

## The Development of Maize Cultivation and Changes in the Village Life of the Bemba of Northern Zambia

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## The Development of Maize Cultivation and Changes in the Village Life of the Bemba of Northern Zambia

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This paper is based on the materials I collected during several periods of field research among the Bemba, who have a unique slash-and-burn cultivation system, called "*citemene*"<sup>1)</sup>. Four periods of research were conducted mainly in Chief Luchembe's area from September 1983 to February 1989. The total duration in the field was approximately 27 months.

In this area, maize cultivation for cash called "*faamu*" cultivation has spread widely since 1986. Although maize-for-cash was accepted as an extension of traditional techniques and subsistence strategies, it has brought significant changes in diet and the structure of labor in agricultural activity.

These changes are;

(1) Changes in diet: A remarkable change is observed in staple and secondary staple food. Maize, which had not been used in 1984, appeared in 1988 and gradually replaced cassava, which accounted for a large portion in 1984. This trend is more conspicuous in secondary staple food.

(2) Participation of male labour in agricultural activity: Rapid *faamu* development corresponds to the changes in male labor in each household. Men, who had been rarely involved in agriculture, have been strongly involved in maize cultivation as a way of getting cash, while women have been continuing the role of maintaining *citemene*. The acreage of *faamu* chiefly depends on the male labor of each household. There have developed different types of household according to the acreage of *faamu* (which leads to income difference) which chiefly corresponds primarily to the male labor force in each household.

(3) Developing use of employed labor: Large-scale *faamu* owners often employ labor for cash and other materials in order to extend and to maintain their *faamu*. Those employed are mainly women, particularly widows. They participate in employment labor when necessary, thus obtaining cash, maize, or other commodities depending on their requirements. They work in employment instead of making an effort to extend their own *faamu*, thus obtaining cash and maize to consume by themselves. This is the background of the spread of a maize diet to every household regardless of the acreage of the *faamu*.

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1) *Citemene* is a Bemba word which means swidden fields used for the year of cultivation only. From the second year, the swidden fields are distinguished, called *cifwani*. In this paper, however, all the swidden fields under cultivation are called *citemene* to avoid confusion.

(4) Change in cash-circulating mechanism: Before 1985, finger millet beer for sale brewed by women played an important role in village cash circulation. However, the frequency of beer selling in the village decreased in 1988. A new method of transporting raw materials to town and brewing and selling in town has become popular, because it is more profitable. In addition, large-scale *faamu* owners have been obtaining more cash than can be balanced by purchase and sales of finger millet beers.

The mode of production itself seems to be the same. Most of the maize fields are abandoned about ten years after their cultivation. *Faamu* at present does not mean a permanent field. Instead maize cultivation is coupled with an "extensive" use of woodland.

This paper aims (1) to make clear the factors contributing to these changes, and (2) to provide a socio-cultural analysis of village life in transition.

## INTRODUCTION

The Bemba, a people I have been studying since 1983, are slash-and-burn cultivators living in the woodlands of Northern Zambia, in southern central Africa. As the soil of the woodland is believed to be low in fertility and productivity, they have developed a unique slash-and-burn method of cultivation called the *citemene* system.

Recently, however, slash-and-burn cultivation has incurred severe criticism, partly because it remains at the stage of subsistence agriculture with low productivity, and partly because it is regarded as a significant cause of deforestation. In addition, the Zambian government has promoted an agricultural modernization program based on the abolition of slash-and-burn cultivation in



Fig. 1. Location of N village

favor of permanent field cultivation, with a view to improving agricultural productivity. In Northern Province, an agricultural modernization program has been promoted with the dissemination of cash crop cultivation (particularly maize) using chemical fertilizers. In addition, a state farm system was developed, in connection with other programs originating in the 1980's, such as the "Back to Homelands" plan, aiming at developing unused woodland in Northern Province and decentralizing the urban population.

In N village in the territory of Chief Luchembe (Fig. 1), the village on which I focused my attention during my four field trips covering a total of two years and eight months, cultivation of maize as a cash crop spread rapidly between 1986 and 1988, with considerable effects on villagers' lives.

The objectives of this paper are 1) clarification of the actual conditions of maize cultivation for cash, and 2) socio-ecological analysis of the changes which have resulted from the development of maize cultivation and the background to these changes.

This paper first presents a general view of the characteristics of the traditional Bemba society from a socio-ecological point of view, then analyzes aspects of maize cultivation development.

Bemba land is largely covered with woodland, in which the dominant trees are *Miombo* (a generic local name), belonging to *Caesalpinioidea*. This woodland has served as the foundation of the *citemene* system and supported the life of the Bemba.

The ethnographical characteristics of the Bemba can be summarized as being subsistence system centered on the *citemene* system. It is matrilineal society of traditional chiefdoms on which many studies have been carried out [RICHARDS 1939; HARRIS-JONES 1963].

The Bemba have a political system based on three senior chiefs including a paramount chief, and 15 junior chiefs. As they each have autonomous territories, the degree of cash crop cultivation development differs considerably among the territories.

Each village has a matrilineal kin group as its core, and the scale is relatively small, with 10 to 80 households. They desert their village site after 10 or 20 years and move to a new site. Villages' historical duration can be calculated by the number of the deserted sites. However, few villages have, more than five deserted sites, which means that villages are relatively impermanent and they easily split up or relocate.

Members of village also move around relatively freely. Residence following marriage is uxorilocal residence in principle. Husbands among young married couples are required to engage in bride-service for at least some years, during which time they live in their wives' villages and work for ir the wives' parents by, for example, cultivating swidden fields. However, the bond of marriage is relatively weak, and separation often occurs. In general, it can be said that the movement of people is widespread.

## 1. CHARACTERISTICS OF THE TRADITIONAL MODE OF LIFE (BASED ON RESEARCH CARRIED OUT BEFORE 1985)

The village which I focused on as my base until 1985 was M village in the territory of Chief Luchembe in Mpika District. This village was founded when Mr. M, the former village headman, returned from the Copperbelt Province (copper mining mountainous region) and summoned his brothers and sisters in 1958. The village, which moved on in 1987 was located 27 km from the center of Mpika District, and was accessible by bus transportation twice a week. The number of households in 1983 was thirteen. Although most villagers have experienced city life and the village was located near the District center, the villagers retained a fairly traditional life style.

### *Citemene* Complex and Subsistence Strategy

As the subsistence strategy of the Bemba and the living strategy of women have already been reported in other papers [KAKEYA and SUGIYAMA 1985, 1987; SUGIYAMA 1987, 1988], only those points necessary for the purpose of this paper will be summarized and stated here.

The traditional subsistence activities of the Bemba include a complex consisting of *citemene* (slash-and-burn), *ibala* cultivation (small-scale mound cultivation), and gathering and hunting. *Citemene* is the center of their life and their entire life is so closely related to *citemene* as to be called the *citemene* complex. Basic subsistence strategy consists of subsistence activities and cash-producing activities.

### SUBSISTENCE ACTIVITIES

The most important subsistence activity is *citemene* cultivation. *Citemene* has unique characteristics in its cultivation method and crop rotation system. In cultivation, men select the land, then climb the trees and lop off just the branches. They then employ the *kusankula* procedure, in which they cut the smaller branches at the joints to reduce the cut branches to moderate size, and leave them to dry. After the branches are dried, women carry them to the center of the clearing and pile them up to about 1 m in height, forming a circular stack. After the *citemene* is burnt (in the mid-late October, just before the rainy season), the *citemene* becomes a swidden field. It is said that while soil is burnt during the firing, not only noxious insects but weed seeds also are burnt. In the *citemene* system, weeding is not carried out at all. In the first year, cassava is planted immediately after firing, and finger millet (*Eleusine coracana*) is planted in December. In the second year, after finger millet is harvested, ground-nuts are planted. In the third and fourth years, cassava which has by now grown enough to be eaten is harvested, depending on the necessity. Cassava is sometimes eaten raw, but is usually soaked in water and ground into flour to be mixed with finger millet and then cooked to produce *ubwali*: the hard porridge which is the staple food. After the cassava is completely

harvested, fences around the *citemene* are burnt down, and edible ground, pumpkin and castor-oil plant, etc. are planted. Also, circular mounds (*mputa*) are prepared in a part of *citemene* and cowpea is planted. After these crops are harvested, the *citemene* is abandoned and will lie fallow for 20 or 30 years.

