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**Multinational Agribusiness Systems Incorporated**

**PEOPLE'S REPUBLIC OF BENIN**  
**MINISTRY OF PLANNING, STATISTICS AND ECONOMIC ANALYSIS**

**VOLUME 7**  
**BUDGET-CONSUMPTION DATA**  
**ATACORA**

**SOCIO-ECONOMIC PROJECT FOR THE  
DEVELOPMENT  
OF  
ONCHO-FREE AREAS**

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**PEOPLE'S REPUBLIC OF BENIN**

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VOLUME 7  
 BUDGET CONSUMPTION  
 ATACORA

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## VOLUME 7

### ATACORA

#### BUDGET CONSUMPTION

##### I. INTRODUCTION

The results presented in this document are the rough results of the Budget-Consumption survey conducted from April 1981 to April 1982 in the Province of ATACORA within the framework of the Socio-economic Study Project for the Development of Onchocerciasis-free Areas (ATACORA and BORGOU).

The main purpose of this survey is to determine the monetary components of the standard of living of the households by taking an inventory of the income and expenditures and to measure the importance of self-consumption through consumption inventories.

The survey is composed of two main sections: one refers to the budget as such (income and expenditures) and the other to food consumption. Therefore, four types of questionnaires were prepared:

- A questionnaire relative to the characteristics of the population of the households studied;
- A questionnaire relative to income;
- A questionnaire relative to expenses; and
- A food questionnaire.

The survey is essentially a matter of describing the structure of the budget of the households through the various items of expenditures and receipts and to determine the quantities of food products consumed at the household level; those that are purchased and those that are auto-consumed. One thus obtains a quantitative estimate of auto-consumption.

The sample used for this survey was prepared in two sections; the primary units (PU), or villages in proportion to their size; and, after having surveyed the village-samples, the secondary units (SU) were prepared with equal probability, that is, the household in each PU. The basis used for the survey was the 1979 population census. At the province level 60 villages were selected and 15 households were selected per village (of which 12 households were agricultural and 3 were non-agricultural). Refer to Volume I for further details on the methodology used in the survey.

Of the 900 households selected, taking into account the elimination of certain questionnaires that could not be used, and that there were no non-agricultural households in some villages, we actually studied 873 sample households.

We are publishing four parts in this report: the first part will be devoted to the budget practices of the households studied. The second will involve a study of the income distribution and an analysis of the income structure. The third part will consist of a study on the distribution of expenses and an analysis of the structure of the expenses. Finally, there will be quantity of food consumption.

## II. BUDGET PRACTICES

During the survey on Budget-Consumption we collected information on budget management methods of households as well as on the types of savings, credit and transfer systems used in the family groups.

### A. Budget Unit

According to the definition adopted in this survey, the budget unit is composed of a group of persons who pool their income and organize their expenditures together under the authority of a decision center called the Budget Unit Chief. It may be noted that the budget unit may be confused with the ordinary household as defined in Volume I.

Table 9 shows the distribution of the agricultural and of the non-agricultural households which centralize their expenditures. This table reveals that 68.7% of the households surveyed centralize their expenditures whereas 31.3% of the households declare that each member of the family group incurs his own expenses.

Among the households that centralize their expenditures, 93% declare that the head of household manages the income of the community (Table 10). In 83.3% of the cases the decision on the expenses of the household is made by priority by the head of household (Table 11). Generally speaking, the income generated by individual activities undertaken independently of those of the community (family operation, for example) is rarely made available to the community. During the course of this survey, we recorded these individual incomes and expenses because those that made them are nevertheless a part of the household since they are still dependent upon the head of household.

The head of household controls the group with regard to the proceeds of the work in common, but this income is generally subjected to all types of monetary tapping to meet expenses affecting the community as a whole. In this regard it is the head of household who provides for all of the expenses (meals, upkeep of the women and children, ceremonies, operating costs, etc.).

These tables do not present very significant differences among the agricultural groups and the non-agricultural groups and between the nationalities.

