

PEASANT RICE CULTIVATION  
IN THE VOLTA REGION  
IN GHANA



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LEGON

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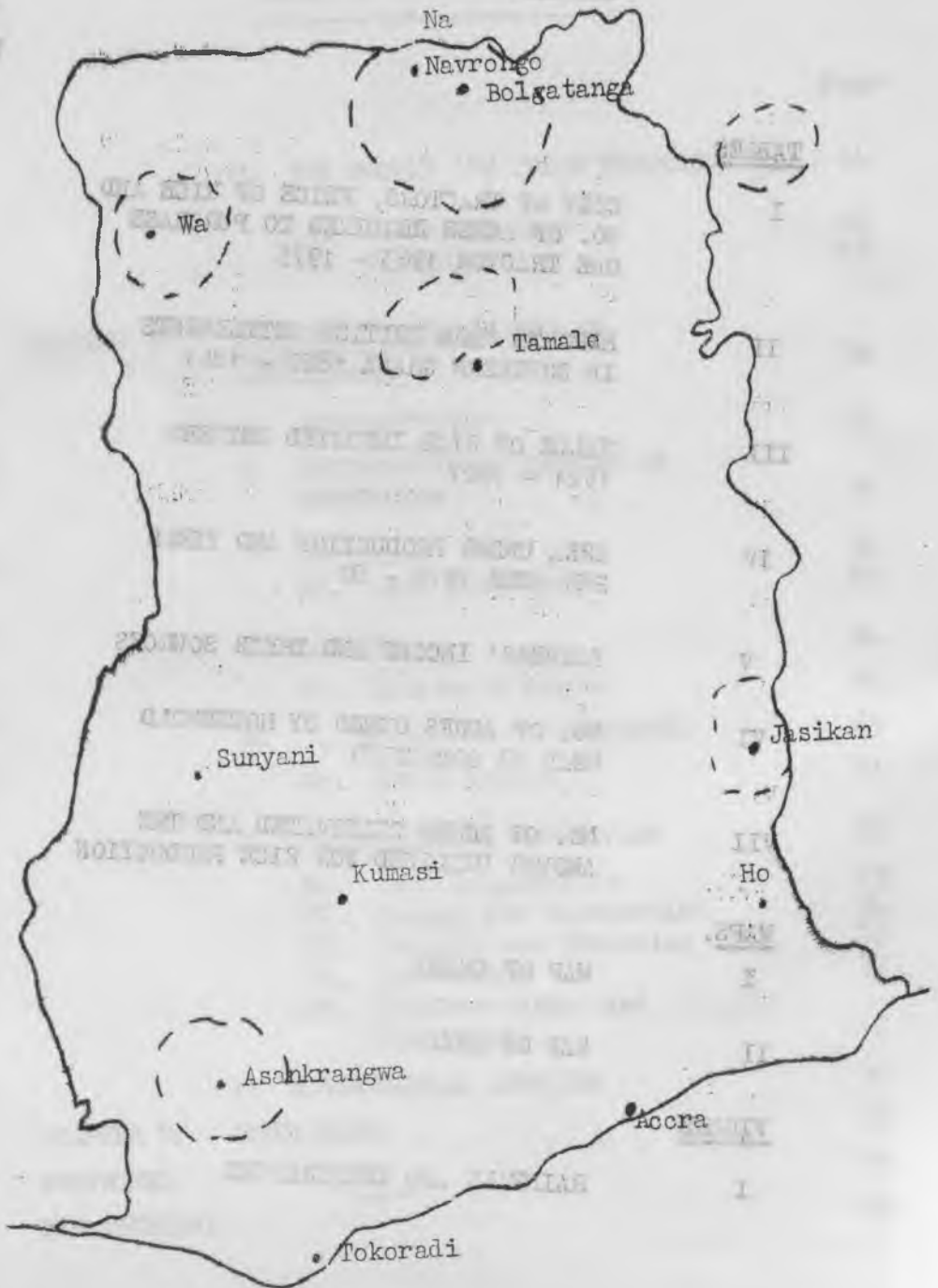
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MAP I  
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PREFACE

Much has been written on the role, or what should be the role, of academic disciplines in third world countries, especially Africa. Should these disciplines concentrate on purely academic pursuits? Alternatively, should scholars consciously go all out to relate their discipline, in an applied sense, to mundane affairs, or must they be seen vigorously participating in the making of policy decisions which invariably affect their role? Opinion is divided on this issue. However, in the social sciences, including Sociology and Anthropology, the question is no longer whether academic disciplines should contribute to the welfare of society, but how far they must go without sacrificing scientific objectivity. It is a problem of degree, rather than of kind, and each discipline is privileged to determine the limits of participation or involvement in the practical issues affecting the society of which they are a necessary part.

Sociology and Social Anthropology which are directly concerned with man, his culture and society must necessarily project the image of that society from which they derive their material for academic study. To the extent that they adhere to the scientific tenets in research - developing hypotheses to be tested empirically and the conclusions deriving from the available data - there can be no anxiety that they will compromise their academic position by overt demonstration of interest in the welfare of society.

This booklet, based on an original field research, attempts to meet the scientific criteria and, at the same time, offer practical lessons in agriculture, especially rice production in the Volta Region. The design of the research, the analytical approach and the conclusions are entirely those of the author himself.

When people are hungry in a country that is blessed with abundant natural resources, including different shades of arable land, then there must be deep-seated problems of interdisciplinary dimension - problems which are probably beyond the ken of agricultural expertise per se. Dr. Thakur has shown that the anthropologist/sociologist, by his preoccupation with problems of culture and society, has a contribution to make to the economics of production and distribution of food items such as rice. Indeed, he has shown, using rice production in the Volta Region as a case-study, that the agricultural problems of this country are "multiplex" - there are problems of, social relations of farmers and non-farmers, work attitudes, lack of capital, inputs and incentives, bureaucratic frustrations, ineffective land tenure arrangements, etc. The wider theoretical frame in which he sees agrarian underdevelopment derives from his academic and practical experience in other parts of the world.

As the author indicates, this study forms only a small sector of the total field covered by his research. He has very good reasons for wishing to test the pulse of the agricultural experts at this stage of his enquiry. Let us hope that the final outcome is equally challenging and that it catches the eye of the agricultural policy-makers.

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In the field I was assisted by Messrs. Salomon Achina and Sichey Anexo (Jacob) who did the bulk of the data collection. Thanks must also be given to the Kludze family of Hohoe who invited me to their home and made me feel welcome. Special thanks should be given to the Chiefs and the people of the four villages who have shown patience with my "intrusion" in their personal life. I would also like to express my thanks to Ms. J. Quampah, my research assistant during the 1979/80 academic year. Mr. Z. Yeebo, amidst his busy schedule, quantified the data, while Mr. Nkansah (Sax), my research assistant, never ceased to demonstrate his enthusiasm for this project. His assistance has been invaluable. Thanks to Mr. Kwadwo Manu for typing the script.

Finally, I wish to express my sincere thanks to Savitri, without whose understanding and cooperation this work would not have been possible and who has grown to share my frustrations, hopes and aspirations for the Ghanaian peasant cultivator.

## INTRODUCTION

The purpose of this study is first of all to discuss, in general terms, the problems of agrarian underdevelopment as they are related to the underdeveloped nations; secondly, to demonstrate specifically some of the problems and constraints which beset the peasant rice cultivator in the Volta Region of Ghana.

In recent years it has become quite evident that every nation - especially the underdeveloped ones - must embark on large scale food production for three reasons:- First, to assist in meeting the basic needs of the people. Secondly, because producing food for domestic consumption has certain distinct advantages, especially in a country such as Ghana where the Government is the single largest employer of labour. Intensifying domestic food production will, besides creating employment, increase the Gross National Product, lower the cost of living and at the same time help to curb inflation and save badly needed foreign exchange. Finally, because large scale food production can help to establish a level of social, economic and political independence. Most underdeveloped nations have become far too dependant on the developed nations to meet their basic needs. This dependence, as we have articulated, is due almost entirely to the historical link between the metropolis and the satellites. It has also been argued that these historical links between the developed and the underdeveloped nations, and the inability or lack of will on the part of the elite leaders in the underdeveloped nations to break the socio-economic links with the metropolis have resulted in persistent food shortages.