In *ibala*, nearer the village, cowpea, ground-nuts, sorghum and native corn and sweet potato are cultivated. The method called *kufundikila*, which is used in preparing *ibala*, has been applied in cultivating the *faamu*. Crops in *ibala* are cultivated without fertilizers, and the *ibala* is used for several years and then abandoned. The acreage of *ibala* cultivated by each household is small, and it can be said that *ibala* plays only a subsidiary role to *citemene*. The secondary forest which develops on the abandoned *citemene* provides various wild animals and plants. Gathering of edible insects, such as caterpillars and crickets (*Gymnogrylla sp.*), and hunting duikers and mole rats are important activities which support the diet of the Bemba. Observing the variation of their side dishes throughout a year clearly reveals in which season each of these animals and plants can be obtained, which means that the Bemba depend on the bush for a large proportion of their side dishes.

#### CASH-PRODUCING ACTIVITIES

Cash-producing activities are also important. Although the Bemba have traditional river-fishing techniques such as using basket traps and fish poison, fishing is rarely carried out in this area. However, in their diet, fish is eaten throughout the year as an important animal protein source. Most of the fish are purchased with cash or finger millet from the Bisa, the adjacent swamp fishers. This explains why some cash-producing activities are necessary. There are two cash-producing activities: small-scale peddling of finger millet, and beer brewing and selling. The former is done by men, the latter by women. It should be noted here that both are activities based on finger millet enabling both men and women to earn cash.

#### Roles Played by Men and Women in Subsistence, and the Leveling Mechanism

A definite sexual division of labor is applied in all subsistence activities. In these activities, men have the task of cutting *citemene* and securing animal protein through gathering and hunting, while women have the task of providing diet calories and basic vegetable nutrients.

Table 1. Household composition of the village

Household type	Male labor	Cash income
female-headed (widow)	—	+
female-headed (co-wives)	(+)	+
male-headed (elder)	+	+
male-headed (younger)	+	++

The basic unit in subsistence is a household labor. Given the sexual division of labor, output of subsistence activities at each household is different depending on household composition. Table 1 shows the households in the village categorized according to the amount of male labor and opportunities for earning cash.

Widows' households which do not possess male labor, lack the labor necessary to cut *citemene* and secure animal protein, although they can obtain cash by brewing beer. Widows brew finger millet beer (*ubwalwa*) more frequently than married couples' households, earning more than 150 kwacha in 1984. With cash earned in this way, they pay for *citemene* cutting and purchase fish as animal protein. The cash is almost all used up to secure the subsistence level. On the other hand, married couples' households have stable labor for cutting and provision of animal proteins. Particularly, households with young husbands who go peddling frequently have more opportunities to obtain cash than others, even exceeding the subsistence level. Thus, gaps among households result within the village in terms of cash income. However, these gaps are eventually leveled at the village level in the long run.

The following factors are involved in this leveling process:

- 1) The foundation of cash-producing activities lie in *citemene*: Cash-producing activities are carried out based on finger millet produced in the *citemene*, and the scale of these cash-producing activities differs depending on the harvest of finger millet.
- 2) The harvest of finger millet is proportional to the acreage of the *citemene*: The harvest of finger millet is almost proportional to the acreage of the *citemene*, which is determined by the balance of labor input by men and women. As the labor force at each household is almost the same, it is difficult to make outstandingly large *citemene* fields. Moreover, finger millet harvests tend to fall short of the requirements of each household.
- 3) Strong attachment to finger millet: The Bemba have a strong attachment to finger millet, praising it as the best food and desiring to eat it throughout the year if possible. At the same time, finger millet is the only raw material available for beer brewing. However, each household's production does not satisfy the basic needs and almost always falls short. While people have to secure sufficient for consumption at each household, they also have to set some aside to obtain cash. The above factors based on the *citemene* complex suppress any excessive expansion of cash-producing activities.

Furthermore,

- 4) The basic principle of sharing, and leveling mechanism based on an abhorrence of *kutana* (refusal to share) are also effective. In Bemba society, those who have more, or better things are expected to directly or indirectly share them with others. Those who refuse to share cannot escape the shame of being referred to as a "*mutani*" (miser), and they may suffer from illness or accidents believed to be caused by the jealousy of others. In such cases, people sympathize with such

a person sincerely, but at the same time, see it as a due penalty for their anti-social act in refusing to share. Young men who obtain more cash through peddling purchase and serve beer free of charge according to people's demands. Households with such young men also hold parties more frequently. To purchase beer, they pay cash to the women, particularly widows, who brew the beer, using the cash to employ people for cutting, and LATER to purchase fish. The basic principle based on sharing thus brings about cash circulation in the village. This leveling mechanism guarantees all the villagers a minimal subsistence level in the long run.

In addition,

- 5) As the bond of marriage is relatively weak and separation is common, there are always a number of widows' households. Therefore, the previously stated type of household composition continues to be reproduced and the leveling mechanism remains. The following chapter attempts to analyze the changes in a Bemba village which were caused by the introduction of maize cultivation.

### 3. DEVELOPMENT OF MAIZE CULTIVATION AND THE CHANGES IN MODE OF LIFE (SINCE 1986)

Fig. 2 shows the changes in maize sales in Mpika District by I. R. D. P. (Integrated Rural Development Project). It can be observed that, compared with the increase of the entire Northern Province, the increase in Mpika District is much larger. In the territory of Chief Luchembe (Fig. 3), the cultivation of maize for cash has increased remarkably in a short period.

According to our census carried out in 1985 on the seventeen villages along the Kopa Road, only two villages introduced maize cultivation for cash. However, this

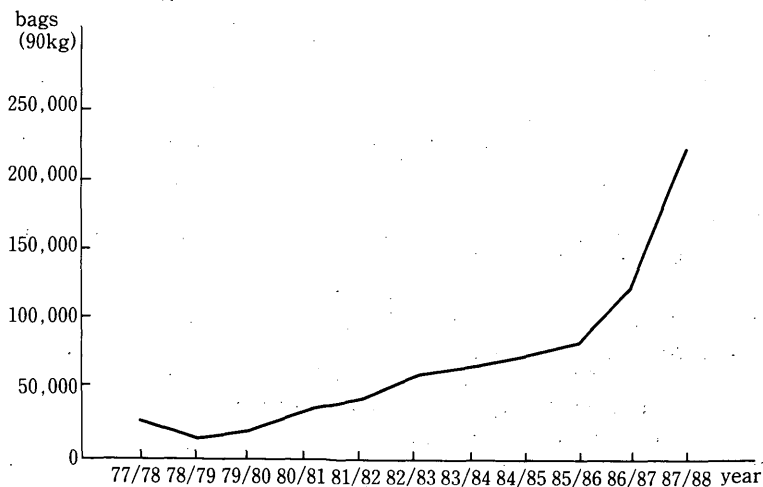


Fig. 2. Changes in maize sales (Mpika District) (data from I. R. D. P 1988)



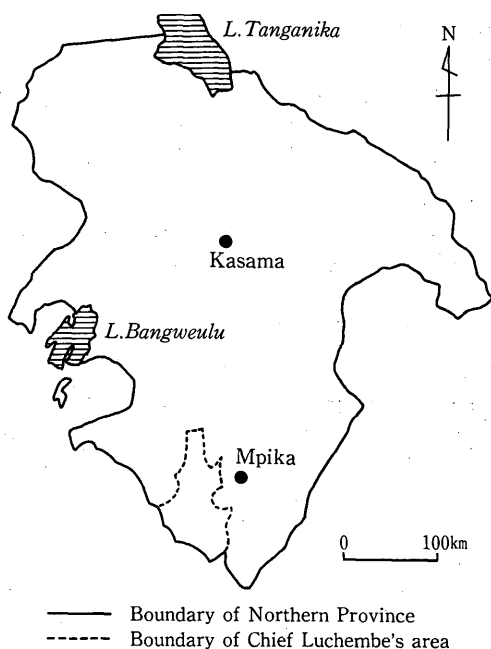


Fig. 3. Location of the territory of Chief Luchembe

research (January and February of 1989) revealed that all villages had introduced maize cultivation.

