



FOODS AND FOOD HABITS IN KENYA, LESOTHO, LIBERIA
AND GHANA

REPORT OF A COMPARATIVE STUDY UNDERTAKEN ON BEHALF
OF FAO'S FREEDOM FROM HUNGER ACTION FOR DEVELOPMENT

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ACCRA, GHANA

MARCH, 1976

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INTRODUCTION

It is increasingly being recognised that efforts to improve nutrition should consider existing cultural practices, beliefs, prejudices and taboos about foods which are likely to account for the resistance to change in the attempt to improve or develop the consumption of certain foods. In view of this, many countries have to work out meaningful and practical approaches to the eradication of malnutrition.

In this venture, are international agencies that carry programmes which are concerned with finding acceptable solutions to the problem. One such programme which aims at providing the best possible nutrition education to all individuals, is FAO's Freedom from Hunger Campaign Action for Development (FFH/AD). In an attempt to plan an effective programme of assistance, FAO has commissioned a study of foods and food habits in some African countries upon which to base its policies for nutrition education.

This report is an outcome of the assignment undertaken by the author on behalf of FAO's FFH/AD programme under the following terms:

To investigate and make a comparative study of existing food habits, taboos and prejudices in English speaking African countries in the light of their effect on nutrition in order to propose acceptable nutrition education policies. The African countries selected were Kenya which represents the Eastern part, Lesotho representing the Southern section, Liberia and Ghana represent the Western parts of Africa.

The period of consultancy was initially for August 12 to December 5, 1975. This period was extended to January 30, 1976 due to unavoidable delays. The Schedule was as follows:

Kenya	-	August 12 to September 12, 1975
Lesotho	-	September 13 to 30, 1975
Ghana	-	October 19 to 30, 1975
Liberia	-	November 12 to December 3
Ghana	-	January 19 to 30, 1976.

The study took the form of discussions with people engaged in work on nutrition, visits to homes, markets, research institutions, universities, schools, hospitals, clinics as well as private agencies and ministries working on food and nutrition projects. Comprehensive programmes were planned for me to cover these in each country. (Appendices 1-4). In addition, literature and reports of work foods and nutritional problems were studied.

In presenting this report, I propose to discuss the food situation in each country in view of the fact that good nutrition depends largely on adequate supply and distribution of food particularly foods of high nutritive value, examining also all other factors that contribute to non availability and non-use of available food.

ACKNOWLEDGEMENTS

I wish to express my sincere thanks to the many people who assisted me in the study and who in various ways made my assignment possible and my stay in each country enjoyable.

In Kenya, my thanks go particularly to Mr. M.K. Murigu and his entire staff in the Kenya Freedom from Hunger office. To Mrs. Julia Ramtu, Head of the Department of Home Economics, Kenyatta University College and her staff. To Miss Grace Wagemu, Chief Home Economics section, Ministry of Agriculture. To Dr. Julia Ojiambo, deputy minister for Housing and Social Services. To Dr. I. Mann and Dr. & Mrs. Majale all of whom have contributed to the success of my programme in Kenya.

In Lesotho, my grateful thanks go to Mrs. Anna Hlalele, Head of Nutrition, Ministry of Agriculture, her assistants and the staff of the Ministry of Agriculture. To Mr. Tom Tyle of UNDP office and his staff, to the National Council of Lesotho Women and to the King and Queen of Lesotho for their hospitality and interest in my programme of work.

In Ghana, my sincere thanks go to Mrs. Janet Tay, Deputy Director, Department of Social Welfare and Community Development and her staff in the regions for their cooperation and assistance in making my studies possible.

In Liberia, my thanks go specially to Mrs. Edith Bright, Director of Kindergartens, Mrs. Nancy Nimene Narh of the National Food Assistance Unit, Mrs. Mabel Hill, Deputy to the Director-General of Home Economics who took over in absence of Miss Bandele Bicaise, the Director-General, Mrs. Eunicer Hill George of UNDP office and to Mr. Okoro also of UNDP office for their assistance.

Most of all I am grateful to Mr. Emanuel Bruce, FFHC Liaison Officer for Africa for the honour and the opportunity to be of service to the United Nations Food and Agriculture Organisation, to the Council for Scientific and Industrial Research through the Food Research Institute for releasing

me to undertake this important assignment, to my husband Moses for his consent and forbearance towards my frequent absence from home.

Above all my gratitude to God for His protection throughout my travels.

Once again, my thanks to everyone not mentioned, not excluding the drivers in whose hands my life was trusted throughout the travels.

K E N Y A

I was met on arrival on August 13, 1975, by Mr. M.K. Murigu the Acting General Secretary of the Kenya Freedom from Hunger Council and taken to the office of the Council to meet the members of staff and to discuss my programme.

The full programme given in Appendix 1 gives details of places visited and people met.

My travels in Kenya were extensive covering the Rift Valley, Nyanza Coast, East and West Provinces. The first two weeks, August 13-28, were spent in Nairobi visiting institutions and departments concerned with programmes in nutrition, and discussing with people engaged in work on applied nutrition.

My travels outside Nairobi took me to Embu, Mikinduri and Meru in the Eastern province, Nakuru in the Rift Valley, Mombasa in the Coast province and Busia in the West Province up the border of Uganda.

A press conference organised by the Kenya Freedom from Hunger Council of National Development (KFFHC) and the Kenya News Agency commenced my visit to Kenya and 'Mambo Leo' a TV programme rounded off my stay.

Visits to different areas of Kenya, offered me the opportunity to compare the food situation in each area, and to observe on the spot some of the peculiar problems in each area. My visit to Mombasa was particularly eventful as it coincided with their great agriculture show.

My own observations and discussions with a number of people engaged on nutrition work, together with a review of a collection of literature and reports of work on nutrition problems, account largely for the opinions presented in this report.

Foods and Food Uses

Food items produced in Kenya include maize, sorghum, wheat, rice, potatoes, sweet potatoes, cassava, bananas, arrowroot. A great variety of leafy vegetables as well as abergines string beans, cabbages, carrots pumpkins, cauliflowers, peas and beans are available in Kenya. Animal foods comprise of meat from various animals and insects such as termites and grasshoppers, fish, eggs poultry, milk and milk products. Fruits consist of oranges, pineapples, guavas, passion fruits, loquats, avocado pears, plums, pawpaw, mangoes and wild fruits and berries. Maize in one form or the other represents the staple food for a vast majority of Kenyans. However, rice, potatoes and bread are common items in the diet of urban dwellers especially.