We have been told by every regime in Ghana since political independence - civilian and military alike - of the importance of agriculture. But these pronouncements have been little more than lip service to the agricultural sector as the fancy words have failed to transform themselves into meaningful reality. Meaningful changes within the agrarian sector, especially in relation to the means of production, as well as changes in

the emphasis on the crop or crops to be grown are bound to meet with a level of resistance. Because everyone recognizes the importance of food, emphasis on agriculture is never overtly criticized. Such criticisms are however carried out behind closed doors and in diplomatic language. For these reasons we have argued that Ghana, or for that matter any underdeveloped nation, should not depend on her "friends" to feed her since food, in recent years, in the international market has become less a trading commodity and more a political weapon (what better weapon can one find against a hungry man?). The political power of food has probably been best expressed by the late Senator Hubert Humphrey where he stated "I have heard..... that people may become dependent on us for food. I know that was not supposed to be good news. To me that was good news, because before people can do anything they have got to eat. And if you are looking for a way to get people to lean on you and to be dependent on you, in terms of their cooperation with you, it seems that food dependence would be terrific" (my emphasis) (see North American Congress on Latin America - N.A.C.L.A. - 1975: 12).. It is obvious that not only are the Americans keen on using food as a political weapon or as a tool in their "bargaining kit", but also for the purposes of political blackmail. Thus, attempts on the part of the developed nations to keep the underdeveloped ones dependent are not a historical accident, as some would like to have us believe, but based on a well thought out system. The politics of food was probably best expressed by the Research Office of the C.I.A. where it stated "... the world's dependence on North American agriculture will continue to increase .... Ability to provide relief food in periods of shortage or famine will enhance U.S. influence in the recipient countries... [if the cooling trend in the world's climate predicted by climatologists] continues for several decades there will almost certainly be an absolute shortage of food. .... In a cooler and therefore hungrier world, the U.S. near-monopoly food position as food exporter ..... could give the U.S. a measure of power it never had before - possibly an economic and political dominance greater than that

of the immediate post - World War II years . . . Washington would acquire virtual life and death power over the fate of the multitudes of the needy (my emphasis) (Ibid: 16).

From the above statements it is obvious that the U.S. is prepared to use any means possible to continue the dependent relationship between the U.S. and the underdeveloped nations. It seems that striving for self sufficiency in food production in the underdeveloped countries is an anti-thesis to U.S. foreign policy. The crucial and yet disturbing question we need to ask and answer is: how genuine is the West African Rice Development Association (W.A.R.D.A.) in its attempt to solve West Africa's food problems? The crux of the problem is that the Association is strongly influenced by Americans and American policies.

In retrospect one wonders whether the U.S. and other wealthy nations were genuinely concerned with the devastating situation during the Sahel drought in 1973-74. It is for these reasons that Governments in the underdeveloped countries should develop a systematic approach to agriculture. By systematic approach we mean that every stage must be well planned and based on both scientific as well as empirical knowledge. We should not satisfy ourselves by simply praying for rain during the dry season but must develop an adequate system of drainage and irrigation for the effective control of droughts as well as floods.

In order to save ourselves from further degradation and humiliation, and to prevent other nations from having the power of life and death over us, it is imperative that we embark on large scale food production. But it would be naive on our part if we were to assume that merely embarking on food production would solve the nation's problems. There are several stages within the food industry which must be integrated, which include production, transportation, processing, marketing and so on. It should be noted however that these different stages require not only a systematic planning for an integrated food industry, but that that industry must find itself in a socially and politically conducive environment in order to be viable.

This study began in June 1979 as part of a wider study on the Social, Economic and Technical Aspects of Rice Production in Ghana. After a brief survey in most of the rice growing areas in the country, it was felt that the Volta Region, the Western Region, the Northern and Upper Regions, besides providing valuable information on most of the rice growing areas, would provide contrasting data on the social economic and technical relations of production.

Some social Anthropologists and Sociologists insist that it is not possible to carry out serious research without going to the field. As a result field research has become crucial in both these disciplines. After a brief survey in the Volta Region, five villages - Santakofi, Akpafu-Mempeason, Akpafu-Adoni, Lolobi-Kumasi and Likpe - were selected in the vicinity of Hohoe. These villages were selected because most of the villagers were involved, to some extent, in rice production. From these five villages of approximately five hundred households, one hundred and ten were randomly selected as my sample size. Although I have not spent any long period in the villages, I had made about a dozen trips, spending up to a week on each trip during the six months of data collection. Most of the actual household data collection was carried out by research assistants while I focused my attention on the interviewing of Chiefs, Bank and Government officials and rice producers.

One of the major set-backs which I encountered in the field was my inability to speak the dialect of the people - an unforgiveable sin among anthropologists - neither could I speak any of the languages in the other areas where field work was being carried out. However, I have been careful to select assistants who could speak the local dialect where they were responsible for collecting data. In most cases these assistants also served as interpreters.

This booklet emerged as an "independent" study for three reasons. First, because of the Volta Region's proximity to Legon, it was much

easier to visit this area on week-ends to meet with assistants and conduct interviews. Secondly, once the data began coming in and I started discussing the findings with friends I was encouraged to publish it with the hope that it might attract some attention to the much neglected rice sector of the agricultural industry. Finally, this study was first submitted to the Research and Grants Committee in December 1980 as a Second Progress Report. Very little revision has been done on the original report.

The rest of this study follows the logical development from the general to the specific. Chapter I deals basically with a macro-analysis of the political economy of agrarian underdevelopment. The discussion focusses at this level in order to demonstrate that Ghana, in a general sense, is not unique in this situation and that many other underdeveloped nations share the same fate. As such we attempt to develop a general typology as related to land tenure and the social relations of production. Chapter II discusses the origin and diffusion of rice and the introduction of the Asian specie (*Oryza Sativa*) into Africa South of the Sahara. It also briefly discusses the social and economic importance of rice in Ghana and the impetus for expansion. Chapters III and IV form a case study of the social, economic and technical aspects of rice production among peasant cultivators in the Buem area in the Volta Region. Chapter presents a brief conclusion.

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## CHAPTER I

### THE POLITICAL ECONOMY OF AGRARIAN UNDERDEVELOPMENT

#### A. INTRODUCTION.

Political independence for the colonial territories began in 1947 and we have all become only too familiar with the antics of Third World leaders, who, after political independence, began making annual pilgrimages to the financial "Mecca" - New York, London, Paris, Frankfurt, Brussels and, more recently, Tokyo - in search of "aids, loans and grants" in order to meet the needs of their developmental programmes. After more than a quarter of a century our Third World leaders continue with their annual pilgrimages to the metropolitan centres, not in search of capital to finance development programmes, but in search of loans to meet payments on debt burden and interest charges.<sup>1</sup> Thus, it seems that the majority of Third World leaders have succeeded in further mortgaging their countries to one or another of the metropolitan powers, and the evidence is clear that the so-called independent nations are more indebted to, and, as a result, more dependent on the metropolitan centres than the preindependent years. The question we need to ask, and answer, is: What has gone wrong? Why have the majority of Third World leaders not delivered the promised goods? We need to stop, take stock of ourselves, study the alternatives, and decide clearly which path we are going to take.

However, before we go on to answer the questions posed at the end of the preceding paragraph, it should be pointed out that the views expressed above are, of course, in opposition to those expressed by the well-known West Indian economist and Nobel Prize Winner Sir Arthur Lewis, in the famous Aggrey-Fraser-Guggisberg Lectures. There he stated:

.... we must first appreciate that what the poorer countries have been doing since the second world war is remarkable and without precedent in their history. Those who go around belittling the progress of the last two decades, even to the point of asserting that the poor countries are getting poorer, are dishonouring the effort which has been made by the farmers, workers, businessmen and governments of these countries. They lend credit to the erroneous idea that efforts to help these countries are fruitless, because they are bogged down in a morass of corruption or inertia. They therefore do a disservice to the poor countries as well as dishonouring their achievement. One cannot get the underdeveloped countries into perspective unless one begins by recognising that their rate of economic growth since the war compares very favourably with what the industrial countries have achieved over the past hundred years (1969: 4-5).

We will be doing ourselves a great disservice if we dismiss Sir Arthur simply as "neo-Ricardian" or as an "arm-chair" economist. For although judging from his statement above, he has, to use the West Indian phrase, "missed the boat", it is of crucial importance that he should be analysed most seriously and critically. I say seriously and critically because Arthur Lewis is considered one of the leading economists of the West and has, over the years, made considerable impact on economic as well as political decisions related particularly to the Third World.

Many young scholars are not at all surprised at Arthur Lewis's position, especially when one realises that he was one of the greatest advocates for the establishment of the "Puerto Rican Model" in Latin America and the Caribbean (discussed later). As expected, he provided us with an abundance of data on Gross National Product, National Income and Income Per Capita in Third World countries to support his arguments. What he has not told us, however, is what percentage of gross national income is repatriated to the metropolitan centres to meet payments on interest charges and debt burden because of continuing dependence; and what percentage is skimmed off by the upper strata within the Third World to purchase luxury goods and mi-



litary hardware to entrench themselves in a power comparable to that of their Western counterparts; and what percentage of the Gross National Product is left for the half-starving majority who live below the poverty line. Arthur Lewis has "missed the boat", since many scholars have come to recognize that the "widening gap between the rich and poor countries has become a central issue of our time" (see Onyemelukwe 1974: 104).

Coming back to the question posed earlier, as to what has gone wrong, we recognize that the problems of the Third World are multiplex - economic, educational, technological and so on. However, these problems have a political genesis. I say political, because at the time of political independence most Third World leaders failed to identify clearly what were their developmental priorities and went on blindly to copy "models" and "policies" patterned after the former Mother Country, regardless of their relevance within the given context. The best case in point is the "Puerto Rican Model" where heavy secondary industries were given priority over light industries and agriculture. The political/business conglomerate of their Northern neighbour was hoping to turn Puerto Rico into a show-piece of the Latin American/Caribbean area, despite the fact that Puerto Rico has very little in the form of natural resources to support heavy industries. Where then were the resources to come from? It was further hoped that the neighbouring Caribbean and Latin American countries would supply the raw materials to meet the needs of these industries. It is obvious that not all underdeveloped countries can become show-pieces, that some must "develop" at the expense of others. In other words the architect of Puerto Rican model had hoped to create a metropolis among the satellites.