To analyze the resultant changes in daily life, this paper concentrates on a single village in the territory of Chief Luchembe. Because M village, the study base until 1985, had split up and disappeared, the neighboring N village, where some of the M villagers had moved, was studied. The number of households in 1988 was 38, and kinship relations of members are shown in Fig. 4.

Table 2. History of agricultural modernization program on the village level

Year	Topics cited by villagers
c. 1966	Government announcement of abolition of <i>citemene</i> , which wasn't accepted by former Chief Luchembe Land around the village was divided among the households
1983	Succession ceremony ( <i>ubupyani</i> ) of present Chief Luchembe
1984	New Chief Luchembe inspected the villages and made speeches on the promotion of permanent fields State farm construction along the Kanchibiya river was rumored
1985	State farm construction started
1986	Loan system for cash maize seeds and chemical fertilizers was introduced, maize cultivation for cash spread at many villages

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**Fig. 4.** Kinship relations in N village

## 1 History of Agricultural Modernization on the Village Level

Table 2 chronologically shows the events which the N villagers cited as the history of the Zambian government's agricultural modernization program. Immediately after the Zambian government declared independence, the abolition of slash-and-burn cultivation was announced and the land around the village was divided among the households. However, due to the resistance of the former Chief Luchembe, the village did not come under direct pressure to abolish the slash-and-burn cultivation. In 1982, about ten years since the death of the former chief, his successor was formally nominated, and in 1983, an *ubupyani*, or succession ceremony, was carried out. The new Chief Luchembe supported the modernization policy. In 1984, he inspected the villages and made a speech in which he declared the abolition of slash-and-burn cultivation; the promotion of permanent fields; the prohibition of village movement to other places not along the main roads; and he encouraged house construction using adobe bricks.

In the same year, it was rumored that the Zambian government would establish a state farm along the Kanchibiya River, construction of which actually started the next year, 1985. In 1986, a loan system for cash maize seeds and chemical fertilizers was introduced. Maize cultivation for cash started in many villages.

External events which contributed to the changes since 1985 can be summarized in the following three points:

- a) Dissemination of a loan system for cash maize seeds and chemical fertilizers: In 1986, NAMBOARD (National Agricultural Marketing Board) started a loan system. Those who enter this system obtain a loan of maize seed and the necessary amount of chemical fertilizers and return the seed after harvesting the next year. At that time, disseminating members called *Kalikacha* (the word deriving from agriculture) went around the villages, explaining the system and calling for registrants. Many men took this opportunity to start *faamu*.
- b) Realization of the State Farm System: The state farm system has as an objective decentralizing the urban population, which accounts for almost half of the total national population, as well as improving agricultural productivity. In the Northern Province, unused bush will be enclosed, roads will be built, partitions will be readjusted and people living in urban areas at present will be relocated as pioneers, under a 10-year plan which started in 1984 in this area. In Chief Luchembe's area, full-scale partition readjustment started in 1985. Around the villages of N and M, the basin of the Kanchibiya River was enclosed. As the Kanuwampungu River near the village is also said to be included in the state farm in the near future, slash-and-burn cultivation and working away from the village are expected to become difficult. As *citemene* is likely to be totally

- 2) Note, however, that even a member of a household with minimal cultivation area increased his primary staple intake of maize. As we will discuss below, this tendency is related to the increasing use of maize by wealthier cultivators as payment for piece-work to poorer households.

banned, and within the area pesignated as the state farm already established swidden fields are not regarded as fields. Even permanent fields were rumored to be taken up during the readjustment, and in 1986 and 1987, those who had built temporary huts and *faamu* along the Kanchibiya river returned to the village one after another.

- c) Deterioration of the domestic economy and increasing inflation: The Zambian economy has deteriorated in part due to the sluggish international price of copper. The exchange rate of Zambian currency per dollar, which was 0.9 kwacha in 1983, deteriorated to 7 kwacha in the middle of 1984 after the introduction of the floating exchange rate system, and to 10 kwacha in 1988. The difference with the unauthorized exchange rate has expanded to three or

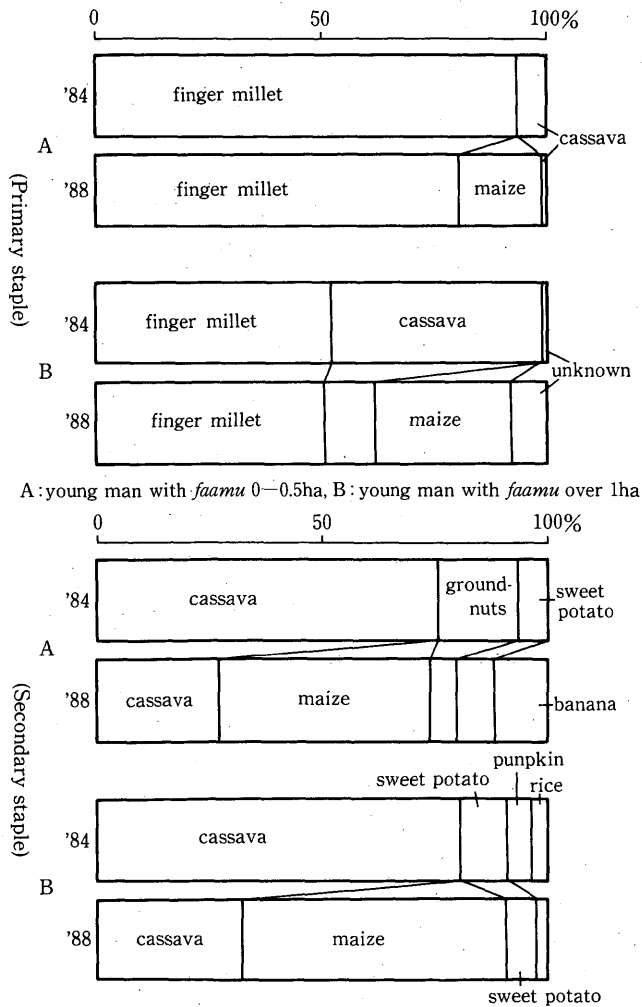


Fig. 5. Changes in primary staple food and secondary staple food (11 months)

four times and the rate of inflation is continuing to rise. Not only imported products such as flour, petroleum and cooking oil, but also domestically produced items such as sugar, cloth, blankets and corn-flour are chronically insufficient, and the prices of these commodities have risen remarkably in a short period of time. Exposed to these rapidly increased external pressures, the life of villagers has also changed remarkably.

## 2 Changes in Diet

Remarkably rapid changes in diet occurred during the 1980's, particularly in terms of the major food staples—finger millet, cassava and most recently, maize. Slightly modifying the terminology of Bolt, Silavwe and Bolt (1989) I distinguish between (1) "primary staple foods", and (2) "secondary staple foods." Primary staple foods are staples consumed in the form of *ubwali* or porridge. In this form the staples are eaten with side dishes, such as vegetables or meat, and are considered to constitute a proper "meal" by villagers. Secondary staple foods may be defined as, "staple foods not eaten as *nshima* or porridge, but more in a snack or supplementary form, e.g. boiled, roasted or raw." (Bolt, Silavwe and Bolt 1989) Secondary staples are generally not eaten with side dishes, and even if eaten in great quantity, they do not constitute a real "meal" in the eyes of rural Bemba-speakers.

Fig. 5 indicates the utilization frequency of primary and secondary staple foods for 1984 and 1988, based on diet journals kept by two young men, "A" and "B". "A" lived in a household with a *faamu* less than 0.5 ha. in 1988, "B" in a household owning more than 1 ha. in 1988. Maize, which had not been consumed at all in 1984, substantially replaced cassava, formerly an important primary staple. This tendency is especially clear in B's diet: cassava, which accounted for a large portion of his diet in 1984, was consumed less frequently in 1988, while his utilization of maize increased by 30%<sup>2</sup>). Interestingly, increasing maize consumption does not appear to have substantially effected A or B's utilization frequency of finger millet as a primary staple, which decreased only slightly between 1984 and 1988.