The white maize is popularly used in a variety of ways. It may after removal from the cob be boiled with beans or other leguminous grains such as peas or groundnuts. Green leaves and potato may be added with some fried onion and mashed into a solid mixture which is eaten with or without a sauce. The dry maize is also ground into a meal and used for thick porridge or made into a thin breakfast gruel and taken with or without milk. The meal flour is commercially available in shops. Fresh maize on the cob is seen during the harvest being roasted along the roads.

Sorghum and Millet are either ground into a meal and used in the same way as maize meal or they are boiled whole after pounding and served with sour milk. Thin gruel made from millet flour is fermented and served as a drink.

Wheat flour is largely used for making thin flat bread known as 'chapaties' and eaten with vegetable or bean stew.

Rice is grown largely as cash crop and its consumption is limited.

Roots and Tubers

Potatoes are cooked separately or combined with bananas mashed together and served with green leaves stew. The mixture of mashed potato and banana is a common food for infants. Cassava is not a common item of the diet for most Kenyans, it is eaten only in Nyansa province, where it is boiled and eaten alone or with some vegetable stew. Or it is dried and ground into flour which is usually mixed with sorghum or maize flour to make porridge.

Legumes

A variety of beans are eaten in Kenya and form the main source of protein in the diet particularly of the rural people. Beans are commonly boiled with maize or cooked separately to make stew, which is served with maize or millet flour porridge. In most areas, groundnuts are simply roasted and eaten as snacks. It is only in Nyansa province that groundnuts are used in making sauces or stews.

Meat and Fish

It is common to see meat being roasted by the roadside for sale. The roasted meat is usually eaten without an accompanying staple food. But meat is also used in stews and served with any staple food.

Fish is largely eaten by people living near Lake Victoria and on the Coast where it forms a principal item in their diet.

Vegetables

A great variety of leafy vegetables consisting of cowpea leaves, pumpkin leaves, cassava leaves, tomato leaves, potato and sweet potato leaves, Kale cabbage and cauliflower leaves and many others are used for stews.

Beverages- The most popular beverage in Kenya is tea. There is however locally brewed beer from millet or corn.

Meal Patterns

Because of the numerous tribes in Kenya, food habits vary considerably. However, two main dishes 'Ugali' and 'Irio' have been identified as popular Kenyan dishes. Ugali which is a thick maize or millet flour porridge served with vegetable stew, is said to be a favourite of the Luo tribe. 'Irio' a whole maize and bean, potato and green leaves mixture is a popular Kikuyu dish.

On the average, two meals are generally eaten in a day, particularly in the rural areas. The main meal may be taken in the afternoon or in the evening. In the rural areas and villages the diet is less sophisticated. Potatoes, meat, milk and eggs are consumed more in the cities and towns. Generally, not much oil is used in cooking.

Child Feeding

Studies undertaken in Kenya reveal that all children are fed on the breast in the first six months of birth. Then maize or millet porridge with or without milk is gradually introduced. From then on, only a few mothers especially in the poorer communities continue with the breast feeding until the child is two and a half years old. Solid foods are added when the child's upper and lower teeth appear. Beans and green vegetables are not given to a child until he is eighteen months old. Sour milk is preferred for infants because fresh milk is suspected of giving worms. Goose berries and wild fruits are regarded as children's food and children take delight in collecting them from the bush.

Food Restrictions in Pregnancy

A pregnant woman is to refrain from eating poultry and eggs. She must avoid meat from the ribs of an animal. In the last three months pregnancy, she must refrain from drinking milk and eating bananas.

In the early pregnancy, hot foods are not allowed because they are believed to burn the child and make his skin parchy. Likewise, cold foods are said to cause heart burn.

Certain foods are however recommended for use during pregnancy. Fermented porridge to which sour milk is added, vegetables with sour milk, maize and beans are some of the special foods recommended to the pregnant woman.

On the other hand, during lactation, the nursing mother is fed liberally. A goat is usually killed to welcome the baby and the mother is fed on it for at least two weeks. Soup prepared from boiled meat and bones to which is added special herbs is fed to the nursing mother and believed to give strength and to produce more breast milk.

Cultural Restrictions

Traditional cultural restrictions and regulations further limit the use of food. In parts of Kenya, adolescent girls are not allowed to drink milk and can only do so after marriage. Each clan has its own list of prohibited foods and members of the clan strictly adhere to these totems.

Twins are not to eat the crop of a new harvest of maize, millet or beans until certain ceremonies are performed. Among some tribes, meat and fish cannot be eaten together at one meal.

LESOTHO

The Kingdom of Lesotho is a mountainous island with a population of about 1.2 million. Due to its rocky mountains, only about 12 per cent of the land is said to be arable.

Lesotho has few economic resources and derives its cash income from the sale of livestock and its products - wool and mohair. However an increasing number of the people derive their cash income from working in industries, mines and farms of South Africa.

Foods and Food Uses

The principal crops are maize, sorghum, wheat, peas and beans.

Maize is their important staple food which is eaten in a number of ways. The grains are cooked separately or combined with beans or peas. The grains are pounded to dehusk and the broken grains known as 'samp' are cooked like rice. Maize grains may be roasted until brown and eaten as a snack or the roasted grains are ground into flour adding sugar and salt and served as a snack.

Maize is often ground into a meal without first roasting and is largely used in this form for porridge which is served with either sour milk or stew made with cabbage. The meal known as 'Mealie meal' is also used for making light breakfast pap. The maize meal may be added to pumpkin mash and cooked to a thick porridge.

Next to maize is wheat which is used largely for bread. Steamed bread is a popular accompaniment to stews and sauces made with beans or peas.

Other foods available in Lesotho are potatoes and vegetables such as cabbages, as-paragus, carrots, and tomatoes almost all of which are imported from South Africa. So are fruits like pears, oranges, and cherries. Peaches and apricots are however grown widely in Lesotho. Likewise spinach and pumpkins are grown in the back yard.

The leafy vegetables are largely used for stews. They are cooked with maize flour to make a stiff porridge. Young pumpkins together with the leaves may be cooked in milk and served with mealie meal porridge.

Livestock

There is an intensive promotion of eggs, poultry, sheep, pigs and fish production.

Infant feeding

A nutrition survey conducted by a WHO team in 1956-1969 showed that almost all babies are breast fed through out the first half year of life. During the second half of the year, mothers are usually ignorant of the baby's increased food requirements and either continue to only breast feed or feed the child on starchy foods without an addition of milk or any protein foods. However, a large proportion of mothers continue to breast feed their children until they are two years old.