On the other hand, some Third World leaders have articulated quite clearly the kinds of developmental priorities they are hoping to pursue. We would probably do well to point to the Arusha Declaration.

According to Nyerere

The mistake we are making is to think that development begins with industries. It is a mistake because we do not have the necessary finances or technical know-how. It is not enough to say we can borrow the finances and the technicians from other countries to start the industries. The answer to this is.... that we cannot get enough money and borrow enough technicians to start all the industries we need. And even if we could get the necessary assistance, dependence on it could interfere with our policy of socialism. The policy of inviting a chain of capitalists to come and establish industries in our economy might succeed in giving us all the industries we need, but it will also succeed in preventing the establishing of socialism. (Nyerere 1960: 26).

Nyerere's priorities towards development are quite clear, and do not require any further elaboration.<sup>2</sup> Specifically on agricultural development, the Declaration stated:

A great part of Tanzania's land is fertile and gets sufficient rain. Our country can produce various crops for home consumption and for export. We can produce food crops (which can be exported in large quantities) such as maize, rice, wheat, beans, ground-nuts etc. And we can produce such cash crops as sisal, coffee, cotton, tobacco, pyrethrum, tea etc. Our land is good for grazing cattle, goats, sheep and for raising chickens etc., we can get plenty of fish from our rivers, lakes and from the sea. All of our farmers are in areas which can produce two or three or even more of the food and cash-crops enumerated above, and each farmer could increase his production so as to get more food or more money. And because the main aim of development is to get more food or more money for our needs, our purpose must be to increase the production of these agricultural products. This is in fact the only road through which we can develop our country - in other words only by increasing our production of these things can we get more food and more money. (ibid: 9).

To summarise, therefore, development, as seen by Nyerere, is neither the annual trips to Europe and North America with long shopping lists for sophisticated industrial, transport and agricultural hardware nor the construction of wide tarmac roads, skyscrapers and airports for jumbo-jets, but the efficient utilization of a country's human and natural

resources. Underdevelopment in under-developed countries did not occur because these countries happened to be at the lower end of the evolutionary scale when compared with Europe or North America, as Rostow (1960) would have us believe. Rostow's "stages" of growth require critical analysis in order to expose the inherent weaknesses of neo-classical economic interpretation of underdevelopment. According to Rostow, growth occurs in stages.

It is possible to identify all societies, in economic dimensions, as laying within five categories; the traditional society, the preconditions for take-off, the take-off, the drive to maturity, and the age of high mass-consumption. First, the traditional society. A traditional society is one whose structure is developed within limited production functions, based on pre-Newtonian science and technology, and pre-Newtonian attitudes towards the physical world.... The second stage of growth embraces societies in the process of transition; that is the conditions for take-off are developed; for it takes time to transform a traditional society in the ways necessary for it to exploit the fruits of modern science, to fend off diminishing returns, and thus to enjoy the blessings and choices opened up by the march of compound interest.... the stage of preconditions arises not indigenously but from some external intrusion by advanced societies.... We now come to the great watershed of modern societies: the third stage in this sequence, the take-off. The take-off is the interval when the old blocks and resistances to steady growth are finally overcome. The forces making for economic progress, which yielded limited bursts and enclaves of modern activity, expand and come to dominate the society. Growth becomes its normal condition. Compound interest becomes built, as it were, into its habits and institutional structure... [The] take-off is defined as requiring all three of the following related conditions: (1) the rise in the rate of productivity investment from, say, 5 percent or less to over 10 percent of national income (or Net National Product (NNP)); (2) the development of one or more substantial manufacturing sectors, with a high rate of growth; (3) the existence or quick emergence of a political, social and institutional framework which exploits the impulses to expansion (Rostow 1960; 4,6,7,39. For further criticisms of Rostow's theory see Frank 1969: 21-94).

We may ask upon what scientific base or paradigm<sup>3</sup> has Rostow built his "Stages of Growth" theory? Or does this particular theory simply fit the whim of a particular ideological school which is being used for the continued exploitation of the majority of the human race? In recent years it has become all too obvious that one can have growth as well as increase in the G.N.P. without actual development.

Rostow began with an explicit assumption that all traditional societies - which are defined as original societies - are underdeveloped and had no prior "stage". This assumption is not only misleading but grossly incorrect. Underdevelopment in Asia, Africa and Latin America was, and is, an active process and must be analysed in the same way as development in Europe and North America. If we are to examine, critically, one single industry - say the cloth industry - in West Africa, we will find that prior to and during the early period of European contact West Africans were, with the exception of Indians and Chinese, producing some of the best cotton and cotton prints in the world (Rodney 1972: 112-115). With the use of slave labour in the Southern United States, the Caribbean and Latin America, ginned cotton began flooding the European market (particularly Britain), which helped to propel the Industrial Revolution. Cloth produced in Britain was later dumped in the West African market. The dumping of European-produced cloth on the West African market not only destroyed an indigenous industry, thus making African dependent on Europe for her supply of cloth - an impact which is felt today - but became part of the infamous Triangular Trade. Thus, to a great extent, it was slave labour which gave the Industrial Revolution and became the pivot for Western development. But West Africa's cloth industry was not the only one that was destroyed in the process; India had to pay the same price so that the Mother Country could industrialize. Therefore, it was the underdevelopment of Africa, first through the forcible removal of its most able-bodied men and women from production, second through the systematic destruction of indigenous industries, and finally through the use of Africa as a dumping ground for European-produced goods which

helped develop Europe. In analyzing the economic importance of slavery Marx stated that:

Without slavery you have no cotton; without cotton you have no modern industry. It is slavery that gave the colonies their value; it is the colonies that created world trade and it is world trade that is the pre-condition for large scale industry. Thus slavery is an economic category of the greatest importance (1967: 111).

The Industrial Revolution did not occur in a vacuum. It was part and parcel of a global system which at first manifested itself through trading and later through coercing, looting, robbing and plundering.

Despite the call for a "new economic order" over the past decade (see The Pearson Report 1970 and the Brandt Report 1980) the structural relationship between the developed and underdeveloped countries remains the same as it has been over the past centuries. The Asian cloth industry has once again reached a high level of productivity, but these countries are prevented from entering the industrial and technological revolution because of tariffs and other protectionist policies imposed by the industrialized countries on their exports of manufactured goods (Joshi 1980: 13). Any attempt, therefore, to transform these underdeveloped areas of the world must first interfere drastically with the social, economic, political and educational structures which were designed to meet the needs of the "Mother Country". However, it must be remembered that the decision to interfere with these structures is itself political and we must understand the external as well as the internal constraints which have so far impeded genuine transformation - and hence development.

## B. AGRARIAN UNDERDEVELOPMENT

Agrarian underdevelopment in Africa manifested itself in different forms. First we can point to the Slave Trade, which, after a period of nearly three centuries, led to forcible removal of more than twenty million of the most able-bodied men and women from the continent thus

robbing her of one of her best potentials - human labour - for development. Second, from the earliest days of colonization the colonizer resorted to different forms of pressure on the native population - from forced labour in the mines to the imposition of monetary taxes on the male population (see Stavenhagen 1976: 54), which later forced many of them into commercial activities, while others were forced into the raising of commercial crops. And this is especially true on the West Coast: peanuts in Senegal, bananas in Guinea and the Cameroon, coffee and cocoa in the Ivory Coast and cocoa in Ghana. Stavenhagen (Ibid: 15) pointed out that when the economic incentives were not sufficient to induce African farmers to move to the production of commercial crops the colonial powers did not hesitate to impose a forced cultivation of these crops. As a result we saw the beginning of mono-crop commercial agriculture, and the consequent destruction of the base of a diversified subsistence agricultural economy. It is this forceful removal of the population from food production to the production of commercial, non-staple crops which is the root cause of food shortages among the indigenous population. Third, and finally, we can point to the expropriation of native lands by European settlers. This phenomenon was expressed with greater intensity on the East than on the West Coast, particularly in Kenya, Zambia, Uganda and Tanzania. According to one source, expropriation was catastrophic for the native population: destroying agriculture, the backbone of the traditional economy, forcing the people into overcrowded "reserves"; and causing emigration to the urban centres or European owned estates, thereby providing a ready source of cheap labour.

These are the factors which are most responsible not only for the destruction of a largely subsistence agricultural society, but for the development of a highly stratified one. Beckett, in an early study of social stratification in a single cocoa-growing village in Ghana, identified four different social categories: (1) owners of cocoa farms, (2) adults who receive part of the harvest, (3) agricultural workers under share-cropping arrangements and (4) a group of annual wage

workers (see Stavenhagen 1976: 75). However the social changes which occurred over the years, not only in Ghana but throughout Africa, require a reclassification which can be placed under four broad categories. These include, (1) seasonal migrant workers, (typical of these are the workers of Upper Volta moving to the large cocoa-producing areas of Ghana and the mine workers from Botswana and Mozambique moving to South Africa); (2) agricultural wage labourers on foreign-owned commercial plantations, such as those of the Firestone Company of Liberia, which produce export crops (these plantations are noted for their "enclave" operations); (3) the individual farmer who produces commercial crops for export (these farmers are virtually totally integrated in the market economy; a good example of this social category is the substantially large number of cocoa farmers in Ghana). It should be noted however that although cocoa is produced by a large number of Ghanaians, actual control is dominated by a relatively few its producers primarily because of their class position; through access to financial institutions, acting as money lenders and influence in politics. And (4) a relatively large percentage of the population of peasants/farmers who are partially but not totally integrated into the market economy.