## B. Savings, Credit and Transfer System

### 1. The Savings System

The distribution of the households belonging to a group practicing the "tontine" (pooling of resources) (Table 12) reveals that only 4.8% of all of the households studied belonged to a "tontine" group. The so-called "tontine" is an association of savers the members of which pay out a fixed amount of money periodically. The quotas of the group are distributed according to a certain periodicity to each associate member. This non-institutional system of savings plays an important role in the social life of the village communities, allowing each associate member to provide for his financial needs at the right time and to thereby escape the ups and downs of usury loans.

In the Province of ATACORA the "tontine" system does not seem to be a common practice in view of the very small proportion of cases recorded. The FONS are the group where the "tontine" system is practiced the most (23.1%).

Table 13, which represents the distribution of the households adhering to the "tontine" system according to how often payments are made, reveals that 58.3% of the agricultural households make their payment in accordance with the periodicity of the markets and that 76.9% of the non-agricultural households follow a monthly frequency.

Most of the agricultural households (78.3%) pay periodically less than 2,000 CFAF. The non-agricultural households are divided into classes paying the highest amounts (Table 14). Subsequently 25.5% of the agricultural households withdraw less than 20,000 CFAF annually from the "tontine" (pool of funds) whereas 38.5% of the non-agricultural households are in that class. The other proportions of non-agricultural households are in the categories of amounts of more than 40,000 CFAF (Table 15).

Other savings structures are used by the households surveyed. Hoarding money at home seems to be the most frequent procedure, since it is noted that 73.5% of the households studied save in this manner (Table 16).

In contrast, there is a very small propensity to resort to institutional savings structures such as the Caisse Nationale d'Epargne - CNE (National Savings Bank), the Caisse Locale de Crédit Agricole Mutuel - CLCAM (Local Mutual Agricultural Credit Bank) and the Banks. Furthermore, 20.8% of the households indicate that they do not save at all.

The distribution of the households according to the categories of amount of money saved in another system reveals that 70.1% of the households surveyed saved

less than 20,000 CFAF during the year 1980 (Table 17). Table 18 shows that close to 26% of the households saved less than 20,000 CFAF per household during 1980.

## 2. Credit

Only 7.7% of the households studied requested a loan during 1980 (Table 19).

Tables 20 and 21 reveal that the loans requested come from sources other than the institutional sources of credit. Thus, 97.6% of the agricultural households and 72.7% of the non-agricultural households obtained their loans from sources classified in the category of "Other".

Generally the time that it takes to repay these loans is between one and two agricultural cycles, for the agricultural households as well as for the non-agricultural households (Tables 22 and 23).

## 3. Transfers

The Budget-Consumption survey also revealed the transfer operations that can take place among the households surveyed. The amount of money must be estimated that the head of household receives free from a third person or from an institution and whether they provide some aid or subsidy to a third person without that third person having to give anything in exchange. Table 25 reveals that 9.3% of the households surveyed receive some aid or subsidy from a third person. In the case of the OTAMMARI, however, there are few who receive any aid (3.9%). The amount of money received as aid varies from

less than 2,000 CFAF to more than 10,000 CFAF, whereas only 31% of the agricultural households are in that category (Table 26).

It is also interesting to note that close to 18% of the households surveyed devote part of their income in the form of a salary pension or family support (Table 27). The annual amount of this aid also varies from less than 2,000 CFAF to more than 10,000 CFAF per household. The greatest proportion of the non-agricultural households (70.3%) are in the in the aid category of more than 10,000 CFAF (Table 28).

The agricultural households receive subsidies from institutions or organizations in the form of a retirement pension or a war disability pension. It is noted that close to 1% of the households surveyed receive subsidies (Table 29). All of the subsidies received by these households are more than 10,000 CFAF (Table 30).

### III. THE INCOME OF THE HOUSEHOLDS

Table 31 gives the distribution of the income of the agricultural households and the non-agricultural households on a monthly basis. It can be seen immediately that each month the mean is clearly greater than the median, which indicates an asymmetrical distribution of households, leaning to the right. In other words, there are few households with high income, but their income is sufficiently high to have a considerable effect on the mean. Consequently, the median is a much more significant measure of dispersion, indicating the limit of income or expenses for 50% of the population. Table 31 seems to show that at the annual level the mean of the income declared for an agricultural household of ATACORA is 91,690 CFAF and

for a non-agricultural household it is 173,442 CFAF, that is an amount that is clearly greater for the non-agricultural households.