Food Prohibitions

Most food prohibitions concern adolescent girls. Girls are not to eat eggs, Surrounding this taboo, is the belief that girls who eat eggs have difficult and complicated married life. Girls are not to eat meat that has been transported over a long distance or carried across a river or stream. Girls are not permitted to eat offal because it is alleged that offal will make them too fertile. If an animal is killed and found to be pregnant, girls are not permitted to eat such meat. Girls between the ages of 12-13 years are not allowed milk or eggs for fear they may grow too rapidly. However, girls are free to eat eggs after marriage when the eggs are presented to them by the mother-in-law.

Pregnant women avoid eggs and offals such as kidneys and brain.

L I B E R I A

The programme in Liberia was rather unscheduled but covered visits to Ministries of Education, Agriculture, Planning, Labour, action for development and progress; to the central hospital, clinics, markets, homes, schools, university, farm and day care centres, and discussions with people in charge of food programmes and those engaged in work on food and nutrition.

Outside Monrovia, I visited Cullington College in Banga - Bong County and Robertsport to discuss nutrition and Agriculture extension work being done respectively at these places.

Food Production and Utilization

Liberia produces rice and sassava as its important staple foods. Other root crops such as sweet potatoes and cocoyam are secondary. The main animal foods comprise of fish of all kinds including snails, crabs, crayfish; goats, sheep and pigs. Others include game of all types, poultry and insects such as termites, bamboo and worms. Cattle raising is limited because of tsetsefly infestation. As such, milk and diary products are imported.

A wide variety of leafy vegetables are used. Popular among these are cassava leaves, sweet potato leaves, collards, wild spinach and others. Other vegetables are garden eggs, okro, pumpkin, peppers and tomatoes.

Groundnuts and beans of different sizes and colour are cultivated. Benniseeds are grown on a small scale.

Oil is produced largely from oil palm both from the kernels and the pulp. Other oils used are coconut oil, groundnut oil and cotton seed oil.

Food Uses

Rice, the main staple food is cooked and served with vegetable soup or stew. Or it is combined with meat sauce to make 'jolloff'.

Cassava is prepared in several ways. The sweet type is simply boiled and served with avocado pear. After cooking, cassava may be pounded into a sticky mass known as 'Dumboy'. It is also eaten as 'foofoo' - fermented starchy paste cooked to gelatinous consistency.

Served with the staple foods are soups and stews made with the great variety of leafy and other vegetables and palm fruit. 'Palm butter' - (thickened palm stew) is a favourite of Liberians. Generally two meals are eaten in a day - one at mid-day and the other in the evening. This may be reduced to one in the rural areas.

Child feeding

The first infant food is rice water which is introduced at the age of six months. This is followed by soft boiled rice with oil, or rice and green vegetables. Children are not generally fed meat until they reach their 5th birthday. To give meat to a child earlier than this, is believed to make him disrespectful to elders or make him steal the meat or cause him to have worms. Fish is not favoured either, because of its bones. Feeding eggs to children are suspected of causing retardation, infertility or delay in talking. On the other hand, termites are considered excellent food for children. The scooping up of the swarmed insects after the rains is said to be a delight of older children. Bananas are regarded as cause for depression of the fontanel.

Restrictions during Pregnancy

Apart from individual's intolerance of certain foods during pregnancy, the pregnant woman is also subjected to a long list of dietary restrictions. Among these, protein foods such as eggs, different types of meat and fish

constitute the greater percentage. Such foods are believed to cause one harm or the other to the woman or to the unborn baby.

Eggs from under a hen that is setting is suspected to cause abortion. In some cases, any type of egg is believed to cause abortion. The eating of squirrel during pregnancy, is said to cause 'fits' in the child. To eat porcupine is also feared to result in the splitting of baby's upper lip or long projecting teeth. To eat the flesh of animals like cow and sheep is said to cause nose bleeding or foaming in the child, or cause difficult birth. The child is said to have the habit of scratching its nose if the mother eats hog meat during pregnancy. Bloody and foamy stools are said to result if the mother eats catfish or crab meat. To eat bamboo worms or a rat during pregnancy is believed to cause respectively difficult birth and nose bleeding in the child. A pregnant woman is not to eat cowbelly for fear the cord will wrap around the child. Nor, is she to eat the crust of cooked rice or else the placenta will not come out. Some foods are generally discriminated against. For example, cocoyam is feared to cause itching of the ~~mouth~~ and said to cause piles.

GHANA

The Volta region, Brong Ahafo, Western region, Northern and Upper regions of Ghana were covered in the study.

These regions represent the main vegetative areas of Ghana such as the Northern Savannah, the forest zone and the coastal plain.

Foods and their uses

Foods produced in the different zones of Ghana are the cereals - maize, millet, sorghum and rice. The starchy crops are cassava, yam, cocoyam, sweet potatoes and plantains. Groundnuts and beans of different types are produced as well as vegetables such as okro, garden eggs, mushrooms, tomatoes and a great variety of leafy vegetables. Fruits consist of oranges, bananas, pineapples, avocado pear, mangoes, sweet and sour sops, guavas, berries and a host of others that grow wild.

Animal foods comprise of meat from cattle, sheep, goats, pigs, game and poultry.

Fishing is an important industry in Ghana and a great variety of fishes including crabs, shrimps, snails and other shell fishes provide a valuable source of protein in the diet of many Ghanaians.

Fats used in Ghana, include palm oil, shea butter, palm kernel oil, groundnut oil and coconut oil.

The different zones have their favourite staple foods. Millet and sorghum are important staple foods in the Northern Savannah. Maize is popular in the coastal plain. In the forest zone, cassava and plantains are the main staple foods. Maize which is prepared in a great variety of ways, is however eaten throughout the country. The maize grains either roasted or unroasted is ground into a meal and used for light or thick porridges.

The grains are processed into dough and serves as the basis for many maize dishes. Maize in grains or flour is cooked combined with other foodstuffs like beans and groundnuts. Beverages are also made using maize and sorghum.

Rice is simply boiled and served with stew or it is mixed with the stew to make a dish known as 'Jolloff'. Or after cooking, it is mashed and sweetened with sugar. This is a common snack in some parts of Ghana and very popular with children.