The trend towards maize is even more conspicuous in secondary staple food consumption. Maize utilization frequency rose to around 40–50% in 1988, while cassava, which had accounted for nearly 80% in 1984, decreased to 30% in 1988.

This trend can also be observed in seasonal changes in utilization frequency. Until 1985, maize (chiefly local species) was utilized as secondary staple food only during a limited period in the rainy season. It started to be utilized as a staple food during 1988 and the beginning of 1989. In particular, from November to February in the rainy season, utilization frequency in the diet journal shows that, in 88.6% of meals, maize was eaten as staple food, replacing cassava, conventional staple food of this period. Maize was utilized as a secondary staple food in 80% of meals.

The increase in maize utilization in the rainy season may be partly because it can be easily ground into flour. Women go to the mill in the District center, Mpika town, 27 km from the village and have the maize ground into flour at 3 kwacha per

**Table 3.** Development of *faamu*

Sites selected as <i>faamu</i>	Former <i>citemene</i> sites	Abandoned village sites	Former charcoal production sites	Total
Number of <i>faamu</i> sites	27	24	4	55

20 liters at a time (as of November of 1988). They leave the village at midnight, arrive at the mill early in the morning, wait in line, have the maize ground into flour and return to the village in the evening. The journey seems very tiring, but they say, "It is not as tiring as pounding cassava in a hand mill," and call the journey to the mill "rest from work."

From January to March, when rain continues to fall for many days, cassava pounding is extremely difficult. When the pounding is suspended, people run short of flour, sometimes decreasing meals to once a day. They call the rainy season *nshita yansala* (hunger season) when they suffer from hunger due to the lack of flour for *ubwali*. However, once they have ground maize, they can eat *ubwali* constantly without worrying about rain. Women cite the best point of maize cultivation as "being able to eat enough in the hunger season." Changes can also be observed in cooking methods. Until 1985 they just boiled native species of maize to utilize them as subsidiary staple food. In addition to this, using maize flour as an ingredient for *ubwali* and stewing half pounded maize for *cisembe* as a secondary staple food are well established.

Another noteworthy change in subsidiary food is the dissemination of foreign vegetables. Although people had opportunities to purchase such foreign vegetables and their seeds were available in town, they seldom planted these vegetables since they could not obtain fertilizers. However, with the dissemination of cash maize cultivation, chemical fertilizers have become easy to obtain. Some boys started to purchase chemical fertilizers by the cup from loan registrants, made small fields (*gadeni*) near the watering place and grew these vegetables. These boys picked the leaves of the vegetables individually and made bundles of about eight leaves which they sold for about 25 or 30 Ngwee (1/100 kwacha) to the women in the village, including their mothers and other relatives.

These foreign vegetables are regarded as subsidiary food which "goes well together" with maize *ubwali*. Saying, "Maize *ubwali* calls *ubukasha* (longing for good food)", people started to purchase such vegetables as rape, cabbage and Chinese cabbage frequently to eat with maize *ubwali*, thus contributing to the spread of foreign vegetables.

- 3) Young husbands who are extending *faamu* hurriedly adopt this method by which maize cultivation can be immediately carried out.

### 3 Background of the Development of Maize Cultivation

Maize was introduced rapidly into the diet together with the development of cash maize cultivation. The background of this development are two factors: 1) The continuity between techniques for maize cultivation and traditional cultivation, and 2) The increase of potential land for *faamu* near the village.

#### 1) CONTINUITY OF TECHNIQUES FOR MAIZE CULTIVATION AND TRADITIONAL CULTIVATION

Cash maize cultivation itself was novel for the Bemba, but the technique was not completely unfamiliar. The technique for small-scale mound cultivation (*ibala*) was utilized for cultivating *faamu* [KAKEYA and SUGIYAMA 1987], as is explained below.

- a) *Cikuka*: When there are large trees in the area to be cultivated, people climb up the trees and lop off the branches, as they did in the *citemene* system. After drying, the branches are piled up around the tree in a circular stack and burnt. Then they plant finger millet in the area covered with ash. Finger millet is harvested the next year and then beans and maize are planted.
- b) *kufundikila*: In the rainy season, by hoeing the soft ground together with weeds and digging, large mounds are prepared. After being left for a year, while the weeds in the mound decay, the mounds are leveled to serve as a field. In some cases, sweet potato and cowpea are planted in the first year mounds.
- c) *kushima*<sup>3)</sup>: This means "hoeing". When the ground becomes soft in the rainy season, ground together with weeds is a little deeply hoed and dug up. One month later, soil clumps are broken and the ground is leveled to serve as fields.
- d) *kuchikosesha*: This is the method for removing the roots of trees growing in the field. The roots are dug up and left for a year. Then the roots are burnt in the dry season together with the branches piled around them.

Sites to be selected as *faamu* are as follows:

- a) Abandoned village sites (*chibolya*): Although eradicating wide-spread weed roots is laborintensive, the land is fertile with few trees to be removed, thus making these sites most suitable for *ibala* fields.
- b) Former *citemene* sites: Trees requiring removal and weeds with wide-spread roots are scarce. These sites have been utilized as *ibala* fields. The *kushima* technique can be used.
- c) Former charcoal production sites: In some recent cases, these sites are utilized. It is said that these sites can be easily utilized since the large trees have been already cut down for the production of charcoal. Table. 3 shows

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4) I gave a watch to this man and asked him to keep a working journal. I sometimes accompanied him and observed his work to check the accuracy of the journal.

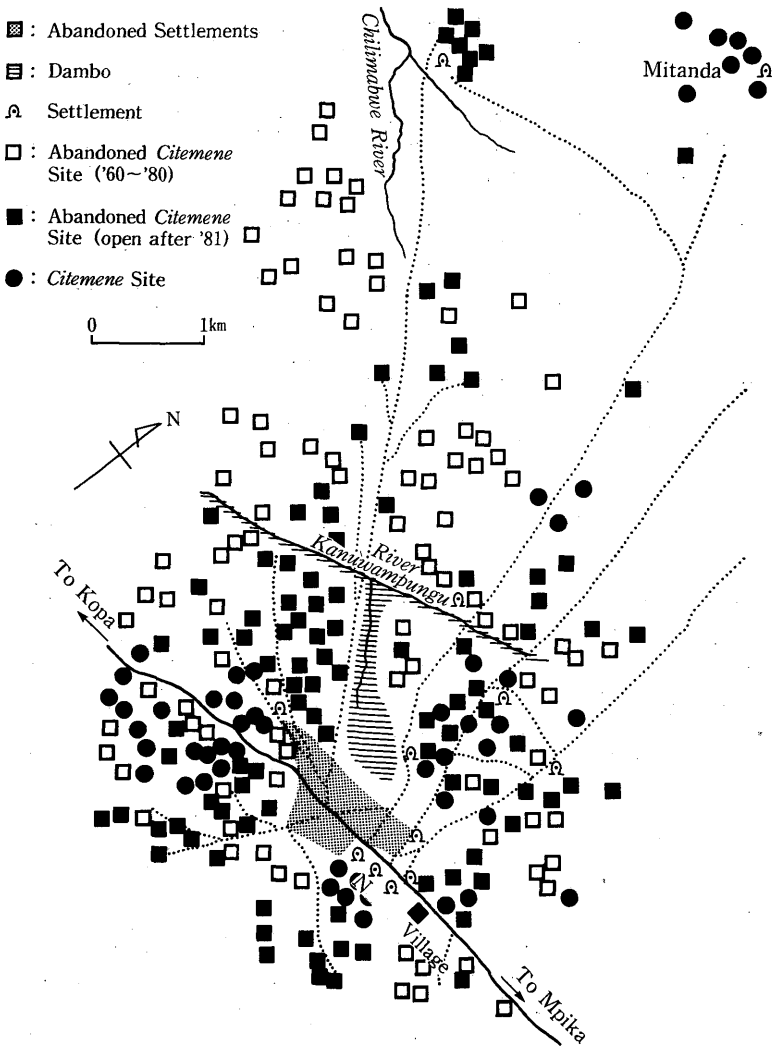


Fig. 6. Distribution of *citemene* fields ('88)

the location of *faamu* in the N village. Most *faamu* are cultivated on abandoned village sites or former *citemene* sites. These sites have traditionally been used for *ibala* fields. Moreover, considering that *citemene* cultivation has been recently carried out with the intention to prepare *faamu* in the future, it can be said that *ibala* technique, as the technique to utilize secondary forest, is now applied to prepare *faamu*. This means that maize cultivation is accepted as an extension of *ibala* cultivation.