There are two factors - one exogenous and other endogenous - which contribute to continuing underdevelopment of agriculture in Africa and other Third World countries. First the endogenous factor. There is a growing alienating process imposed on the peasants and poor farmers by the bureaucrats in the urban administrative centres. More often than not the rural poor are stereotyped as "ignorant" and must depend on the bureaucrat since he is the "big man", The attitudes of the Government Officer are in themselves impediments towards understanding between poorer farmers and officials. He invariably speaks a language which cannot be readily comprehended by poor farmers. At other times he would be happy to stand on the bund (rising bank of dirt to control water from going astray) and shout orders, avoiding getting his feet wet.<sup>4</sup> For the job of an officer to be meaningful and effective he must first understand the problems, hopes, frustrations, and

aspirations of the people whom he is supposed to serve. The root cause of this problem seems to lie in our educational system, where a young graduate - be he/she an engineer, a sociologist or an agriculturalist - is somehow made to believe that it is not his job to get his/her "hands dirty".

However, the historical fact is that, structurally, the administrators and the administrative centres were created during the colonial period to serve colonial interests and these institutions are still intact. Little wonder then that these administrators and administrative centres continue to identify more closely with Europe than with their own rural communities. Placing the problems of the rural people in a broader perspective, Thiesenhusen stated that for most of the poor in Third World countries:

their national Governments could well be in the moon as in the capital city; it would matter very little to them. Likewise, cold and cruel as it may sound many of these countries pursue economic policies that relate primarily or solely to the market economy ... These policies reflect a continuing and fundamental misunderstanding of the problems of poverty, and imply a belief that if the national income can somehow be raised it will ipso facto raise the lot of all those contained there in. (1978: 16)

It is important that we recognise that the alienation of the peasants and poor farmers from the decision-making process of the major social institutions in many underdeveloped societies is not simply by ignorance on the part of the political or bureaucratic elites, but is based on a coherent pursuit of narrow interest which maintain the "established order". Genuine participation within these institutions on the part of the masses would lead to fundamental structural changes which would threaten the privileged position of the political and bureaucratic elites. Thus when we enter into a productive crisis - low productivity - within the agricultural sector, our political and bureaucratic elites begin to look for agronomic and other technical



interpretations when in fact the problems, more often than not, are based on the social, economic and political alienation of the majority of peasants and poor farmers. And this is precisely why the so-called Green Revolution failed (for a detailed discussion on the problems of the Green Revolution see Cleaver Jr. 1971).

Second the exogenous factor. Within the last few decades there has been a swing from the traditional techniques of production, i.e. the use of simple hand tools and animal power, to the use of sophisticated machinery.<sup>5</sup> Much has been written, which need not be repeated here, on the "cost benefit" of mechanization (see Schumacker 1974). Our major concern here is not so much the cost of machinery, but to provide comparative data on the cost of machinery produced in the developed countries and the price of agricultural crops produced in the underdeveloped countries. Elsewhere (Thakur 1978: 118-123), I have discussed the relative increase of the cost of tractors imported into Guyana compared to the prices of rice paid to the farmers. It was found that in 1960 a Massey Ferguson 35 H.P. tractor cost \$3,500 (Guyanese);<sup>6</sup> by 1975 the same model tractor was selling for \$13,500 or an increase of 285 percent. During the same period a bag of rice increased from \$21.04 to \$38.00, an increase of only 80.6 percent. In 1960 we would have required 167 bags of rice to purchase one tractor, whereas in 1975, 355 bags would have been required. To take the analysis one step further, it can be demonstrated that if in 1960 an acre produced 10 bags of rice, then we would require a little more than 16 acres of rice to purchase one tractor. In 1975, assuming we maintained the same level of productivity, we would require 355 bags of rice, or more than 35 acres of land under production, to purchase the same tractor (see Table below). From the above data it is obvious that not only is the increase in the price of rice insignificant when compared with the increase in the price of tractors, but, more important, there is a substantial increase in the number of acres which must be brought into production to meet the rising cost of machinery. This is an active process of underdevelopment.

Table 1

Cost of Tractor. Price of Rice and No. of Acres Under  
Production Required to Purchase one Tractor 1960-1975

Year	Cost of Tractor	Price for one bag of Rice	Bags of rice needed to Purchase one Tractor	Acres Required to produce Paddy to Purchase Tractor.
1960	₱3,500	₱21.04	167	16
1975	₱13,500	₱38.00	355	35

Source: Data Collected 1975.

It should also be borne in mind that in the industrialised countries, the increase in the cost of living, through inflation, is cushioned through the comparative increase in wages which is eventually passed on to the consumer. The Third World agricultural producer, like other producers, is caught in a dilemma; he has no control over the machines or the inputs, such as insecticides and weedicides, which are controlled by giant multi-national corporations such as Cargill (see N.A.C.L.A. 1975: 19), nor does he have any control over the cost of his produce, which is seemingly controlled by his Government - which is easily manipulated or influenced by these same multi-national corporations.

In the marketing aspect, first, foreign corporations and their local agents should be discouraged from the marketing sector of the rural economy, that is, from the purchasing of staple or commercial crops, because of their financial power, have the tendency to eliminate local merchants, primarily through the offering of higher prices.<sup>7</sup> The elimination of local merchants allows the corporations a direct control which is subsequently used in manipulating prices. Second, the international financial backing of these corporations, again through their local

agents, allows them entry into rural credit systems; and in pursuit of their own interests, or in opposition to the interests of the nation, they organize the production, financing and marketing of commercial crops at the expense of food crops (see Frank 1969: 262-63). It is interesting to note that during the 1960's when certain parts of India were experiencing severe famine and thousands of people died of starvation some areas were exporting Basmatie rice to Europe (Basmatie is considered to be the best quality rice). In other words the commercial rice growers of India were more concerned with the production of rice for a market, and their market commitments, than with meeting the country's domestic needs.

### C. FACTORS OF PRODUCTION.

In every agricultural society, traditional or advanced, we can identify three factors responsible for production; (a) tools, (b) labour; and (c) land which are indispensable for production.

#### (a) Tools.

When we speak of tools in agricultural production we are, in fact, speaking of a whole range of implements of hardware - from a digging stick to the most sophisticated tractors and combines. With the massive introduction of machinery and the "revolutionizing" of agricultural production in the nineteenth century, large capital input became a prerequisite for the accumulation of tools - and hence production. As such, we find that it is capital, rather than tools, which is identified as a factor of production. This however has not always been the case, and there are certain societies where the traditional, non-capital practice still continues.

If we are to examine the range of tools in agricultural production, we will find that there are social and economic advantages in both simple as well as sophisticated or advanced technology depending on the socio-economic environment. We find that a digging stick, a hoe, or a plough requires very little, if any, capital expenditure. The raw ma-

terials (wood and later iron) are usually found in the environment and agricultural implements can be produced by the peasants with the aid of the local blacksmiths - given the level of internal technical development. Thus we find that the peasants are completely free from any outside foreign influence, dependency or domination as far as the implements of production are concerned. However, with simple tools we find that peasants simply can not enter into extensive cultivation because of their inability to till large tracts of land. On the other hand expansion is sometimes limited by topographic and demographic pressure, especially in areas such as South East Asia.

With the use of hand tools, and later of draught animals, there was little pressure within the subsistence economy to produce over and above one's immediate needs. With the introduction of Post-Industrial Revolution machinery, however, there has been growing pressure on the peasants to produce more, not so much to meet their basic needs and to increase their lot materially, but rather to produce for a market. It becomes obvious, after critical examination, that the "depeasantization" process of the late nineteenth, and more so of the second quarter of the twentieth century, was designed to bring the peasants into a market economy. According to Cleaver Jr:

... effort to increase output has been the transformation of agrarian social and economic relations by integrating once isolated [ or low productive ] areas or farmers into the capitalist market system. This "modernization" of the countryside, which has been an important part of so-called nation-building throughout the post war period, has been facilitated by the dependency of the new technology (1972: 88).

But this de-peasantization and modernization process has had adverse effects, namely the forcing of many rural dwellers into the urban centres. According to Nyerere,

If this type of capitalist development takes place widely in the country, we may get a good statistical increase in the national wealth of Tanzania, but the masses of the people will not necessarily be better off. On the contrary as land becomes more scarce we will find ourselves with a farmer's class and a labourer's class, with the latter

being unable either to work for themselves or to receive a full return for the contribution they are making to the total output. They will become a "rural proletariat" depending on the decisions of other men for their existence, and subject in consequence to all the subservience, social and economic inequality, and insecurity which such a position involves (1975: 7).