Cassava is consumed in a variety of ways. The sweet type is simply boiled and served with vegetable sauce. The boiled pieces are pounded into 'Fufu' a sticky mass which is served with soup. Cassava is ground into dough and used for making porridge, or the dough is processed into other products such as 'Gari' (Gelatinised grains of cassava dough). Pieces of cassava are dried and ground into flour and used for making thick porridge either separately or in combination with maize or millet flour. Starch from cassava is processed into 'Tapioca'.

Green plantain may be boiled with cassava and pounded together to make 'Fufu' or it is simply boiled and served with vegetable sauce.

Other starchy crops such as yam, and cocoyam are also pounded into 'Fufu'. Including sweet potatoes, these roots are also blended with meat or fish stock adding oil, tomatoes and onions to make a fairly thick porridge which is ideal for infant feeding. After boiling, these starchy crops may be mashed adding fried oil. This is another good dish for children. Strips of the crops are also fried for snacks. Ripe plantain is commonly fried in cubes or pounded and mixed with any cereal flour or dough and fried or baked.

Legumes: A great variety of leguminous foods are produced in Ghana. Chief among these are cowpeas which are used in many different ways. A popular form is simply boiling and serving with fried oil and 'gari'. The grains are cooked, combined with rice or with roasted corn meal to make a thick porridge which is served with sauce. The grains are ground into paste or flour after dehulling, and drying and used for making fried or steamed products. The dehulled grains are also cooked into semi-solid paste adding some oil - A suitable dish for infants. Cooked cowpeas are very much used for stews.

Other types of legumes such as the broad beans and 'agushie' melon seeds are used in stews and soups sometimes as thickening. The bambara bean is also very popular. It is boiled and seasoned with salt and pepper and served with fried plantain or other plantain products.

Oil seeds:

Groundnuts are used not only for oil but also for soups. In Northern Ghana, the paste that is left after the oil is extracted is rolled into strips and fried for snacks. It is common to see hawkers selling roasted groundnuts for snacks. Groundnut cake is also a popular sweet.

Coconut is eaten fresh. In the dry form it is largely processed into oil. Some amount of dried coconut is consumed either served with the staple foods or grated and made into sweets.

Palm fruit - apart from extracting oil, the palm fruit is also largely used in making soup.

Variety in diets

What has been described accounts largely for the Ghanaian diets in general. The northern parts of Ghana have unique dietary patterns. Not only do they live largely on millet and sorghum, but their soups and stews are usually flavoured and enriched with fermented oil seed

products which are made locally. Greater use is made of leguminous grains and a greater variety of leafy vegetables both cultivated and wild are used in making soups and stews. These leafy vegetables are usually dried and preserved.

Eating Patterns

The main meal which may be taken either in the afternoon or evening, usually consists of a staple food served with soup or stew which contains meat and or fish-smoked or fresh and vegetables as well as oil or oil seeds.

The first meal of the day may be heavy or light depending on the individual. Commonly, this meal consists of light rice or maize pap.

Infant feeding

The first infant food is usually introduced at the age of six months and consists of maize or millet pap sweetened with sugar. Gradually, very light maize dough porridge is served with some soup and mashed yam and other starchy foods are added.

Young children are objects of many food restrictions. The most serious are the refusal of meat and eggs to young children because meat is suspected to cause worms or sore in the child's stomach, and the blame on eggs for causing constipation, offensive stools, molted teeth, worms, delay in walking or early teething which is regarded in certain areas as a bad omen.

Milk and fish are known to cause diarrhoea and like meat, fish is blamed for offensive stools and withheld from the child also because of the bones. It is common opinion that a child who is brought up on meat, fish and eggs becomes a spoilt child and a thief.

Leafy vegetables are not usually fed to young children, together with fruits, they are regarded as causes for diarrhoea.

Food Restrictions in Pregnancy

The pregnant woman is also subjected to numerous restrictions on food most of which concern important foods such as eggs, and different types of meat and fish as well as fruits and vegetables. Chicken, eggs are avoided for fear of having difficult birth. Eggs in general are said to cause the child's head to be tender. Snails are suspected to cause patches on baby's body and are said to be responsible for slimy mouth and black lips.

Bats and monkeys which are eaten in certain areas are avoided during pregnancy for fear the baby will have physical characteristics of these animals.

Fruits such as pineapples, mangoes, and sugarcane are said to cause miscarriage. Pawpaw seeds when incidentally swallowed by a pregnant woman is feared to collect in the child's cord causing stomach pains.

Among the vegetables that are avoided are garden eggs, okro and tomatoes. Garden eggs are supposed to cause the development of an enlarged naval or are said to produce rashes on the child. Okro is thought to cause weakness during delivery.

DISCUSSIONS

Food Production and Distribution

Kenya and Ghana, the two large countries, produce the largest variety of foods. Kenya in particular is fortunate to have a climate which is suited for both tropical and temperate foods.

My own observations tend to support the assertion that both these countries produce sufficient food to feed their populations.

Liberia also has the potential to produce enough food and is almost self sufficient in the production of her main staple food.

Lesotho on the other hand, is in a less privileged geographical position. Being mountainous and susceptible to natural erosion, she has to rely on food imports. However, much effort is being made beyond the mountains to produce her own food.

In any case, without exception, all the countries have a common problem - that of uneven distribution and marketing of available foodstuffs with the result that there is a congregation of foodstuffs in the cities and large towns, leaving the small towns and villages almost bare. Also in all the countries, starchy foods and the cereals are in a more abundant supply. It is also ironical that in all these countries except perhaps Kenya where it is not so striking, there are contrasting groups of 'too well-fed and not so well-fed populations.' Thus emphasizing the problem of poverty and or unfair food distribution within the countries. Food is sparsely available even in villages where certain foods are produced. Seasonal shortages of staple foods are reported in every country.

Food Uses

Diets normally follow patterns of food production. Thus, starchy food crops become important staples where they are produced. Likewise,

in cereal producing areas, cereals form the main staple. It is recognised nutritionally that communities that have starchy food crops as their staple, require more protein foods for an adequate diet than in cereal eating communities where the cereals supply at least 7-8 per-cent protein. However, the mixture of cassava and cereal flour as observed in Kenya and Ghana, is a good way of using nutritionally inferior flour.

Regarding animal foods, Ghana and Liberia can be broadly described as fish eaters. Fishing and fish smoking are big industries in these countries. Lesotho and Kenya on the other hand are predominantly meat eaters.