Considering the median, it is found that 50% of the agricultural households have annual incomes equal to or less than 32,834 CFAF and the non-agricultural households have income equal to or less than 38,859 CFAF. This reduces the differences between the two groups. Among the non-agricultural households in particular there is a small group of privileged persons in comparison to the rest of the population. They are probably merchants. The following table shows that the average monthly income for the agricultural households varies from 6,183 CFAF for December to 9,712 for April.

MEAN AND MEDIAN DISTRIBUTION OF THE INCOME OF  
THE AGRICULTURAL AND NON-AGRICULTURAL HOUSEHOLDS

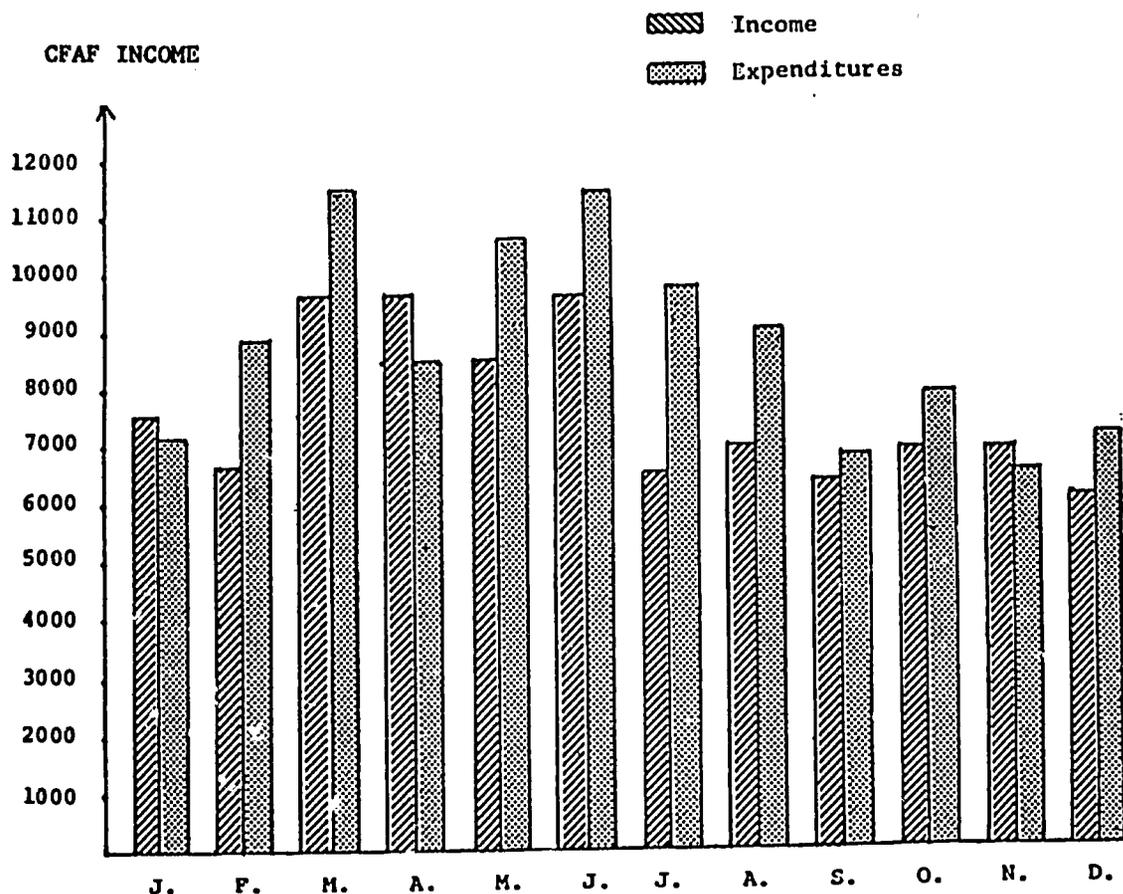
	<u>AGRICULTURAL</u> <u>HOUSEHOLD</u>		<u>NON-AGRICULTURAL</u> <u>HOUSEHOLD</u>	
	MEAN	MEDIAN	MEAN	MEDIAN
January	7,585	2,910	12,660	2,595
February	6,798	2,800	11,976	2,635
March	9,601	2,665	8,821	1,550
April	9,712	3,850	16,149	5,200
May	8,448	3,220	16,375	3,365
June	9,656	2,050	17,899	3,815
July	6,519	2,487	15,968	4,467
August	7,054	2,327	11,274	2,787
September	6,307	2,225	17,048	3,075
October	6,954	2,380	12,724	3,245
November	6,873	2,450	18,115	3,425
December	6,183	2,670	14,433	2,700
<b>TOTAL</b>	<b>91,690</b>	<b>32,834</b>	<b>173,442</b>	<b>38,859</b>