On the other hand it can be argued that mechanization has certain distinct advantages in agrarian production. First, with machines there is a high level of efficiency; a tractor can turn the top soil much deeper, whenever necessary, than a hoe or animal drawn plough, a combine harvester can cut, thrash and winnow paddy all at the same time. Second, the machine facilitates extensive agriculture. Land which once lay idle can be brought under production. An individual with a tractor can plough more in one hour than was formerly done by a man and his animal-drawn plough in a day. Likewise a combine can reap as much paddy in one day as it would take an entire family of six to do in an entire reaping season. Finally, machines are labour-saving, and this is particularly useful in societies where there is a shortage of labour. Conversely, mechanization has a tendency to displace labour, which has had a devastating effect in Third World countries where a high level of unemployment and under-employment already exists. The effect of mechanization has, so far, been disastrous because there are no other sectors in the underdeveloped economy to absorb those displaced from agriculture. This eventually leads to emigration to the urban centres and this is especially true among the young from poor families. The urban centres are not always very hospitable to the so called "illiterates" and they are usually pushed to the periphery of the cultural milieu and become the most likely candidates for what Oscar Lewis (1970) refers to as the "culture of poverty".

However, it must be remembered that the decision to mechanize (or not to mechanize) is a political/ideological one. Machines are not, in themselves, "doers" of things; they are passive in the process. Mechanization may have either negative or positive impact

depending on the social control of machines within the given society. Further it can be pointed out that, so far, mechanization has been closely tied up with dependency. First, machines require spare parts and fuel if they are to remain serviceable. Second, and probably more important, it has been discovered that with the introduction of machinery it is possible, in less than a generation, to lose the technical skills associated with cow and plough or hoe culture, thereby becoming completely dependent on foreign-produced tools. The borrowed productive techniques resulted in the structure of dependence. At the same time the class distinction within the society solidifies with continued domination by the external as well as the internal forces.

(b) Labour or the human involvement in the process of production is the most crucial factor. There are two types of labour which can be identified; concrete and abstract. The latter seems more philosophical. Abstract labour, according to Geoffrey Kay:

exists within concrete labour though there is no way of seeing it or proving its existence empirically ... It is an abstraction whose reality is demonstrated every time one commodity exchanges for another (1974: 28)

Abstract labour is neither visible nor tangible, but is embodied in every commodity produced. In abstract labour it has been recognized that the basis upon which commodity is exchanged is all the product of human labour. It is called abstract labour because, for example, the farmer who produces grains and an artist who produces sculptures can exchange their product because both are the products of human labour. In recognizing the equivalence of the product one abstracts from the specific form each individual's labour take. Concrete labour on the other hand is actual performing of the task. For example a priest who performs a ritual, a judge who presides over a trial or a farmer who weeds his farm provides concrete labour.

Besides the material aspect of production, that is, man's interaction with nature, there is also a social element which is referred to as the social relations of production. The social dimension of produc-

tion, according to Kay (Ibid: 21), is that men are not only involved with nature i.e., material production, but they also enter into relationships with each other in relation to the means of production.

The social relationship between men in relation to the means of production have undergone several changes throughout history which can be identified as distinct categories. These categories are, of course, general and must be refined if they are to be applied to specific areas of the world during a particular historical period. It should also be pointed out that it is possible for two or more categories (listed below) to exist in a society at the same time.

(1) Manorial or hacienda system.

Under this system of production the relationship between the owner (landlord) and the worker (peasant) is more that of patron/client. The productive process can be divided into two parts: (1) the cultivation of small plots by the peasants for subsistence; and (2) the cultivation by customary labour dues of domain land under the lord's supervision, which may be used for commercial crops. Some examples of these are to be found in medieval England and parts of Latin America. The system also survived in Russia up to the first quarter of the twentieth century.

(2) Slave labour.

In contrast to the feudal serfs, who had definite rights such as guaranteed access to land, under the system of slavery, the slave has no rights. Not only does the slave have no property right to the means of production or the product of his labour, but he is denied rights in his own labour (Kay 1976: 22). The best examples of slave labour are those which existed in the sugar, coffee and cotton plantation in the Caribbean, parts of South America and the Southern United States.

(3) Family labour.

Under this system of production, labour is provided by the family. The land cultivated may either be owned or rented. The size of the holdings is generally small. A relatively large number of members from

this category can be considered peasant/farmers, primarily because they do not have the economic means to expand either in land holdings or machinery to be considered true farmers. They are most resistant to changes, since they are the most likely candidates to be displaced by mechanization and/or expropriation. This system can be found in every agrarian society.

(4) Exchange labour.

This system operates where land holdings are also relatively small and family labour is not sufficient, or the nature of the work demands more than one adult male or female. Thus members are forced to exchange labour. Exchange labour is found in most traditional agricultural societies, such as in Africa, Asia and Latin America, but is non-existent in slave societies and where wage labour is prevalent.

(5) Wage labour.

This system of production exists where there is capital intensive agriculture. The wage labourer has no rights over the means of production (i.e., land or tools) or the product of his labour. On the other hand he is legally entitled to remuneration, which is in the form of wages. The cost of labour is relatively low, and there is a tendency towards mechanization. This system is found in North-eastern Mexico, the Western United States, Canada, and Western Europe.

(6) Co-operative labour

Co-operative labour exists where individuals form themselves into a group in order to organize production. There are different types of co-operative labour; from loosely structured co-operative, as in the case of Guyana, to highly-organized ones such as the communes in China, Russia and the kibutz in Israel.

(7) State Farms.

'State farms', as the term suggests, are where the farms are owned and managed by the State and wage labour is employed. The best example



of State farms would be found in the U.S.S.R. and other Socialist countries, including some newly independent countries.

(c) Land.

Land tenure is probably the most vexed question in agrarian underdevelopment. If we are to examine, very carefully, the seven different categories of the social relations of production (discussed above), we will find a one-to-one overlapping between ownership - access or control over land - and the social relations of production. For example, it was Slave Labour in the New World which not only created the plantation economy but also gave it its character. Below is an attempt to draw a correlation between land tenure and the social relations of production. This model is however ideal and there is likely to be criss-crossing between land tenure and the social relations of production.

Land Tenure	Social Relations of Production
1. Feudal	Serf/Peasant
2. Plantation	Slaves
3. Capital Extensive	Wage
4. Family-size Tenancy	Family/Exchange
5. Small family-size Holdings	Family/Exchange
6. Co-operative	Co-operative/Collective
7. State Farms	Wage

When we realize the importance of land in relation to the means of production it becomes quite obvious why it was necessary for the colonist to control large tracts of land. But, as we have argued earlier, it was the coming of the Europeans to Asia, Africa and Latin America that led to the creation of a new structure within these societies.

According to Desai (see Stavenhagen 1975: 47), it was the British conquest of India which created the prerequisite for the capitalist deve-

lopment of agriculture, that is, by introducing individual ownership of land and the creation of two classes - the peasants and the landlords. This further complicated the existing cost structure. Social changes in the means of production undermined the whole agrarian economy of pre-colonial India.

#### D. CONCLUSION.

When peasants and poor farmers call for changes in relation to the means of production, what in fact they are calling for is a radically new land tenure system which will facilitate a rapid increase in real production. The World Conference on Agrarian Reform and Rural Development (F.A.O. 1979: 6) pointed out that in countries where re-organization of land tenure and land distribution to landless peasants and small-holders is necessary as part of a strategy for rural development, the government should consider the following actions:

(1) a ceiling should be imposed on private holdings and the government should acquire land and other natural resources, and form assets in accordance with nationally determined policies; (2) water areas and waste lands suitable for agriculture should be acquired, reclaimed and distributed on favourable terms to farmers and fishermen for the development of aquatic farming; (3) land precedence in distribution should be given to established tenants, small-holders and landless agricultural workers, with special attention to the most deprived group; (4) implementation of these changes should be carried out with speed and determination and must be backed by legal sanctions to avert any evasive transfers; (5) post-reform institutions, including farmers' association and co-operatives should be created and supported, and the widest possible participation should be encouraged, in order to prevent the emergence of a new pattern of concentration of resources, or any other forms of exploitation.

As we have attempted to demonstrate, the problems of underdevelopment are not mythical and do not call for mythical solutions. There

are certain external as well as internal forces which impede or frustrate genuine changes in relation to the means of production. If any meaningful gains are to be made in development then we must first of all disentangle ourselves from our colonial and neo-colonial past - both ideologically and structurally - in order to escape the vicious circle of poverty. It must be pointed out however that the five point strategy outlined above by the World Conference on Agrarian Reform and Rural Development is not new and attempts to implement it have been made in underdeveloped countries - especially in Latin America. These attempts have so far been frustrated: first because the ruling class in the rural areas sees these reforms as a threat to their class position; and second, because we find that the genuine political power which is a prerequisite for such reforms is in the hands of this same ruling class and not of the people as a whole. Politicians genuinely interested in the transformation of the land tenure problems of the suppressed masses of the agrarian sector are quickly met with resistance from the local ruling class, who quickly appeal to their international allies for assistance. And as we have pointed out earlier, these foreign allies with vested interest are only too happy to assist either by destabilizing the Government through racial or tribal division, or direct military assistance or intervention. The best example of the latter is Allende's Chile. As a result we know what is the situation in Chile vis-a-vis the peasants and the farmers - back to the pre-Allende period. Thus, it seems that unless the masses of the people take control over the political machinery, genuine agrarian transformation is not possible.