Food combinations and dietary patterns particularly in villages are less sophisticated and often short of other important ingredients. For example, the diet in a rural area may consist of a staple food and some vegetable sauce containing little or no meat or fish. In Kenya, the traditional 'Irio' which is a combination of maize, beans, potatoes and leafy vegetables, though sound, is nutritionally inadequate without any meat or fish stew.

It was interesting to see similarities in eating patterns particularly among the low income groups in all the countries. Just as 'kontomire' (cocoyam leaves) are simply boiled with an addition of fermented fish and oil and served with boiled plantain in Ghana's poor communities, so are cabbages boiled and served with boiled green plantain or corn meal porridge in Kenya and Lesotho. It was interesting for me to know that green bananas are eaten in certain areas of the Western region of Ghana too. As in Kenya, they are simply boiled and served with vegetable stew. Or after boiling, are pounded into 'fufu'. However, in Ghana, bananas are popularly eaten ripe as fruit and not as a staple food as in Kenya.

Cash Sales

It is well known that wage earners or people with cash income are better off than those without. Accordingly, people who in the farming system produce cash crops such as cocoa, coffee, tea, wheat, rubber, oil palm, pyrethrum etc. which command ready and guaranteed price are in every respect more prosperous.

As foreign exchange earners, governments pay more attention to the production of such cash crops, and offer incentives for their export. The organisation of cash crop production in Kenya particularly is very impressive. Vast stretches of land are specially cultivated for the production of tea, coffee, wheat, pyrethrum and others. While admitting that large scale food crop production is also promoted along with cash crops in almost all the countries, the large scale food crop farmers are not so well off without such guaranteed markets considering also the perishable nature of food crops.

The small scale or subsistence farmers rely on what they produce for their food requirements and sell as much as they could afford in order to get income for non-farm essential food stuffs as well as for other needs. This being the case, the small scale farmers tend to offer for sale, foodstuffs that fetch the highest price and which incidentally are also the most nourishing foods. Thus unlike fishermen, farmers generally are nutritionally worse off.

It is however seen that in every country efforts are being made to expand food production to satisfy the requirements of the growing population. It is also recognised as disastrous the promotion of cash crops to the neglect of food crops especially the protein containing foods. It can be said with certainty that much awareness has been created in every country in regard to the need to give attention to the nutritional quality and not only to the commercial value of the food crops. In this connection, each government has embarked on programmes to increase the production of

the staple foods as well as protein rich foods such as beans to supplement expensive animal protein foods. Interest in back yard gardening and poultry keeping has been generated in all the countries. In Liberia pig rearing is being intensified.

There are programmes going on especially in maize eating countries which are aimed at increasing the protein content of maize through breeding. There are in addition, programmes for increased animal production to facilitate the consumption of animal protein foods. Every government is trying to ensure its country's self-sufficiency in essential foodstuffs as shown for example in Ghana's 'Operation Feed Yourself' programme. But contrary to these attempts, are deliberate policies that encourage the exportation of not only cash crops but food crops as well, in order to increase the country's foreign exchange earnings. The result is that, out of what seems to be an abundance of food, there is hardly enough to satisfy increasing internal demands.

In Lesotho particularly, it has been observed that emphasis is being placed on the production of wheat for export than on the growing of maize, their staple food. The reasoning is that it is cheaper to import maize with the cash obtained from the export of wheat than to grow the maize locally. This may be true but, it seems unfortunate to have to rely on importation of the main staple food of the country.

OPINIONS ABOUT FOOD

Wide spread opinions about food in each country can be regarded in my view as personal prejudices and superstitions rather than taboos or totemic beliefs which are observed only by people that belong to a particular clan and which concern rare types of animals. There are interesting similarities in the opinions about foods and in the restrictions against vulnerable groups. The restriction against eggs is observed as widespread.

The great variety of foods available in each country, provide the bases for the formulation of well balanced and nourishing meals. It therefore seems that unnecessary emphasis is being placed on taboos as a factor in malnutrition. It has been my experience that even taboos or totems are no longer being seriously observed. People have admitted eating totemic foods without any effect. What to me is most disturbing and which should engage serious attention in nutrition education programmes, is the association of diseases to very important foods such as milk, meat, eggs as well as fruits and vegetables and their avoidances during critical moments such as pregnancy and childhood.

It has been discovered that in some areas, the avoidance of eggs is only in respect of eggs that are left unhatched. In some cases too, as in pregnancy, only chicken eggs and not guinea fowl or duck eggs are avoided. The unfortunate thing in this respect is that chicken eggs are in a more abundant supply. It has also been observed that generally, eggs are not traditionally regarded as regular items of a meal. Boiled eggs that are sold by hawkers, are largely eaten as snacks rather than as part of a meal.

POVERTY AND CULTURAL BEHAVIOUR

Poverty is indeed one of the factor that contribute to malnutrition, but aggravating the situation are the African cultural values and practices. Poverty may cause the denial of essential and expensive foods to the entire family, however, the African cultural practices are such that when essential foods are in short supply, it is the young child that is denied the privilege of such foods in favour of the grown ups, particularly the father. Such cultural values of respect to elders which deny meat or egg to the child because the child may become disrespectful to elders or may become a thief, is serious, and should be taken up as an important area for education.

Many other opinions about food in this report, reveal gross ignorance of the causes of diseases. Nutrition educators and extension workers should concern themselves with these stated opinions while studying more of such misconceptions about food in order to explain in the light of modern and scientific knowledge, the causes of diseases to which certain foods are associated in order to eradicate these false opinions from the population.

It is equally important to break certain traditional beliefs and fears about rivers which may be loaded with fish but which are reserved for gods. This is a sad observation in Ghana where the sea and the rivers could have provided sufficient fish for the population.

TRADITIONAL HEALERS AND NUTRITION EDUCATION

It is very common in African countries for the sick to consult witch doctors or traditional healers. At traditional clinics, prescriptions include foods to be avoided. It is an interesting observation that foods that are commonly forbidden to the sick, consist largely of protein containing foods. These prohibitions are often in conflict with nutrition principles. On the other hand animals such as chicken, sheep and goats are demanded for sacrifice. A clever way for the healers to obtain these animal foods for their own consumption.

SCHOOL FEEDING

Another group in the population of each country that suffer from lack of adequate food, are day-school children. Little or no provision is made towards the feeding of day-school children in all the countries. In Liberia, Kenya and Lesotho, feeding of the children is organised around relief-foods. In Ghana, it is left largely in the hands of food hawkers. It is known that day school children walk long distances to school starting very early in the morning often without breakfast for most of them.