**Table 4.** *Faamu* acreage by the type of household

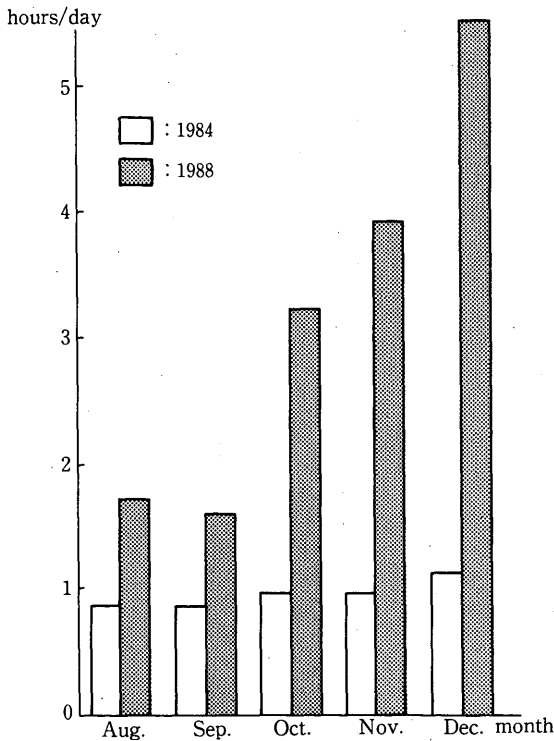
Household type <i>Faamu</i> acreage (ha)	Male-headed		Female-headed (co-wives)		Female-headed (widow)		Total (household)
	elder	younger	elder	younger	elder	younger	
0 -0.5	4	1	2	1	6	2	16
0.5-0.9	0	12	0	1	1 <sup>2)</sup>	1 <sup>1)</sup>	15
1 -	4	3	0	0	0	0	7
Total	8	16	2	2	7	3	38

1): Former husband made the *faamu*. He left the village after preparation of *faamu*.

2): One of her sons who had been living with her made the *faamu*. He left the village after preparation of *faamu*.

**2) INCREASE OF POTENTIAL *Faamu* SITES AROUND THE VILLAGE DEVELOPMENT OF SECONDARY FOREST**

Fig. 6 shows the distribution of the *citemene* near N and M villages. As the survey for 1985 shows that the average *citemene* acreage was approximately 35-a. and that about six times the acreage of *citemene* is cut [KAKEYA and SUGIYAMA 1985], 210-a. cut area is added to each *citemene* site. The figures



**Fig. 7.** Changes in labor input for agricultural activities by a husband

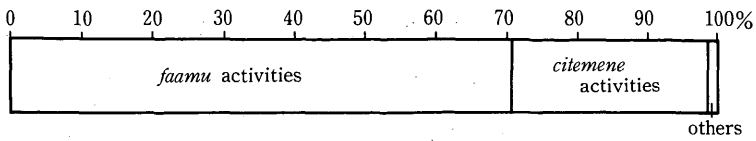


Fig. 8. Details of working hours for agricultural activities

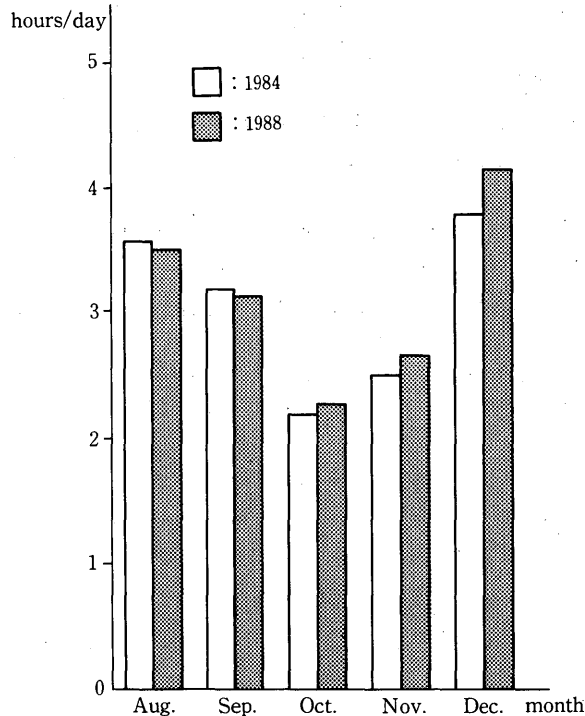


Fig. 9. Changes in labor input for agricultural activities by a wife

show that considerably larger areas around villages were cut for *citemene* in the past ten years, and that secondary forest where vegetation has not sufficiently recovered is expah. Although *citemene* usually lies fallow for over 20 years, some *citemene* were prepared around the villages by cutting secondar forest after about ten years.

When people lack lands suitable for *citemene* around villages, they build temporary huts (*mitanda*) away from the villages and cultivate *citemene*. In N village, households which make *citemene* away from the villages have increased since 1986. In 1988, 34 out of 38 households founded temporary huts near the Chilimabwe River 6 km away from the village to make *citemene* fields. This also indicates that they lack suitable places for *citemene* near the villages. Forest not

5) This data is mainly obtained by the observation concerning working frequency. I also asked this woman to keep in a working journal and checked data mutually.

sufficiently recovered for *citemene* provides better conditions for *faamu* cultivation. In young secondary forest, cultivation using *ibala* technique can be carried out easily. Furthermore, secondary forest near the village is located closer to the main road thus facilitating the transport of maize, contributing to the promotion of *faamu* cultivation.

#### 4 Participation of Male Labor in *Faamu* Work

Rapid development of maize cultivation corresponds to changes in labor within each household, particularly in male labor.

Table 4 shows the acreage of *faamu* by the type of households in N village. This figure shows that households which have *faamu* over 1 ha all consist of married couples. Households with 0.5 to 0.9 ha *faamu* mostly consist of young married couples and households with 0.5 ha or less *faamu* consist of aged married couples or widows. Fig. 7 shows the hours one particular married man spent carrying out agricultural activities.<sup>4)</sup> His household did not cultivate maize at all in 1984, but started *faamu* cultivation in 1986 and increased the *faamu* rapidly to 0.8 ha in 1989. He was engaged in agricultural activities for almost 1 hour a day on average in 1984. After that, however, he increased his working hours remarkably until 1989 finally to 5 hours in December, the busiest farming season when *faamu* cultivation was carried out. Details of work (Fig. 8) indicate that he spent over 70% of his entire working time on agricultural activity related to maize cultivation. This means that the rapid increase of his working hours for agricultural activity was caused by the introduction of maize cultivation. For comparison, working hours given to agricultural activity by his wife were also recorded (Fig. 9). Although slight increase can be observed in 1988, it can be said that no remarkable changes took place. This indicates that *faamu* activity is carried out by the husband of the household.

To clarify the role played by men in *faamu* activity, I studied cases of widows' households which lacked male labor. At present, none of widows register with NAMBOARD. They make *faamu* just big enough to support themselves, using seeds and fertilizers given by their brothers and sons who were registered. Some of these households, however, are planning to extend maize cultivation.

The woman of No. 28 household is planning to obtain cash by maize cultivation, utilizing the *faamu* originally cultivated by her now divorced husband. During a 102 day observation period from November, 1988, to February, 1989, she spent 62 days on agricultural activities, 36 days of which she was engaged in maize cultivation.<sup>5)</sup> When compared with the same period of 1984, working hours increased by more than one hour per day. This means that she extended her working hours due to the increase in *faamu* work. However, when the time spent for maintaining *citemene* as well as cooking and processing is considered, the work which can be covered by the extension of working hours is limited. Therefore, it is obvious that widows' households are extremely disadvantaged, compared to households with husbands. In addition, in widows' households *faamu* cultivation

itself is difficult, since *faamu* cultivation is much more labor-taking requiring intensive labor input. *Faamu* cultivation is extremely hard work, sometimes including felling and digging up trees with D. B. H. (Diameter at Breast Height) exceeding 20 cm, for which male labor force is indispensable.