CHAPTER II

THE ORIGIN/DIFFUSION OF RICE AND THE GHANAIAN RICE INDUSTRY.

A. BACKGROUND

The social and economic importance of rice, at a global as well as a national level, can hardly be overstated. It is the most important cereal grown in the world today and is consumed by more than half the world's four billion people as their staple. It is probably the only major food crop which is grown in commercial quantities in all five continents. This is primarily because of the plant's ability to adapt to extreme environmental conditions. For example, around the equator the plant flourishes at a very low altitude, as in the case of Guyana's coast-line where it is grown below sea-level (Thakur 1978: 65). With increasing distance from the equator it grows at very high altitude, as in the Himalayan Range, where it grows over 10,000 feet above sea level (Grummer 1970: 13-14, Crist 1965: 11, Hanks 1972: 17). The plant is also known to survive productively under extreme climatic conditions; for example, in Europe cultivation has moved northwards up to 49° latitude in Czechoslovakia and 47° latitude in the Soviet Union (Crist 1965: 10). South of the equator the plant thrives at up to 40° latitude (Ibid: 419). Thus it can be said it is the high adaptability of the plant that gives it its universal character.

The taxonomic classification of rice, especially for a layman, can be very confusing, for within the genus Oryza there are nineteen known species (Ibid: 482) based on the standard classification and nomenclature drawn up by the International Rice Research Institute (I.R.R.I.) in 1963. However, for our purposes here, we need to identify the two most important species, Oryza Sativa and Oryza Glaberrima.

Oryza Glaberrima which has been given very scanty attention, either by botanists or agricultural historians, is believed to have

originated independently in Africa and particularly in the Niger Basin. According to Wood

.... Negroes from the West Coast of Africa were widely familiar with rice planting. Ancient speakers of a proto-Bantu language in the sub-Saharan region are known to have cultivated the crop. An indigenous variety (*Oryza Glaberrima*) was a staple in the Western rain-forest regions long before Portuguese and French navigators introduced Asian and American varieties of *O. sativa* in the 1500s. By the seventeenth and eighteenth centuries, West Africans were selling rice to slave traders to provision their ships. The northernmost English factory on the coast. James Fort in the Gambia River, was in a region where rice was grown in paddies / fields along the river banks. In the Congo-Angola region, which was the southernmost area of call for English slavers, a white explorer once noted rice to be so plentiful that it brought almost no price (1974: 59).

It can further be argued that the rice growing skills of the African slaves in the Southern United States played a very important role in the development of the rice industry in the United States. This is probably best depicted by an advertisement (see Mannix and Cowley 1962, Plate III following P. 164) in a Charlestown newspaper in 1776 giving notice of 250 Negroes for sale. The caption stated that the slaves were "valued for their knowledge in rice culture". Professor Dickson (1971: 49) suggested that *glaberrima* was in cultivation in West Africa over three thousand years ago. Porteres (1976: 444) stated that the rice culture in West Africa began about 1500 B.C. which would give it at least 3,500 years of existence.

The exact origin of *Oryza Sativa* is still a matter of great debate, though there seems to be a general agreement that the cultivation of the crop first began in Asia. However, one wonders if this on-going debate will ever be resolved since rice, as a cultivated crop, pre-dates (written) history. As such we must turn

our attention to linguistic and archeological records. According to Copeland (1924: x), "in Classic Chinese, agriculture and rice culture are synonymous, showing that this was a staple crop while the language was taking form. Rice and food are synonymous..." Crist (1965: 5) further stated that references are found in Chinese writings, about five thousand years ago, where it is stated that so prestigious was the sowing of paddy that it was reserved for the Emperor alone while the sowing of other cereals were left to lower status members of the family. He further noted that all Hindu scriptures mentioned rice and all offerings to God are given as rice, denoting its antiquity. Bridgett and Raymond Alchin (1968: 266) in an analysis of their archeological discovery in Western India stated that rice "appears to be an indigenous crop" and the earliest evidence for its cultivation was during the Harappan period. Further archeological evidence has shown the storage of rice in earthen jars in West Pakistan indicating that rice was a very important staple in the Indus valley civilization which flourished some 4,500 years ago (see Crist 1965: 5).

It will suffice here to conclude that there is enough documented evidence to accept that the two species in discussion - *Oryza Sativa* and *Oryza Gaberrima* - have had their independent origin, the former in Asia and the latter in Africa.

Because of its higher adaptability, *Oryza Sativa* has superseded *Oryza Glaberrima* in its natural habitat. Exactly when the Asian variety arrived in Africa, South of the Sahara, is still a matter requiring in depth research. We know that the first introduction of rice into the Middle East was a direct result of the conquest of the East by Alexander the Great (Pratt 1960: 2). The Greeks learnt of rice from the Persians and it was imported rather than cultivated during the time of the Roman Empire. The Bible made no mention of rice. Ancient Egyptian writings made no mention of rice, and no mention was made of rice cultivation in the Mediterranean area until it was introduced by the Arabs in the 7th

Basin (Crist 1965: 7). It was the Malays who first took rice to Madagascar and the East Indians took it to the East African islands. The Moors introduced the crop to Spain and from there to Italy, while the Turks introduced it to Southern Europe (Ibid: 6-7). Columbus first took rice to the New World on his second voyage, but there is no evidence that its cultivation was successful. It seems that the real introduction of rice in the United States was in 1865 by way of Madagascar (Heyward 1937: 4-5).

The introduction of *Oryza Sativa* into West Africa, according to Harlan and others (1976), seems to have occurred during the first millenium A.D. and probably by the 5th century or even earlier, by the Malayo-Indonesian travellers. The spread of rice and other crops has been thought to have been brought through the Zambezi and the great lakes, then across the Congo into West Africa.

The active displacement of *Glaberrima* by *Sativa* in Africa, South of the Sahara began in the 15th century (Carpenter 1977). Although the African species has declined very much in importance, efforts are being made in rice breeding programmes at the International Rice Research Institutes in the Philippines, Nigeria and Sierra Leone to retain the germ plasms - not only of *Glaberrima* but other known traditional varieties throughout the world; the reason being that rice geneticists are conscious of the fact that newly developed strains of paddy are less resistant to certain insects and blasts, and that one disastrous year could lead to the elimination of hundreds, if not thousands, of newly developed genetic strains. Thus a conscious and cooperative attempt is rightly being made at the international level to create a storage bank for germ plasms.

Attempts are being made to cross-breed the Asian and the African varieties. Rice geneticists are hoping that they will be able to combine the best traits of both species. The Asian species is known for its high yielding, white and non-shattering properties while the African species is known for its high elongation, greater resistance to floods, and its ability to adapt to alkaline

soils found particularly in the Sudanese savannah (see Oka and Chang 1964). Unfortunately, so far, the crossing of the Sativa and the Glaberrima has met with little success. The major problem according to Anon (1964) is one of high sterility.

#### B. THE ESIAMA RICE MILL

It is generally believed that rice cultivation in Ghana, on a commercial basis, is relatively recent. And, invariably, when one speaks of rice as a commercial crop one immediately thinks of the Esiama rice mill. This stereotypic view of the Ghanaian cultivator, like so many other stereotypic views, is not only mis-leading but sets a dangerous precedent in analysing Ghanaian social and economic history. Citing from first-hand sources Professor Dickson (1971: 103) has shown that, as early as 1702, two Dutch ships took 51,755 pounds of rice from the Gold Coast. He has also shown that in 1828, 1831 and 1836 Southern settlements in Ghana exported 204, 925, 135 and 23 cwts. of rice respectively. (see Table II below). The point for us to bear in mind here is that Ghana has moved from a net exporter of rice in the early nineteenth century to a net importer in the twentieth century.



Table II

EXPORTS FROM BRITISH SETTLEMENTS IN SOUTHERN CHINA 1822 - 1841

Year	Rice (Cwt)	Palm Oil (tons)	Coffee (lbs.)	Pepper (lbs.)	Guinea grain (lbs.)	Gum copal (cwt.)
1822	-	420	-	-	-	-
1823	-	38	-	-	-	-
1824	-	255	-	-	-	-
1825	-	260	-	-	-	-
1826	-	217	-	-	-	-
1827	-	243	15,581	85	12,306	36
1828	264	368	14,017	4	1,603	2
1829	-	350	-	1,001	5,302	5
1830	-	678	-	29,071	15,283	2
1831	952	838	12,265	3,914	6,415	17
1832	-	827	-	568	39,869	11
1833	135	1,230	42,814	64	84,403	105
1834	-	1,074	68,797	174	31,408	62
1835	-	950	33,317	2,432	31,592	163
1836	23	1,102	25,856	8,231	32,574	360
1837	-	1,099	130,949	5	6,241	2
1838	-	1,784	64,696	-	-	9
1839	-	2,017	2,994	5	16,635	7
1840	-	2,339	58	6	13,351	34
1841	-	2,137	-	-	6,482	81

Source: Cited in Dickson (1971) p.123.