DIETARY CHANGES

It has been my experience through out the tour that nutrition extension programmes initiated by every government has made considerable impact on people's knowledge of nutrition but with little effect on dietary habits and cultural behaviour. The observation in Ghana and Lesotho although not exclusive, is cited to illustrate the importance of cash income in the improvement of diets. While abundant quantities of eggs are seen piled up in 'egg circles' and market places, the price is still beyond the means of the average low income earner.

Women still have fears about the consumption of many foods during childhood and pregnancy. However, it is re-assuring, the admission by older people that the adherence to such prohibitions is on the decline among the younger people.

NUTRITIONAL PROBLEMS

Major nutritional problems in each country are Kwashiorkor and Marasmus. Correlated with these conditions are infections such as measles, tuberculosis, diarrhea, malaria, tape worm and anaemia. It is found that in some areas, protein foods - eggs, milk and meat are withdrawn during measles.

SOCIAL FACTORS

Family instability and irresponsibility of so called bread winners have been observed as factors in malnutrition. Women of the low income families, are left to bear the full burden of child feeding and rearing. In such cases, the women feeling neglected and over worked are unable to give special attention and care that the children need.

SUMMARY AND RECOMMENDATIONS

Constraints that have been observed in respect of malnutrition in all the countries consist of sparse food supply in remote towns and villages; the need for cash which forces the farming populations to sell much of the foods that are produced or shift to cash crop production which is better organised in every country as a foreign exchange earner; social and cultural practices, and beliefs evident in the numerous opinions about food that affect the nutrition of vulnerable groups. Inter-relation of poverty, disease and malnutrition has been noted as indeed a complex problem. The low income groups being constrained by inadequate income, also suffer from lack of food, social amenities such as good drinking water, poor and unsanitary surroundings, with the result that the poor are more susceptible to diseases which in turn lead to greater nutrient requirement.

In view of these constraints, I would like to add my voice to the ever recommended approach to the problem of malnutrition. Programmes that aim at eradicating malnutrition should coordinate other programmes from the Ministry of Agriculture for food production, distribution and marketing on the local level; Ministry of Health for control of disease and environmental hygiene, Ministry of Social Welfare for increase in purchasing power as well as continuing nutrition education.

The problem of inadequate food supply need be thoroughly examined for each country. In Lesotho, the greatest need as I see it is for irrigated lands to produce the food. Ghana, Kenya and Liberia also require dams for irrigation to offset their periodic food shortages. Equally important for these countries that seem to produce enough food but yet have sections of their population with little or no food, is for them to be aided to collect the necessary data on their food production and distribution to enable them plan their food production for total self sufficiency.

In Ghana, the constant call for transportation and marketing of foodstuffs that are claimed to be rotting on the farms create impressions of abundant food for all except for lack of good transport and distribution systems. In fact, the need for cash income should and does urge the transportation of food from producing areas (the rural areas) to the consuming or good market areas (the cities and towns). The result is that there is a congregation of a great variety of foods in the cities and large towns. It is common to see large quantities of foodstuffs in city markets, the unit cost of which is still beyond the purchasing power of the low income group.

In considering food supply and purchasing power, I would like to recommend an approach which should aim at motivating people with low purchasing power to produce on household level, some of the essential foods - small back yard gardening for vegetables, small poultry keeping for meat and eggs and rearing of other small animals for food.

Poor households in both urban and rural areas can be identified and aided to produce food for their own consumption. The emphasis and the criteria for receiving aid should be primarily for home consumption and not for commercial purposes. This recommendation is not new. What is important is to guard against previous experiences of promoting projects that benefit not the poor but people who are already well off.

It is important to promote subsistence farming along with commercial food production. In this regard, governments should see first to the satisfaction of food supply to the population before engaging an exportation of food for foreign exchange. Commercial food farmers should be encouraged with the necessary incentives to step up food production considerably in order to have enough first for domestic consumption, then for feeding the factories and lastly for export.

INTERNATIONAL AND PRIVATE AGENCIES

Many international and private agencies are operating in all the countries on programmes related to food and nutrition.

Among them are the following: United Nations Food and Agricultural Organisation (FAO) with its FFHC programme, the World Food Programme (WFP); United Nations International Children's Fund (UNICEF) and United Nations Development Programme (UNDP).

Voluntary organisations include the Catholic Relief Services, Save the Children Fund, the Red Cross and the Missionaries. These agencies are supplementing the efforts of governments in one way or the other in solving the food and nutrition problems. While appreciating the useful services being rendered by these organisations, I am of the opinion that a co-ordinated effort will achieve accelerated results. The FAO's Freedom from Hunger Campaign/Action for Development Programme (FFHC/AD) which also concerns itself with the problem of malnutrition, is an appropriate body that should undertake to coordinate the activities of other agencies and to recommend areas for action. This will enable other organisations wishing to offer aid or to participate in development programmes to know the directions in which they can operate in order to offer help where it is actually needed with the aim of eventually covering the whole country.

In this connection, the establishment of an FFHC committee in every country would be of great benefit. At present, of the four countries, Kenya is the only one that has a Freedom from Hunger Council for national development which is privately and independently run, but with government recognition and support.

In Ghana, the FFHC committee that was once established under the Ministry of Agriculture was abolished as a result of the introduction of 'Operation Feed Yourself' programme by the government.

Under the umbrella of FFHC committee, it should be possible to undertake studies of the problems and needs of a country and solicit funds for projects according to these needs; to recommend to other voluntary or international agencies, areas where they can operate with the aim of freeing the whole population from hunger and malnutrition.

In Lesotho, projects such as the development of fish ponds and **training in fish smoking need be extended to other parts of the country** for the benefit of the whole population. In this regard, FFHC Committee can direct other agencies to undertake the same project in different areas of the country, and can invite African countries where fishing and fish smoking are organised industries, as trainers.

Dams for irrigation are needed in all the countries for sufficient food production and to avert periodic food shortages.

Co-ordinated programmes for crop and animal production, health, social and welfare services, cottage industry and nutrition education, aimed at overcoming malnutrition are organised in all the countries only in limited areas. Such projects need to be extended to cover other poor communities.