When a woman of a household without male labor force asks a man of another household to cut trees for *citemene* (just cutting branches), she pays 1 to 3 kwacha per tree with D. B. H. of 20 cm and height of 15 m. However if she asks him to fell a tree at the base and dig up the root, she pays 5 to 10 kwacha per tree. From the research on vegetation around the village, the number of trees per 1-a is estimated to be about 20 on the average. Therefore, to ask 1-a *faamu* to be cultivated, she must have cash or commodities for payment worth 100 to 200 kwacha. Even if she acquires the cash, the men she can ask are limited to her own sons or daughters' husbands. It is difficult to employ non-relatives, since many men prefer to cultivate their own *faamu*, considering that the amount of work out is the same.

It is a traditional practice to ask another household for labor, and people ask for joint work by offering beer (*kutumya*). However, this practice is seldom applied to *faamu* work. This is because the logic underlying the *kutumya* is helping people whose work is delayed or people who don't have enough labor to support themselves, which is the logic of guaranteeing support for society's most disadvantaged members. Therefore, *faamu* work regarded as an activity to obtain cash is not covered by this logic. This means that *faamu* is considered to be "extra" work, separate from subsistence activities such as *citemene*. For these reasons, it is obvious that maize cultivation is considerably restricted households which lack male labor. The acreage of *faamu* possessed reflects the size of the male labor force within the household. Male labor force is the key in *faamu* activity.

In traditional subsistence activities, men were rarely involved in agriculture. Moreover, agricultural activity itself had developed without requiring male labor force except for certain periods. Therefore, maize cultivation has rapidly developed because the male labor force, which was regarded as "extra" within the traditional *citemene* complex, has been fully involved in maize cultivation and now participates in agricultural activities.

Households of couples have extended their maize cultivation while maintaining *citemene*. This has been enabled by the labor division within households, in which maize cultivation has been born chiefly by men and *citemene* chiefly by women. From the viewpoint that *citemene* is mainly an activity to secure subsistence while *faamu* is a source of cash, it can be said that this labor division follows the traditional subsistence strategy system, in which subsistence activity was born by women and cash-producing activity by men. However, when the entire social relationship within the village including widows' households is observed, it becomes obvious that maize cultivation has caused changes in other respects. These include adoption of employment labor by households with large-scale *faamu* and changes in the cash circulating mechanism.

## 5 Generalization of Employment Labor

When household composition is analyzed for large-scale-*faamu*-possessing households, while the male labor force within the household is considered, households with exceptionally large-scale *faamu* can be observed. Why do they possess such exceptionally large *faamu*? The following is an overview of the process of extending the *faamu* and ways of mobilizing labor force at these households. Households with large-scale *faamu* can be roughly divided into two types: households which started cultivation depending on the abundant male labor force within households and those which did not have such an abundant male labor force.

### THE TYPE DEPENDING ON MALE LABOR FORCE WITHIN HOUSEHOLDS

Case 1: The wife of No. 18 is a sister of the founder of N village and lived for a long time in the Copperbelt province with her husband who worked as a miner. After the husband retired in 1978 due to the age limit, the couple moved to N village, where they spent a few years. Then they moved to the basin of the Kanchibiya river and started *faamu* cultivation and maize growing around 1982. However, as this area was incorporated into the state farm, they returned to N village at the end of 1986, built a house where they had lived previously, and started *faamu* cultivation again.

In the first year, they cut trees and dug up the roots with the help of their daughters and their husbands, planting cassava on the entire field. In the second year, the couple continued cutting, depending on the daughter's husbands and others, while employing women of the village for hoeing in exchange for cassava, thus extending the acreage of field. Additionally, they employed children of the village for hoeing in return for mangoes which they had planted when they lived in the village before.

Case 2: No.13 household left the main village area in 1983 and built a house about 0.8 km away from the village. However, they depended solely on *citemene* at first. It was after 1985 that they started full scale *faamu* cultivation. This household had abundant male labor force consisting of the husband, unmarried son and daughter's husband under bride-service. While increasing *citemene* cutting, they also started to cultivate former *citemene* sites. In addition, they also made *ibala* on low-lying land, where they planted a lot of sugar cane and banana. In the next year, for hoeing the cutting area, they employed children of the village, paying them with sugar cane and bananas, and employed women in exchange for maize, thus promoting the cultivation of *faamu*.

### THE TYPE DEPENDING ON LABOR OUTSIDE HOUSEHOLD

Case 3: No. 14 moved 3 km away from the main village area in 1982 partly because they started raising beef cattle at the request of their nephew who ran a restaurant in Mpika. In 1984, they started to cultivate hybrid maize. With the

assistance of the nephew, they easily obtained salt, soap, fertilizers and other commodities. With these commodities for payment they employed women to carry out hoeing and sowing. After they harvested maize, they paid women with harvested maize.

Case 4: After graduation from elementary school, the husband of No. 11 stayed with relatives in the capital, learning and engaging in the agricultural methods of "the Whites" in some towns. Returning to N , he married. In 1982, he and his wife moved to the forest, saying that he would make a temporary hut for *citemene*, and started to cultivate a plot of land to make a *faamu*. First, they managed mainly with the husband's labor. From the third year, they extended the *faamu*, paying women with maize, vegetables harvested in the *faamu*, and salt.

Case 5: No. 14 household has few close relatives within the village. The husband of this household worked for a long time for a copper mine. After retiring, he purchased soap, cooking oil, clothes and other items with his retirement allowance and moved to N village. Not good at cutting, unlike other Bemba men, he employed men of the village paying them with clothes and furniture to cut trees. For hoeing and planting sweet potato and cassava, he employed women paying them with soap and cooking oil. The next year, for breaking the mound and sowing maize, he employed women paying them with the sweet potato and cassava. After harvesting the maize, he employed women with this maize, thus extending the *faamu*.

Case 6 and 7: No. 27 and No. 37 households have few close relatives within the village. They had long been engaged in peddling and were skilled in obtaining cash. The husband of No. 27 is one of the pioneers of maize cultivation.

After the *faamu* system became widespread, they spent profits obtained through peddling to make their own *faamu*. They promoted cultivation by employing women with cash or dried fish, soap, clothes or salt. No. 37 in particular extended their *faamu* to 2 ha., depending almost fully on such an employed labor force.

From the cases mentioned above, it is obvious that many of the large *faamu* owners are marginal people, as it were, who lived apart from close social relationships within the village. It should be noted that No. 11, who had relatives within the village, moved away from the main village area very early, declaring that they would set up a *mitanda*. The former two examples both promoted *faamu* with abundant male labor forces as background and mobilized additional labor by utilizing the harvest of the *faamu*. The latter five expanded their *faamu* with retirement allowances or substantial capital obtained from peddling.

One point common to both cases is that to cultivate and expand *faamu*, they mobilized the labor force of other households through "employment". It is by this method, which exceeds the limitations of a labor force within the household that they obtained an exceptionally large acreage of *faamu*.

Following is an overview of those employed. They are mainly women, particularly widows. They participate in employment labor when necessary, thus

obtaining cash, fish, maize and other commodities required for the time being. They are employed not only in N village but also in some adjacent villages.

They work in employment instead of making an effort to engage a labor force and cultivate their own *faamu*, thus obtaining cash and maize to consume by themselves. This is the background of the spread of maize diet to all the households in the village regardless of the acreage of the *faamu*.

This clearly indicates that recent changes in diet took place not because all households promoted *faamu*, but because the new employment system, in which those who have small *faamu* are employed by those who have large *faamu*, was widely accepted and proliferated. Here is seen a pattern that large-scale *faamu* within the village are maintained and further extended by the labor force of women of other households, particularly widows who have small *faamu*.

