted cultivar is *Enyarweru*, which traders prefer because of their large fingers and compact bunches, whereas *Enjagata*, which is regarded as the tastiest, is the second most favored cultivar. However, banana prices do not vary with cultivars. The reason why farmers choose a particular cultivar which traders prefer is not clear. Farmers might regard *Enyarweru* as large because the weight of a bunch determines its price. In addition, *Rwasha*, which was introduced ten years ago, has rapidly spread and its frequency is now “very common.” Commoditization of bananas might also affect its prevalence, as further research may reveal.

The Haya, who live in northwestern Tanzania and whose language belongs to the same group as that of the Nkore, had mainly depended on the East Africa highland cooking banana as their staple food. Commoditization of bananas began from the 1980s up to the 1990s in their area. The response to commoditization varied between

farmers. Farmers with large gardens intensively grew cooking banana cultivars with high commodity value, whereas farmers with small gardens specialized in cultivating cooking bananas for self-consumption (Maruo, 2002).

Differences between farmers exist in the research area. We observed a farmer who brought a large number of bananas to the Buyanja banana market in a pickup truck. Transaction of bananas is expected to expand in the research area in the future. Continuous and broad research is necessary to reveal the effect of commoditization of bananas on local farmers in the research area and within Uganda.

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#### NOTES

- 1: The addition of banana and plantain production in 2014 of FAOSTAT.
- 2: Vernacular words are shown in italic letters in this paper.
- 3: In the interview, we divided the frequency of cultivars into “very common,” “common,” “rare,” “very rare.”
- 4: Shilling is a unit of currency in Uganda. The exchange rate in August 2016 was one US dollar to 3,200-3,350 shillings.

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