High Schools are being mobilised in Liberia and Ghana to produce some of the essential foods for their own use in order to reduce cost of feeding particularly in boarding schools. But, day 'primary school' feeding seems to receive little attention. Relief foods are being used in these countries notably Kenya, Lesotho and Liberia and in parts of Ghana for feeding day school children. As to how long this donation can continue is a question to consider and plans made to evolve a more lasting school feeding system. These are some of the areas where voluntary agencies can be of great help. In food production, greater emphasis should be placed on animal foods and protein rich crops. Note should also be taken of the fact that people are resistant to unfamiliar foods. It is therefore better to produce more of familiar and preferred foods than to introduce unfamiliar ones.

EDUCATION

With proper nutrition education, it should be possible to formulate well balanced meals out of the great variety of foods available in each country. There is need for continuing education on the value of food to the body particularly at vulnerable periods with an understanding of what constitutes a nutritionally adequate diet.

It is important to organise a campaign against deep rooted beliefs and prejudices about food and against cultural practices and attitudes in child feeding, and during pregnancy.

As part of the campaign, songs should be composed in the local languages of each country with the purpose of making meaningless, such beliefs and prejudices about food as well as cultural practices that militate against the nutrition of young children and pregnant women. Cooperation of traditional healers should be sought in view of their part in perpetuating opinions about food.

Through short orientation courses or seminars, traditional healers, health and nutrition extension workers should be exposed to facts from research results and provided with necessary techniques to combat deep rooted beliefs and cultural practices. Explanation of the causes of disease in the light of modern and scientific knowledge should form part of nutrition education.

Setting up Nutrition rehabilitation centres in poor communities where mothers are involved in the preparation of the children's diet using local foodstuffs combinations according to nutrition principles, will make a lasting impression of the effect of good food on the health and growth of their children.

I have seen nutrition rehabilitation centres in Kenya and Ghana being run by voluntary organisations and missionaries. More of such centres will contribute greatly to the eradication of malnutrition.

Nutrition extension workers should arouse the consciousness of the poor and the malnourished to the relation between the number in a family and adequate feeding and good nutrition and the quality of life.

FOOD USES

Maize, rice, and cassava are the staple foods common to all the countries. Their dietary uses are in most cases similar. But there is a more varied use of cassava and maize in Ghana than in the other countries. So are protein rich foods such as beans and groundnuts.

An exchange of information among African countries about dietary uses of foods will be beneficial in promoting a more extended use of available foods as well as helping to combat resistance to foods that are unacceptable in one area, but are in common use elsewhere.

APPENDIX I

ITINERARY IN KENYA - AUGUST 13-SEPTEMBER 11 1975

Wednesday 13th August

Arrival and meeting with the Kenya Freedom From Hunger Council staff at the Headquarters.

Thursday 14

Preliminary meeting with Miss Grace Wagemu. Head of Home Economics Section, Ministry of Agriculture and a member of the Education Committee of Kenya Freedom From Hunger Council (KFFHC).

A visit to a semi-modern maize mill at Kibiehiky.

Monday August 18

To Nyeri

Tuesday August 19

Meeting with Miss Beautah, Lecturer in Nutrition at Kenya Polytechnic and a tour of the polytechnic.

Courtesy call on the Ghana Ambassador.

Wednesday August 20

Meeting with Mrs. Susan Ngui, Head of Nutrition Section, Ministry of Health and Chairman of Nutrition Committee of KFFHC.

Visit to Karen College of Nutrition.

Thursday August 21

Visit to FAO office

Meeting with Dr. Crystall and Miss J. Berger of the FAO's programme for Better Family Living. The latter is a member of KFFHC Nutrition Committee.

Visit to Food Processing Industries.

Friday August 22

Meeting with Mr. Zadock Otiens, Chief Executive of the National School Feeding Council and member of KFFHC Executive Committee.

Second meeting with Miss Grace Wagema in her office.

Monday August 25

Meeting with Dr. Julia Ojiambo, Assistant Minister, Ministry of Housing and Social Services.

Meeting with Mrs. Julia Ramtu, Head of Home Economics Department, of the Kenyatta University College.

Tuesday August 26

Joint meeting with Dr. S. Ongeru, Senior Lecturer and Dr. Sehmi both of the Faculty of Medicine, University of Nairobi.

Visit to the University of Nairobi Medical Research Centre.

Wednesday August 27

Visit to Kenya Cooperative Creamers

Meeting with Mr. P.K. Kinyanjui and his colleagues of the Institute of Development Studies, University of Nairobi.

Thursday August 28

Press conference in the KFFHC office

Aim- Comments on the effects of faulty food habits, taboos and prejudices on nutrition

Departure to Embu-Eastern Province accompanied by Mrs. Rose Kiangura Home Economist, Ministry of Agriculture.

Joint meeting with the provincial nutritionist, Home Economist and social welfare officer in Embu.

Return to Nairobi.

Friday August 29

Departure to Mombasa - Coast province

Saturday August 30

A day at Mombasa Agriculture show

Monday September 1

In Mombasa

Visit to homes and markets

Joint meeting with provincial nutritionist, Home Economist, Social Welfare Officer and Director of Social Services.

Tuesday September 2

Visit to Nutrition centres in Mombasa and Kilifi

Return to Nairobi.

Wednesday September 3

Visit to Kirathino village - A multipurpose centre with a Nutrition unit.

Thursday September 4

Departure to Meru - Eastern Province.
Courtesy call on the District Commissioner.
Visit to Mikinduri children's home and health centre.

Friday September 5

In Meru
Visit to Kaaga Rural Training Centre.
Joint meeting with the social welfare officer - Meru,
District Nutritionist, District hospital and home economics
officer, and agriculture officer.
Return to Nairobi.

Sunday September 7

Departure to Busia on Lake Victoria.

Monday September 8

A day with Dr. Julia Ojiambo, Assistant Minister for
Housing & Social Services.

Tuesday September 9

Departure to Nakuru.
Joint meeting with the Rift Valley Provincial Nutritionist,
Home Economist and Social Welfare Officer.
Visit Egerton College.
Return to Nairobi.

Wednesday September 10

Visit to Crop Production Unit of the Ministry of Agriculture.

Discussion with the crop production officer.

Final meeting with the staff of KFFHC.

Farewell meeting with Mr. C.H. Malavu - Chairman of KFFHC.

Mamboleo - TV Programme to comment on some observations.

Thursday September 11

Departure from Nairobi to Lesotho.

PROGRAMME IN LESOTHO SEPTEMBER 12-17

Friday September 12

Arrival

Meeting and discussion of programme with Mrs. Hlalele -
Nutrition officer, Ministry of Agriculture.