The women obtain one kwacha or one plate of fish (approximately 100 g) for making a mound of 0.8 m in width and 15 m in length, and five kwacha or 20–1 maize for hoeing 2 a. When calculated simply, a 1-ha. field yields approximately 3–tons, or 30 bags, which provides an income greater than 2,000 kwacha. Even if 200 kwacha is spent for chemical fertilizers, *faamu* owners obtain a considerably large amount of profit. As more and more women accept employment labor, the gap in cash income between widows' households with small *faamu* acreage and households with large *faamu* acreage expands. Before *fammu* spread, much of the "extra" cash over the subsistence level was used for making beer available for free, as was stated before. Thus the flow of "extra" cash by means of consumption balances the household gap in terms of production to some degree. Then, what has become of the purchase and sale of finger millet beer which was a cash circulating mechanism in the traditional mode of life?

## 6 Changes in the Cash-Circulating Mechanism

Finger millet beer for sale was brewed just twice at most in 1988 in N village, while it was brewed 19 times in 1984 in M village of 13 households. This decrease in the frequency of finger millet beer brewing is partly due to the poor harvest of finger millet in 1988 and partly due to the decrease of the acreage of *citemene* which yields finger millet.

Comparison of *citemene* acreage in 1983 and 1988 in N village (1983 data based is that of M village) is as follows. The largest *citemene* exceeded 60 a. in 1983, while it was 50 a. in 1988 in N village. Formerly, young households moved to temporary huts (*mitanda*) and cultivated large *citemene* of 50 or 60 a. In

N village, most households, excluding those of widows or those with sick members, cultivate *citemene* in *mitanda*. However, the acreage is almost the same as the acreage of *citemene* formerly possessed by aged or widow households.

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6) While some criticize this type of conduct by widows, people generally consider that the widow have no choice but to do this in order to obtain cash required for subsistence during time of high prices of commodities.

The most remarkable change is the dissemination of a new method of transporting raw materials to town and brewing and selling there. As the inflation has increased very rapidly, prices in the city of, for example, cloth have jumped 3 to 10 times. The prices for dried fish, an important protein source, have more than doubled, while prices of everyday goods, stationery and school uniforms have also risen. Previously, profit obtained by one brewing (approximately 30 kwacha in 1984) was enough to purchase a *chitenge* (multipurpose waistcloth, approximately 15 kwacha in 1984), a child's uniform (approximately 10 kwacha) and fish for side dishes. In 1988, however, even one piece of *chitenge* can not be purchased since it costs as much as 150 kwach in Mpika town.

The price of beer in the village has also risen. However, the rise was just one kwacha per five liters. This is because of strong resistance to price rises. Whatever little price rise does occur is only permitted through the consensus of other villagers.

Moreover, in selling in the village, people should offer one cup of beer for free for *dyonko* (tasting). After selling, they should hold a party, to which they should invite villagers and serve *cipumu* (hot beer) for free. They have to offer nearly two-thirds of the total amount of raw materials for free. Therefore, even if the price is increased, in the village the increase in profit per one brewing is not more than around 20 kwacha. Therefore in a sense, it is natural that women started to transport raw materials into town and brew and sell beer there. In town, the standard price is already fixed. There is no need to serve beer for tasting and to offer beer as a treat, since customers in town are not relatives for whom such service is required. In town, they can obtain approximately 180 kwacha per brewing, with which women purchase *chitenge* and dried fish<sup>6</sup>) and return home.

As a result of increasing sales of finger millet beer outside the village, a chronic shortage of beer has occurred within the village. After the poor harvest in 1988, as beer brewing frequency substantially decreased, purchase and sales of beer by reservation started. People leave cash and a container the day before beer is completed. Early in the next morning, they go to take the beer, taste one cup of beer and hurry home. They invite only very close people and enjoy privately.

Formerly, on the morning when finger millet beer was sold, people held parties in the front garden of the seller and continued singing and dancing until late at night. It was observed that those who came late asked for beer from those who were drinking, or aged women demanded beer as a treat from those considered wealthy. At present, however, such scenes are rarely observed. As symbolically represented by the style of parties, finger millet beer, which used to attract people and generate the flow of cash and information seems to have reduced the function as public device and to have become something to be enjoyed more privately.

Also, by offering good beer, women received social recognition that they fulfilled the expectations for Bemba women, and provided a "place" where people gathered. However, as beer sales in town have been promoted and beer has become an item more usually privately enjoyed, beer itself has taken a central role. With the role of the sponsor diminishing, brewing is becoming just a way to obtain cash.



As a result of these changes, people have lost a means of activating a cash flow. Also, the absolute amount of cash obtained through *faamu* activities is too large at present to be balanced by the purchase and sales of finger millet beer. However, it is strange that people do not demand sharing despite the economic gap between households of thousands of kwacha. Section 2 described the traditional principle of Bemba life as sharing with others. Then why are there households which obtain large amounts of cash from large-scale *faamu*, while there are households of widows who are employed by such large-scale *faamu*-possessing households? Furthermore, it seems that the system to redistribute these profits does not function well. How is the sharing carried out?

A woman employed for *faamu* work said, "The work I am employed for is my share. As he has provided me with the opportunity to obtain cash, he has given me a share."

Large-scale *faamu* owners are, in many cases, marginal, living apart from the close kinship group, the core members of the village [KAKEYA and SUGIYAMA 1987]. Although they own products and cash, they do not have a rigid obligation for giving, not having close kin relationship. They are out of the relationship of "begging—being begged." A man in such a position creates the opportunity of distributing his products and money as described above by his act of employment. This means that the act itself is an act of "sharing." When those who have wealth hold back such wealth, such an act is called *kutana* (refusal to share). However, social category of people whom people can request is limited to those with close kin relationship. Therefore, if a person who has wealth but does not have such close relatives allows his wealth to flow on to others, he is "sharing."

At this stage, maize or cash is not just a reward but "sharing" which has started to flow by the opportunity created by "those who have." It seems that labor is regarded to accompany the flow of "sharing." In this sense, he is deemed to be acting in a socially approved way, thereby employment labor is accepted as one form of "sharing." Thus, employment has become an opportunity for cash to flow in the village.

In the traditional mode of life, *kutana* was abhorred and social sharing was encouraged by a basic social principle; this worked to prevent those who had more than others from accumulating wealth, and functioned as the basis of a leveling mechanism. At the same time, however, a principle based on ostensibly the same values seems to be functioning with the reverse effect, expanding the economic gap.

Why does the logic of sharing, which was so binding in the traditional mode of life, seem to have diminished in power suddenly? Why is sharing of cash obtained through maize cultivation not strongly demanded?

Whether or not in the relationship of "begging-being begged", begging cash, not things, has long been regarded to as shameful. Why sharing is not strongly demanded may be because maize cultivation is directly connected with cash. However, when redistribution was strongly demanded the cash obtained through finger millet peddling, the explanation that redistribution of things is obligatory

**Table 5.** Working procedures at *citemene* and *faamu* and the social units concerned

	Working procedures		Social units concerned			
			Household	Village	Chief	
<i>citemene</i>	①	site selection	○			
	preparation	②	cutting trees	○	(○ communal labor)	
			piling branches	○	(○ communal labor)	
			deciding the date of burning		○	○*
			burning	○	○	
	③	deciding the date of sowing fingermillet		○	○*	
	④	sowing	○	○		
	⑤	maintenance	○			
	⑥	harvest	○			
⑦	ritual after harvest		○	○		
<i>faamu</i>	①	site selection	○			
	②	preparation of <i>faamu</i>	○			
	③	deciding the date of sowing	○			
	④	sowing	○			
	⑤	maintenance	○			
	⑥	harvest	○			

\* very rare at present

while that of cash is not leaves some aspects still unclear. For better understanding, the social significance of *citemene* and *faamu*, where finger millet and maize are respectively produced, should be analyzed.

## 7 Logic of *Citemene* and *Faamu*

Table. 5 shows the working procedures at *citemene* and *faamu* and the social units engaged. *Faamu* work is mostly done at household level. The work is carried out at a level exceeding the capabilities of households only when employment of labor is adopted. Such arrangements are based on independent relationship between the *faamu*-possessing households and women employed through the medium of cash or things.