For most of the farmers the income becomes larger with the sale of the harvest, that is beginning with February and March, and the income becomes smaller as the reserves are depleted, in particular starting with the months of August and September. Considering the median income, the fluctuations are much smaller, but still reveal that the highest income occurs in April.

For the non-agricultural households, large fluctuations are also observed between these months, reaching a maximum in November (18,115 CFAF) and a minimum in March (8,821 CFAF).

The total income of a household of ATACORA is therefore very low, but superimposing the income and expenditures on the same graph shows that the expenditures exceed the income almost all of the months. Now, we have seen that 70% of the households claim they economize up to 20,000 CFAF per year, which means the data that we have on the income are clearly underestimated. The per capita income that we calculated is 10,706 CFAF (Table 41). If, however, we consider that the expenditures per capita are 18,779 CFAF (Table 61), we can conclude that the average per capita income should be between 18,000 and 20,000 CFAF.

## STRUCTURE OF INCOME AND EXPENDITURES OF AGRICULTURAL HOUSEHOLDS ON A MONTHLY BASIS



Tables 32 to 38 show that there is no statistical relationship between the income of the agricultural households or the non-agricultural households and the age of the head of household, the size of the household, the number of active members of the household, or the main activity of the head of household, as concerns the non-agricultural households.

Table 39 reveals the source of the income of the households. For agricultural households, it would appear that the agricultural operation per se only accounts for 39.1% of the income, which is very little. In contrast, 46.9% comes from small-scale commerce. The other income consists of gifts (8%), outside jobs (3%) or miscellaneous (.20%).

In effect, careful examination of Table 41 reveals that the products of the farm, plus the products of the picking of fruits, hunting and fishing represent 56.3% of the income of the agricultural households, which is more realistic. Commerce, excluding the unprocessed products of the farm, therefore represents 27.4% of their income; the outside jobs represent 3.5%; and the miscellaneous category ("tontine", pension, etc.) represents 12.8%. A graphical representation of the income structure of the agricultural households yields therefore the following:

### INCOME STRUCTURE OF AGRICULTURAL HOUSEHOLDS

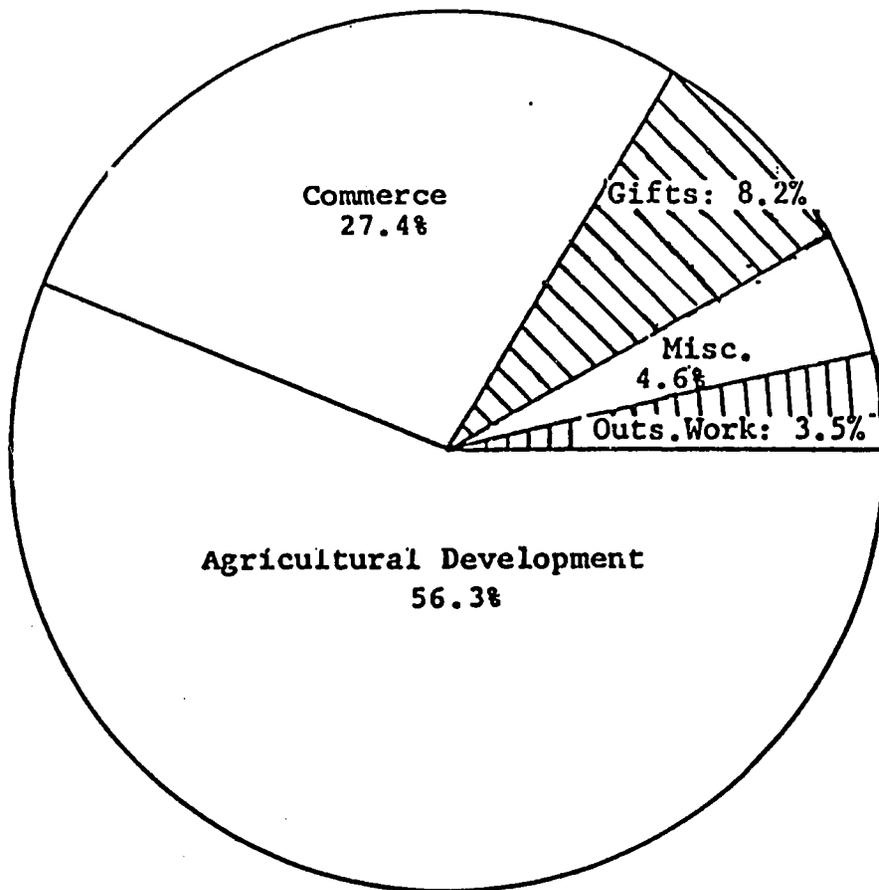
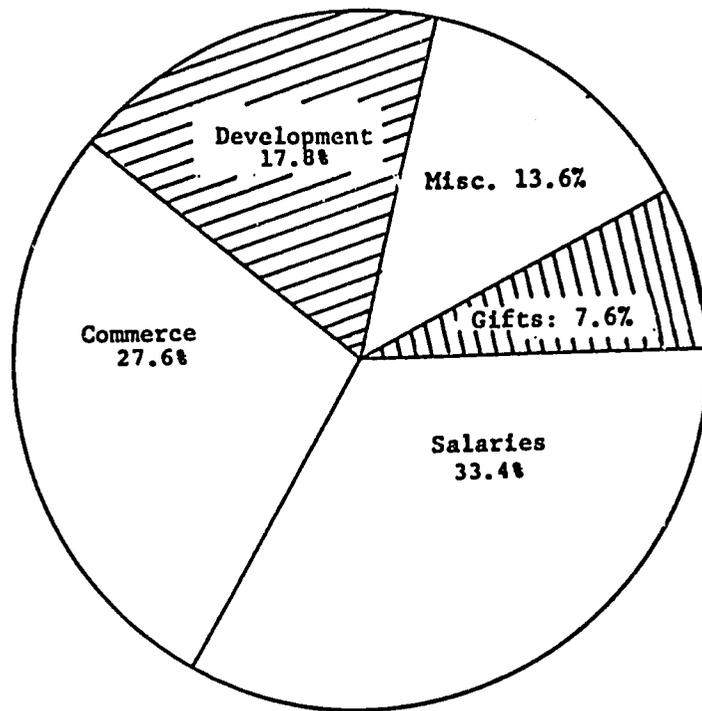


Table 39 has little meaning for the non-agricultural households, since the enumerators often were confused between the categories "outside jobs" and "agricultural operation", having included their wages sometimes in one category and sometimes in the other category. Thus, it would appear that 45% of the income is the result of commerce and 35.1% is the result of salaries, in adding up categories 1 and 3. At the same time, however, we know that there are rarely any non-agricultural households without a field, or a large garden, from which they draw income from the sale of the products they grow. Table 40 reveals that 17.8% of the income is indeed the earnings from their small operation, which is important for the non-agricultural households, 27.6% is the proceeds from commerce, 33.4% the salaries received and 21.2% miscellaneous. A graphical representation of the income structure of the non-agricultural households therefore yields the following:

#### INCOME STRUCTURE OF NON-AGRICULTURAL HOUSEHOLDS



Comparing the income structure of the agricultural households and the non-agricultural households, one notes that commerce represents practically the same percentage of income in each of the groups, and occupies second place, after the income from the operation for the agricultural households and after the salaries for the non-agricultural households.