Visit to Makhalan yanes to witness official closing of a
village level nutrition course.

Saturday September 13

Meeting with Mr. Russ Coggsell of UNICEF.

Monday September 15

Courtesy call on Dr. D. Phororo, Permanent Secretary, Ministry
of Agriculture.

Meeting with the director of central planning; Director of
Catholic Relief Services; Mrs. C.M. Phafane, Home Economist -
Ministry of Education and Mrs. W. Coaker - Chairman - Save The
Children Fund.

Tuesday September 16

Meet Mr. A.W. Monyake - Director, Bureau of Statistics

Visit to Teyatayaneng (TY).

Meet Senior Poultry Officer

Visit poultry plant and egg circle

Meet the Director of National Teacher Training College and
the Home Economics staff.

Wednesday September 17

Meeting with Mrs. I. Sello, Director of Lesotho Red Cross Association.

Visit to Thaba-Bosin Maternal and Child Health Clinic.

Visit to Agriculture College - Meet the principal and staff.

An evening with the Executive Committee of Lesotho National Council of women.

Thursday September 18

Visit to Lesotho High School and meeting with the headmaster, the Home Economics staff and the matron.

Meeting with the Director of Public Health Services

Visit to Research station and Fisheries section of the Ministry of Agriculture.

Friday September 19

Leave for Roma

Visit St. Mary's High School - Meeting with the Headmistress and staff;

Visit the University of Botswana, Lesotho, and Swaziland (UBLS)

Discussion with the catering officer

Visit St. Joseph Hospital

Return to Maseru.

Monday September 22

Leave for Quthing

Visit Koali Nutrition centre and Mount Moorosi vegetable garden, and egg circle and some communal gardens and fish ponds owned by private farmers.

Tuesday September 23

Leave for Mhaleshoek and Mafeteng:

Visit Farmers Training Centre.

Meeting with the project manager, and his staff.

In Mafeteng, meeting with Mr. Sesoane and Mr. Q. Molapo.

Wednesday September 24

Leave for Tsakholo Health Project and Mapotu Nutrition Centre.

Return to Maseru.

Thursday September 25

Leave for Leribe via Maputsoe Industrial area.

Visit Farmers Training Centre and Leshoele irrigation project.

Return to Maseru.

Friday September 26

Farewell meeting with Dr. Phororo, Principal Assistant Secretary, Ministry of Agriculture and Mr. Montsi, Central Planning.

Saturday September 27

Departure.

APPENDIX III

ITINERARY IN LIBERIA - NOVEMBER 12-27 1975

Wednesday November 12

Arrival
Visit UNDP office.

Thursday November 13

Meeting with Mrs. Nancy Nimene Narh, Nutrition Officer,
World Food Unit.
Meeting with Miss Bandele Bicaise, Director-General,
Home Economics Education.
Courtesy call on the Ghana Ambassador

Friday November 14

Visit Ministry of Agriculture, Extension Division.
Nutrition Committee Meeting.
Visit market

Monday November 17

Visit well baby clinic
School feeding programmes.

Tuesday November 18

To Banga
(Accompanied by Mrs. Edith Bright)
Visit Cullington College

Wednesday November 19

University Farm
Ministry of Action for Development, Discussion with Home
Economists and Agriculture Extension Officers.

Thursday November 20

Ministry of Education
Ministry of Economic Planning
Discussion with Mrs. Edith Bright, Director of Kindergartens.

Friday November 21

Trip to Roberts port - Agriculture Station.

Monday November 24

Visit to Schools

Tuesday November 25

Ministry of Agriculture
J.F. Kennedy Memorial Hospital

Wednesday November 26

Visit Nutrition Clinics
Joint meeting with Home Economists.

Thursday November 27

Departure.

APPENDIX IV

ITINERARY IN GHANA - OCTOBER 19-31 1975 AND
JANUARY 19-30 1976

Sunday October 19

Arrival in Sunyani (Brong Ahafo)

Monday October 20

Meeting with Regional Local Welfare Officer and staff.
Visit to Sunyani Hospital - Discussion with regional
and District Public Health Nurses & Nutrition Officers.
Visit to the market

Tuesday October 21

Visit to Chira to meet a traditional healer - Discussion
on food prohibitions in the treatment of disease
Visit to Ministry of Agriculture, Extension Division.
Discussion with District Agriculture Officer and Extension
Officers.

Wednesday October 22

In Bolgatanga (Upper Region)

Thursday October 23

Meeting with the Regional Social Welfare and Community
Development Officer and staff.

Friday October 24

Visit to market
Home visits

Saturday October 25

Return to Accra.

Monday October 27

In Ho (Volta Region)

Discussion with the Regional Social Welfare and
Community Development Officer and staff.

At Ho Kpenoe

Discussion with households about the foods they eat
and those avoided.

Tuesday October 28

In Santrokofi

Call on the Chief

Discussion with assembled community about foods produced
in the area, their food habits and food avoidances.

Wednesday October 29

At Kpandu & Hohoe

Joint meeting with Social Welfare Officers, Agriculture
Extension workers and Nutrition Extension Officers.

Visit to markets.

Thursday October 30

At Dzodze & Abor

Visit to Hospital

A look round the markets - Discussion with women in the markets.

Friday October 31

Return to Accra.

Friday January 16

In Accra

Consultative meeting with people working on food and Nutrition improvement programmes.

January 19-30

In Western Region.

Monday January 19

To Axim

Tuesday January 20

Meeting with the Regional Social Welfare and Community Development Officer at Sekondi
Discussion of programme.

Wednesday January 21

To Aboso and Agno villages. Meeting with chief and people.
Discuss food produced in the area, their dietary uses and food prohibitions.

Thursday January 22

At Princess Town
Call on the chief
Home visits

Friday January 23

At Sekondi

Joint meeting with representative of Agriculture Extension workers, Home Science educators, Social Welfare Officers and Nutrition Extension workers.

Monday January 29

At Nsien

Meeting with chief and people.

Visit market and clinic - discussion with the nurse in charge.

Tuesday January 27

At Asanta

Meeting with chief and people.

Wednesday January 28

At Axim

Discussion with the Social Welfare & Community Development Officer.

Thursday January 29

At Simpa Pepesa and Tankwa

Visit intergrated Rural Development pilot project.

Discussion with officials on the project.

Friday January 30

Final meeting with officials of Social Welfare, Nutrition and Agriculture extension workers.

Saturday January 31

Departure.

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