*Citemene* work is mostly carried out at the household level. However, some stages such as deciding the date of burning and cutting and the first crop offering after harvest are carried out at the village level and involve chiefs. Also, the working unit is not the individual household, but has characteristics of joint work.

In cultivation, similar tendencies can be observed. The sense of living together in a village, or sense of sharing land, underlies *citemene*, while *faamu* seems to be recognized as independent space.

People can freely select land to be cultivated for *citemene*. However, being a member of the village is a prerequisite, since it is said that ancestral spirits live in the woodland and disasters will occur if cultivation is carried out without their permission. The permission is not obtained by each individual, but by the village as a whole. The role of negotiating with the ancestral spirits is a responsibility of the village headman. When the village headman establishes a new village or moves the village to another site, he has to go and get the permission of the chief. Then he goes to the woodland where the village will be newly founded and personally sets the first fire. In the village, a shrine for ancestral spirits (*mfuba*) should be built. As long as the village exists, first crop offering should be carried out to please the ancestral spirits, thus upholding the friendly relationship.

It can be said that, under the protection of the chief and with the headman as negotiator, villagers share the agreement with ancestral spirits and obtain potential rights to use woodland within a certain area. The potential rights are actualized by work such as selection of cutting area and cutting which are carried out at the household level. Here there is a discrepancy with the actual working group (household). It can be said that the sense of sharing potential rights to use land is deeply rooted in the Bemba village as a group living together, and that the village has characteristics of a production group in this sense.

Similar characteristics can be observed in actual labor. Assistance in the form of joint work (*kutumya*) is provided to households which are delayed in implementing work and those which do not have sufficient labor, which means that a system exists to support the most disadvantaged households. Although the village consists of households of varying composition and labor force, this practice of joint work promises minimally required labor force to all households as a result. In this sense, the village can be regarded as a group which shares even labor force. This communal characteristic can be represented symbolically by *citemene* cutting, firing, first crop offering and worship to ancestral spirits which provide finger millet. It can be considered that *citemene* and finger millet produced there present the characteristics of "communality".

Conversely, *faamu* represents secondary utilization of already cultivated areas. The *faamu* is considered an extension of *ibala*. The right to use the area owned by each household is already assured without the help of the village headman as a negotiator and belongs to the particular household as long as they continue cultivation. This means that the *fammu* is a more independent arrangement than *citemene*. In *ibala*, subsidiary to *citemene* in subsistence, various crops are produced according to the needs of each household. If *citemene* production is primary, that of *ibala* production can be said to be "+Alpha." Therefore, for *ibala* work, help by other households be rarely expected, while the products plainly belong to each household.

*Faamu* at present, as an extension of this process, can be regarded as an independent endeavor, where production and working groups closely correspond to each other at the household level. Therefore, the products of *faamu* plainly belong

to each household and can not be claimed by people of other households in the village of "communality," due to the logic of "individual endeavor." Whether or not sharing is demanded can be derived from the difference of social meaning that *citemene* represents the logic of "communality", while *faamu* represents the logic of "individual endeavor".

#### 4. CONCLUSION

##### (1) Maize Cultivation and Changes in Village Life

This paper described recent changes in N village, caused by rapid dissemination of maize production and *faamu* cultivation.

Despite the rapid changes, finger millet still occupies an important position in people's life and the *citemene* where finger millet is raised continue to be maintained. If individual households are observed, it can be said that their subsistence activities consist of two strategies: subsistence activity through *citemene* and cash earning through *faamu*, as an extension of traditional subsistence activities. Also, the basic principle of life based on sharing has not changed greatly. Cultivation of maize as a cash crop has been accepted as an extension of *ibala* in terms of the selection of land for *faamu*, and the cultivation techniques are also disseminated with the social significance which is succeeded from *ibala*.

However, changes caused by the dissemination of maize cultivation can not be regarded as just an extension of traditional characteristics. Rather the changes have the potential of leading to structural changes in the traditional mode of life. In this regard, the most important change is that the male labor force, previously rarely engaged in agricultural activities, has started to participate, even taking the lead. This has caused the following effects:

##### 1) INCREASE OF ABSOLUTE LABOR FORCE IN AGRICULTURAL ACTIVITIES

Traditionally, men were rarely engaged in agricultural activities except for cutting. This suppressed the cultivation of bush. However, after the introduction of maize cultivation, men started to participate in agricultural activities. As a result, the total labor force used at each household for agricultural activities increased, thus accelerating cultivation. At the same time, it was not restricted the capabilities of the female labor force, cultivation has been promoted according to the independent pace of each household.

##### 2) FROM LOGIC OF "COMMUNALITY" TO "INDIVIDUAL ENDEAVOR"

In the mode of life based on *citemene*, the labor force belongs to the village of "communality", a jointly producing group. The practice of joint work promised the minimum required labor to all the households of the village.

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7) In another village, a woman who expanded maize cultivation rapidly was accused as the suspect of a "witchcraft" case and left the village.

However, in maize cultivation, labor input directly corresponds to *faamu* acreage and harvest. This means that labor force is expressed by the amount of cash obtained. Thus, the meaning of the labor force may change. The labor force has become independent at the household level as consumption unit, while households have been increasingly characterized as production groups.

### 3) SUBSISTENCE STRATEGY OF WOMEN AND MAIZE CULTIVATION AS A SOURCE OF CASH

Although the labor force has started to become independent, traditional practice still continues at present, particularly for *citemene* for subsistence, thus promising minimal male labor force. Many widows do not put much emphasis on maize cultivation, still concentrating on *citemene*. On the other hand, some widows regard maize cultivation as a blessing to women. This is because once the *faamu* is cultivated, subsistence can be guaranteed without worrying every year about securing a labor force for cutting.

However, it should be noted that, when women concentrate on maize cultivation, they may face social resistance. This is because, as was already described, maize cultivation is regarded as a cash earning activity, which has long been a male preserve. Women who are conspicuous in maize cultivation may be criticized for having "invaded the male territory."<sup>7)</sup> Therefore, widows' households which do not have male labor force have limited alternatives of carrying out small-scale subsistence level maize cultivation or obtaining cash by being employed at large-scale *faamu*.

As men concentrate on *faamu* activities and thus control a larger cash income, the traditional balance of power between men and women may change.

#### (2) Abandoned *Faamu*

The social aspects of villages have been changing as described. Then what changes have been caused by maize cultivation in terms of production mode? When utilization of land is observed for several years, it becomes obvious that the *faamu* is not a permanent field in the real sense. When *faamu* distribution since 1983 is observed, it is revealed that nearly 4 ha of *faamu* has already been abandoned. The same tendency can be seen in other villages. In A village, where maize cultivation was introduced in the 1960s, much earlier than others, the *faamu* area cultivated first was almost all abandoned, and villagers, left the main village area and previously cultivated forest. The reasons for abandoning *faamu* include deterioration of fertility, weed proliferation, and increased damage caused by animals.

In interviews, villagers said that removal of proliferating tall weeds was so labor-taking that they abandoned *faamu*, considering that cultivating another

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8) Stromgaard (1985) reported on Mwewa village, where *citemene* has become was cultivated every second year.

*faamu* would be better. When crops were raised continuously for several years, mice and mole rats made nests and damaged crops in many cases. In fact, at the time of sowing in 1989, many households had to sow over and over again due to severe damage caused by mice, and some households abandoned their fields. A few households mentioned deterioration of fertility and other problems caused by repeated cultivation of land.

For the above reasons, people usually abandon a *faamu* 5 or 10 years after cultivation and start to cultivate a new *faamu*. What is actually happening in this area is not the spread of "permanent fields," but the cutting of woodland accelerated by *faamu* abandoned after about 10 years' utilization, in addition to *citemene* cultivation. Shortage of *citemene* cutting land and shortening of the fallow period will be accelerated.<sup>8)</sup> Should this occur, what changes will be caused to the subsistence strategy consisting of subsistence activity through *citemene* and cash generating activities through *faamu*? How will the Bemba, who have traditionally relocated on the basis of the *citemene* system, promote permanent settlement while utilizing and maintaining the environment at the same time? It is obvious that this area is at present in a confusing period of transition. Future changes should be observed, and at the same time research from pedological and agricultural viewpoints should be considered to more fully understand Bemba society.

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