The first major policy statement on the need to develop a well organized rice industry was made by the Colonial Government in 1924. This led to the establishment of the Esiana rice mill in 1926. It would seem that prior to 1924 the Colonial Government had seen rice primarily as a food crop with little commercial value. The main objective for the establishment of the rice factory was to boost rice production in the area.<sup>8</sup> According to Government information sources rice was an established crop and the farmers had already acquired the skills of production which could easily be expanded through the building of the rice factory. The crucial reason behind the Government's move to expand the rice industry however was not so much the need for the people to feed themselves, but more so to provide cheap food for the people in the urban, industrial and mining centres so that labour might reproduce itself cheaply for the benefit of the expatriate industries. Of course there were other reasons, one being topographic and climatic conditions which were highly suitable for rice production and two, the fact that the cost of importation of rice into the country, as can be seen from Table III, rose by more than one hundred percent from 1921 to 1927.

Table III

VALUE OF RICE IMPORTED BETWEEN 1921 - 1927.

Year	Quantity of Rice in Tons	Cost
1921	3,220	93,471
1922	4,656	109,068
1923	7,205	141,832
1924	8,330	161,571
1925	9,200	130,189
1926	9,544	134,368
1927	10,303	201,925

Source: Robb 1929: 131.

The mill was constructed on land given by the Esiama, Kiekam and Nkrofo stools. And in 1931, only five years after its establishment, it was realized that the factory had not made much progress. The mill had the capacity to process 1,200 tons of paddy annually. However it has not milled more than 289 tons in any single year. From the figures it is quite obvious that the mill was operating under capacity. There are four factors which have been suggested to explain the low productivity of the mill. First, some administrators felt that the paddy was not forthcoming because the people lacked the inclination and zeal to produce paddy in commercial quantities. Second, the introduction of commercial crop production in the locality plus the development of the mining industries had proved - at least for the time being - more lucrative ventures than rice farming, thus luring most of the able bodied men away. Third, (the lower cost of) imported rice posed a direct threat to the industry. Finally, many farmers viewed the Rice Mill Administration with suspicion and continued to process their paddy using traditional techniques.

Transportation was another major problem faced by the authorities. There were few feeder roads and the vehicles operating in the area charged exorbitant price for transporting paddy from the field to the factory. The records show that there was a distinct relationship between the distance from the field to the factory, increasing distance between factory and field showing a decrease in the quantity of paddy brought forward. Realizing the transportation problem the Government built new feeder roads eg., the Esiama-Anibil road. The Government also made efforts to use the rivers, eg. Ankobra, Tano, Twin etc, as a means of providing water transport for paddy (water transport is, of course, relatively cheaper). Although there was a tendency on the part of the Chiefs operating the ferries to charge fares at certain times, the presence of European supervisors prevented such practices from becoming widespread.

Apart from the ferries, most farmers were reluctant to use boats or canoes for the transportation of their paddy, as it appeared that the people had an aversion to water transportation and could not easily be encouraged, even by incentives. Maintaining the waterways was also a problem. The people looked to the Government to do it, while the Colonial Administration hoped that the Chiefs would mobilize their people to do the job. After some confrontation the Administration realized that it would be better to employ wage labour to clear the waterways and institute a toll for the payment of such services.

Paddy brought to the mill was processed for a fee. The factory retained the bran and the broken bits. Although there is no clear information on how the rice was marketed, the available data gives the impression that the factory sometimes bought paddy from farmers, and after processing, sold it to institutions such as Achimota College, The Gold Coast Regiment, the Technical College, the U.A.C., and mining firms.

The establishment of the mill led to the beginning of a co-operative society which, it was thought, would be for the betterment of the rice farmers. The society was named the Esiana Rice Growers Co-operative Society. The co-operative did not live up to expectation and as a result died prematurely. It was never registered as a co-operative society and was regarded by the mill authorities as little more than a Thrift Society, since more than eighty percent of its membership had nothing to do either with the production or the marketing of rice.

In 1938, as a result of difficulties facing the operation of the factory, it was closed down. After its closure plans were made to sell it out and there were bids from Sierra Leone. Plans for disposal were later cancelled when it was decided that the mill should be retained for use in the future if need be. In 1940, as a result of requests from the people of the area as well as Chiefs from out-

side the locality, the mill was re-opened. The mill was finally closed down in 1952, after seventy-six years in-and-out of operation, on grounds that it was too expensive to operate.

Despite the failure of the Esiama Rice Mill some administrators were very optimistic about the future of rice. F.A. Rabb in his capacity as Superintendent of Agriculture in 1929 wrote:

The past two years' operation of the [Esiama] Mill has shown that the rice industry is capable of considerable development. During the year our agriculture survey of the Nzima country was completed and from the information gathered it has been suggested that two other mills should be erected, one near Half-Assinie and the other in Central Nzima, between Atwabo and Beyin.

It is to be hoped that their erection will not be long delayed and that in the near future the Colony will be able to grow sufficient rice to meet its own requirements (Robb 1929: 169).

A brief examination of the Esiama experiment reveals that the operation failed because the people - the real producers - were never consulted or brought into the decision-making process. They were expected to be "passive participants" i.e., simply producers of paddy. The experiment failed because little or not attention was paid to the social forces within the productive process.

### C. THE RICE MISSION TO THE GOLD COAST.

The most significant action on the part of the Colonial Government to expand the rice industry in Ghana was the sending of the Rice Mission by the Secretary of State in 1948. The Mission was made up of W.M. Clarke and F. Hutchinson. The purpose of the mission was to consult with the Colonial Government of the Gold Coast (and all other British West African Colonies) and to advise on the existing rice producing schemes. The terms of reference of the experts were to investigate and report on the possibilities of expanding rice production in new areas by mechanization or by other means.

They were also to advise on the location and extent of any area deemed suitable for small jute production.

Places listed for the visit of the mission included Accra, Kpandu, Jasikan, Bibiani, Wiawso (CS. File 174/0433). From the above list it can be seen that the Northern Regions were left out of the tour programme. The Chief Commissioner, W.N. Ingrams drew the Colonial Secretary's attention to this omission and an amendment was made. The reviewed list included the Northern Territories as well as Ho and Kpeve. Mr. Ingrams suggested that the Northern Territories be investigated by the Mission specifically as rice producing areas. He noted potential areas such as the Nasia Valley, areas around Kani, Tizza and Nandom in the Lawra sub-district. The last two places were to be studied specifically with respect to mechanical cultivation. Other areas included in the Mission's itinerary were the flooded areas on either side of the Kumasi/Tamale road (NT. File 0413/12).

The Mission suggested<sup>9</sup> that further investigation be carried out into the area around the Nasia River with the view of a two-canal system on the right bank of the river. Further investigation should also be carried out into the groundnut region with the view of establishing a canal system from the Mole and Labone rivers including the Laera area, on the left bank of the Black Volta; there is also the area which extends partly into the Northern Territories which needs to be investigated further (see CS File 8673/413 May 1948). The Mission also suggested that further study of the soils in the area be carried out in order to carefully assess the potential of crop yield.

It was further recommended that random samples should be chosen from cultivator's fields in all areas in which rice cultivation schemes were to be undertaken. It was hoped that this random sampling would provide reliable data as to the yields in the different areas concerned. The issue of cultivating rice under irrigated conditions was seen as relating closely to soils and this

was supposed to be dealt with by the soil survey staff. With regard to further research the Mission suggested that a paddy research station be established at Esiama where 200-300 acres of land would be required for the purpose of carrying out experiments. The Mission further recommended that a second research station should be established at a site of any reservoir constructed for the purpose of adopting schemes for irrigated rice production (CS File 3/393).

In August 1952 the Agriculture Officer in Nyankpala was asked by the Government Agent in Tamale to select suitable sites for rice expansion schemes in the Western Dagonba. The seven sites selected were, Sanorigu, Zugu, Talon, Tali, Lamburgu, Gbulung and Dalang. One criterion on which the villages were selected was the past cooperative efforts of the villagers. A second basis was the location of the village in relation to Tamale or Nyankpala; this was to facilitate easy administrative activity (CS File 6941/0413 Tamale). In September the Assistant Government Agent included Walbaga in the number of selected villages, and in October the Agriculture Engineer, the Plant Breeder and the Agriculture Officer from Nyankpala selected Talon, Tali, Walbaga and Panihayili as suitable sites for extension schemes.

The expansion effort was to be undertaken jointly. The Agriculture Department in the Northern Region was to provide the technical services for the development of the schemes. The Department of Rural Water Development was expected to assist in the construction or modification of dams whenever the need arose. The Mass Education Unit of the Department of Social Welfare and Community Development was asked to assist in educating the people on the purpose of the project. The Chiefs of the area were taken on a tour to the Nyankpala Station and details of the expansion schemes were explained to them. However, despite the grandiose plans nothing has actually been achieved.

#### D. RICE IN THE POST INDEPENDENCE PERIOD

During the early years after independence the Nkrumah Government showed enthusiasm equal to that shown by its predecessor - the Colonial Government - more than thirty years earlier. The Government gave encouragement in the form of subsidized inputs, such as fertilizers and ploughing services in order to increase productivity. The incentives given by the Government led to a gradual increase in acreage under cultivation (F.A.O. 6/CHAO 2/1). Interestingly, although the area under cultivation increased, and continued to increase, the yield per acre continued to decrease since 1965, reaching the lowest level among the West African Rice Development Association (W.A.R.D.A.) countries in 1976 (W.A.R.D.A SD/79/13). It seems quite obvious that the emphasis was placed on expansive rather than intensive rice cultivation. And this was particularly true during the Acheampong Regime (see Table II below). Expansive rice cultivation had one particular advantage for the soldier/businessman/bureaucrat cum rice farmer since incentives, including easy access to bank loans and tax concessions were given on the basis of the number of acres farmed rather than the number of bags reaped. As a result the incentives were, and still are subjected to grave abuse.