Table 41 gives the annual income of all of the households by nationality. As concerns the FON, YORUBA, DENDI and others, the number of households is too small for the data obtained to have any significance, the margin of error being too great. Considering only the most important groups, we therefore obtain the following classification of per capita income:

NATIONALITY	PER CAPITA INCOME CFAF
DJOUYOU	14,182
PEULH	12,154
OTAMMARI	7,926
BARIBA	7.165
PROVINCE	10,706

The BARIBA and the OTAMMARI therefore appear to have per capita income far below that of the PEULH and the DJOUYOU. If we consider the expenditures, however, (Table 61), we see that the order and amount are entirely different:

NATIONALITY	PER CAPITA EXPENSES CFAF
OTAMMARI	23,129
DJOUGOU	17,238
BARIBA	10,710
PEULH	10,664
PROVINCE	18,779

This time, it is the OTAMMARIS who are far ahead in terms of expenditures and the PEULHS who are at the bottom of the scale. Since very few households have access to credit, it can be concluded that the income declared by the OTAMMARI, DJOUGOU and BARIBA is way below reality. That income was underestimated.

#### IV. THE EXPENDITURES OF THE HOUSEHOLDS

Table 44 gives the distribution of the expenditures of the agricultural and of the non-agricultural households on a monthly basis. As for the income, the mean of the expenditures is much greater than the median: 50% of the population with very low income spend little and those with more income can spend more. The following table shows that the largest expenditures for the agricultural households occur in March (11,407 CFAF), the beginning and middle of the agricultural cycle, and they decrease beginning with October, for the dry season. For the non-agricultural households the greatest expenditures take place in May (20,000 CFAF) and the lowest level is experienced in February and March, as can be seen from the following table:

**MONTHLY MEAN OF EXPENSES OF THE AGRICULTURAL  
AND NON-AGRICULTURAL HOUSEHOLDS**

EXPENSES (CFAF)				
MONTHS	<u>AGRICULTURAL HOUSEHOLDS</u>		<u>NON-AGRICULTURAL HOUSEHOLD</u>	
	MEAN	MEDIAN	MEAN	MEDIAN
January	7,150	2,617	15,810	4,010
February	8,913	2,922	11,486	4,270
March	11,459	2,807	10,263	3,655
April	8,427	3,215	16,000	6,630
May	10,713	3,400	20,200	5,710
June	11,407	3,465	17,590	4,642
July	9,879	3,630	16,351	4,717
August	9,017	3,410	16,335	5,400
September	6,802	2,505	12,954	3,237
October	7,888	2,755	14,596	4,135
November	6,449	2,225	15,558	4,605
December	7,133	2,895	17,001	3,370
<b>TOTAL</b>	<b>96,220</b>	<b>35,926</b>	<b>184,152</b>	<b>54,381</b>

There is no statistical relationship between the annual per capita income and the age of the head of household in the agricultural households (Table 45) or in the non-agricultural households (Table 46). Also there is no relationship between these expenditures and the size of the households in the agricultural households (Table 47). In contrast, there is a negative relationship ( $r = .38$ ) between these expenditures and the size of the households in the non-agricultural households. The lower the expenditures per capita the larger the size of the household (Table 48). Furthermore, there is no relationship between the expenditures of the households in the non-agricultural households and the number of active persons in agriculture (Table 49). There is, however, a relationship ( $r = -.38$ ) in the

non-agricultural households: the more active persons there are the lower are the expenditures per capita (Table 50). Finally, there is no relationship between the amount of the expenditures of the non-agricultural households and the activity of the heads of household (Table 51). Table 59 presents the overall structure of the expenditures of the agricultural and the non-agricultural households. In categories such as housing, education, health, transportation, animal and plant production represent a very small percentage of the expenditures, for the agricultural households as well as the non-agricultural households. For the two groups, the expenditures for commerce are quite high: 19.6% in the agricultural households and 23.0% in the non-agricultural households. The differences appear above all for the categories "food", "clothing" and "ceremonies-leisure". In the non-agricultural households the expenditures for clothing and ceremonies are very small: 2.6% and 2.8% of total expenditures. In contrast, in the agricultural households more is spent on clothing (6.1%) and above all for ceremonies, which represent 12.1% of the total expenditures. The largest category of expenditures for each of the groups is food. Food represents 34.2% of the expenditures of the agricultural households and 51.7% for the non-agricultural households. In summary, there are three large categories of expenditures in the agricultural households and two in the non-agricultural households, as can be seen in the next table:

CATEGORIES OF EXPENDITURES	AGRICULTURAL HOUSEHOLDS %	NON-AGRICULTURAL HOUSEHOLDS %
Food	34.2	51.7
Commerce	19.6	23.0
Ceremonies-leisure	12.4	2.8
<b>TOTAL</b>	<b>66.2</b>	<b>77.5</b>

Table 60 gives the breakdown of expenditures by products of the agricultural households and of the non-agricultural households. The differences between the two groups are not very large, with the exception of yams and corn which account for a much higher percentage of expenditures in the non-agricultural households. Thus, for the non-agricultural households yams constitute 13% of their expenditures, whereas for the agricultural households yams only account for 2.8% of their expenditures. The same is true for corn, which accounts for 5.9% of the expenditures of the non-agricultural households compared to 1.4% of the agricultural households.

#### V. FOOD CONSUMPTION

Table 66 shows the detailed structure of the annual consumption of food of the agricultural and the non-agricultural households, by product and by origin of the products, as well as the per capita consumption. It is interesting to compare the results by large categories with the data presented by the Ministry of French Cooperation in 1980 on the food situation in the countries of black Africa and the Indian Ocean. This study contains data on Benin which we reproduce in part in the following table:

**CONSUMPTION STRUCTURE**  
(in kg per capita per year)

	ATACORA		BENIN
	AGRICULTURAL HOUSEHOLDS	NON-AGRICULTURAL HOUSEHOLDS	FRENCH COOPERATION STUDY (1980)
Cereals	125	98	87.7
Tubers	193	107	217.2
Beef	2	7	3.7
Mutton	2	1	0.7
Goat meat	2	-	0.8
Pork	1	2	1.6
Eggs (unit)	5	13	-
Milk (liter)	9	3	4.4

This table would seem to show that the consumption structure between agricultural households and non-agricultural households is quite different, at least concerning the quantities consumed. It immediately appears that the consumption of food per capita and per year is much less in the non-agricultural households, for both cereals and tubers. Certainly, for cereals the data on the non-agricultural households are very close to the data of all of Benin (98 kg as against 87.7 kg). But for tubers the consumption of the non-agricultural households appears to be quite low when it is compared with that of the agricultural households, and even more so when it is compared to that of Benin as a whole: 107 kg as against 217 kg. In contrast, the non-agricultural households consume more beef and pork than the agricultural households, but less mutton and goat meat. Finally, the non-agricultural households eat more eggs, but they drink less milk than the agricultural households.

As concerns the nationalities, significant differences appear, as shown in the next table on the consumption structure of the agricultural households. The non-agricultural households are insufficient in number to be able to be analyzed by nationality.

#### CONSUMPTION STRUCTURE OF THE AGRICULTURAL HOUSEHOLDS

PRODUCTS	ATACORA	BARIBA	DENDI	DJOUGOU	PEULH	OTAMMARI
Cereals	125	138	162	80	181	155
Tubers	193	255	100	221	213	131
Beef	2	2	5	2	-	2
Mutton	2	0	-	1	-	3
Goatmeat	2	0	-	5	-	1
Pork	1	0	-	0	-	2
Poultry (unit)	0	0	0	0	-	1
Eggs (unit)	5	0	0	1	19	9
Milk (liter)	9	32	1	1	73	2

This table shows that the BARIBA and the DJOUGOU eat the most tubers, in particular yams, whereas the PEULH consume the most cereals, eggs and milk. (We know that milk is the basis of their diet). The OTAMMARI and the DJOUGOU consume more meat than the other groups.