The formation of the West African Rice Development Association (WARDA) in 1970 is an expression of the concern of the Governments of West Africa over attaining self sufficiency in rice production in the region, through cooperation. Ghana's membership in the Association must be seen as an expression of her concern and determination to increase her rice production. Ghana continues to provide high incentives to large scale rice producers in the North, while at the same time she is forced to import large quantities of rice to meet her domestic needs. The latter problem stems from the fact that a substantial proportion of the paddy produced in the North is smuggled across the border into Upper Volta where it



is sold for higher prices. The ultimate deterioration of the economy as a result of oppressive and non-progressive military rule in coalescence with the petty bourgeois class has affected the rice industry as well. Thus the W.A.R.D.A. projections for 1980 in terms of the number of acres to be cultivated and the yield cannot be realised.

Cultivation of rice in Ghana is spread throughout the country. The crop is grown in the savannah areas in the North and the swamps in the South. Although rice is grown in all the administrative regions of the country the North has, in recent years, been identified as the major rice growing area. In 1975 the Region accounted for more than 61% of the total land area under rice cultivation. As in the case of other crops, rice cultivation in Ghana is numerically dominated by small scale farmers who in 1970 numbered more than 61,000. An average small farm measures less than two hectares, while the large farms, especially those in the North, range from 10-200 hectares (W.A.R.D.A./SD/79/3).

Table IV

AREA UNDER PRODUCTION AND YIELD PER ACRE 1970 - 80

Year	Area ( '000 Acres)	Yield Lbs. Per Acre	Long Tons ( '000)
1970	136	N.A.	48
1971	150	N.A.	54
1972	153	N.A.	56
1973	164	N.A.	61
*1974	165	807	72
*1975	175	840	65
*1976	185	876	72
*1977	195	906	79
*1978	208	941	87
*1979	220	976	96
*1980	233	1,015	160

Source: Five-Year Development Plan 1975/76 - 1979/80  
pp. 34, 24

\*Target: Development Plan was prepared in 1974.

Although there are no figures to substantiate my argument it would seem - based on empirical evidence - that over 90% of the 61,000 rice farmers will fall in the category of "small farmers". Thus, when we speak of development within the rice industry it must be viewed from the perspective of the majority of small farmers and not a small fraction who, by virtue of their class position, have access and control over the means of production.

Rice cultivation in Ghana can be classified in two categories. First is the popularly known upland rice which is normally carried out under rain-fed conditions and is sometimes inter-cropped with other crops (for further discussion see Chapter IV). Second, rice

cultivated under irrigated conditions, or wet rice agriculture as it is popularly known which is a more recent development in Ghana. The process of accepting the new technique of cultivating rice under irrigation. It was projected that by 1980, 6,300 hectares of irrigated lands will be under cultivation. Again, it is doubtful whether this target has been realized. However, it is anticipated that the Irrigation Authorities established in 1978 will assist in accelerating irrigation programmes throughout the country.

It is a known fact that Governments in the underdeveloped countries are hesitant to embark on large scale drainage and irrigation schemes for the purposes of agricultural development, because it requires very high initial capital input. However, in terms of long term development strategies, the benefits outweigh the cost. Some of the distinct advantages of irrigation for wet rice agriculture are: first, the creation of permanent employment for a number of farmers; second, the guarantee of high yield and the facilitation of double cropping through regular water supply. Finally, it has been argued elsewhere (Thakur 1978) that a well organized and productive rice industry creates employment in transportation, milling, banking, insurance and other service industries. Therefore, besides being a mere producer of food and a potential foreign exchange earner, a well organized rice industry can also be a net employer of labour.

CHAPTER III

THE AREA, ITS PEOPLE AND THEIR  
SOCIAL HISTORY.

A. INTRODUCTION

The concentration of traditional rice growing in the Volta Region falls within the Buem area (see Map 2). The other area known for traditional rice cultivation is around Hohoe. Within the last decade the northern part of the Region has assumed some importance in rice production with increasing emphasis on commercialization with the use of heavy machinery. This latter area, about seventy miles north of Hohoe, exhibits topographical features identical to those in the Northern and Upper Regions of the country. For example, there are large tracts of flat land which are ideal for wet rice mechanized agriculture. However it is the Buem speaking area in the Volta Region which receives special attention as the main centre of traditional rice growing.

B. THE AREA

The Buem area is located in the Eastern part of the Volta Region, stretching from  $0^{\circ} 4''$  E to  $0^{\circ} 25''$  E and from  $7^{\circ} 23''$  N; this area lies along the border with the republic of Togo. Jasikan, the main urban centre is located about five miles from the border - and this geographical proximity is a very important factor in the high incidence of smuggling across the Togo border.

B1. Relief

The major characteristic feature of relief are the mountain ranges (Dickson 1970: 162), notably the Akwapim - Togo ranges which run in the North - North Easternly direction, across the Republic of Togo and extending into the Republic of Benin (Dahomey). In this part of the Volta Region settlements tend to be located on land of lower elevation, that is, at the mountain base.

Two reasons can be given for the location of these settlements at the lower elevation. First, the availability of water in the streams and rivers - especially during the dry season and secondly, the richer content of the soil through erosion of the mountains.

The average height of these mountain ranges is approximately 1,400 feet but there are peaks measuring up to 3,000 feet on or near to the border. Mount Afajato, the highest mountain in the country, measuring approximately 2,900 feet, is located on the Ghana-Togo border. From afar the general appearance is one of a single mountain chain. However, on closer examination one sees that there are other chains of mountains (visible from the settlements) which are separated from one another by lands of lower altitude.

In some places the elevated areas on highlands have local names, such as the Ewli (check meaning) mountains at Hohoe (strictly speaking these are hills rather than mountains). There are also stretches of low lands which are mostly swampy and form part of the low land area which are referred to as the Volta low lands. These lowlands are of crucial agricultural significance as they provide highly suitable soils for wet rice cultivation.

## B2. Climate

Even though rice plant thrives under a variety of climatic conditions (see Chapter II), some climatic conditions are more favourable than others. The characteristic elements of the weather - rainfall, humidity, temperature and so on - call for a brief discussion since they constitute an important indicator, not only of the kind of crops that can be grown under "natural" conditions, but more importantly the rhythm of the sowing and the reaping seasons. A thorough understanding of the climatic conditions and the desirability or need to grow a particular crop will indicate whether or not we must resort to the use of "artificial" techniques such as drainage, irrigation, the use of shallow wells and so on.

Throughout Ghana the mean monthly temperature never falls below 77°F (Ibid: 32). This can be explained by the country's geographic proximity to the equator. Generally, the warmest months of the year are between January and March just before the rainy season, while August is the coolest month of the year. Although average figures suggest uniformly high temperatures, variations exist because of the varying altitudes in different parts of the country. Temperature variation could also be explained partly as a result of the locational differences in relation to the ocean (see Map 1).

Rainfall is quite unevenly distributed throughout the country. The extreme South-Western part is clearly the wettest section of the country, receiving as much as 190 centimeters of rain annually. This high level of precipitation is the result of the direct impact of the moisture-laden Tropical Maritime air mass and the Equatorial - Eastern air mass (Ibid: 26-27). Ideally, with increasing distance to the North rainfall decreases. However, the driest area in the country is found in the South-Eastern Coastal Plains where the mean annual rainfall is less than 75 centimeters.

The elements of climate combine in different ways to determine various climatic types. It is on the basis of such combination that four distinct climatic types may be distinguished in Ghana (Ibid: 33). These are:-

(a) the South-Western Equatorial type

(b) the dry Equatorial type

(c) the wet semi-Equatorial type, and

(d) the tropical continental or interior savannah.

The area under study falls under the "wet semi-equatorial type." This climatic type has two seasonal rainfalls - with a mean annual rainfall of 125-200 centimeters. For the Volta Region as a whole some of the wetter parts include the Akwapim-Togo ranges, and the Southern Voltaian plateau where annual rainfall sometimes exceeds 165 centimeters. The main rainfall season is

between May - June while the second or minor rainfall season is between September and October. The least rain-fall is recorded between December and January; drought however, is a rare phenomenon in the area. (see Figure 1).

The problem with rainfall, or precipitation in general (dew plays a very important role in plant growth during drought or dry seasons) is that it may occur at the "wrong" time. The rains may set in late (which has a delaying effect on land preparation), or may depart earlier than usual. This has very serious implications for cereals in general and rice in particular since lack of moisture impedes the maturation or the formation of the grain, which results in no grains in the shell of the paddy - "wind rice", as it is sometimes called. This was the case in 1976, especially in the Northern and Upper Regions - when the rains suddenly stopped at the end of October instead of the usual end of November. Dependence on "natural" conditions for agricultural production within the last decade has had catastrophic results and it is for this reason that the Government should begin to take serious steps towards both short term and long term planning of infrastructural development within the agrarian sector, which will guarantee production.

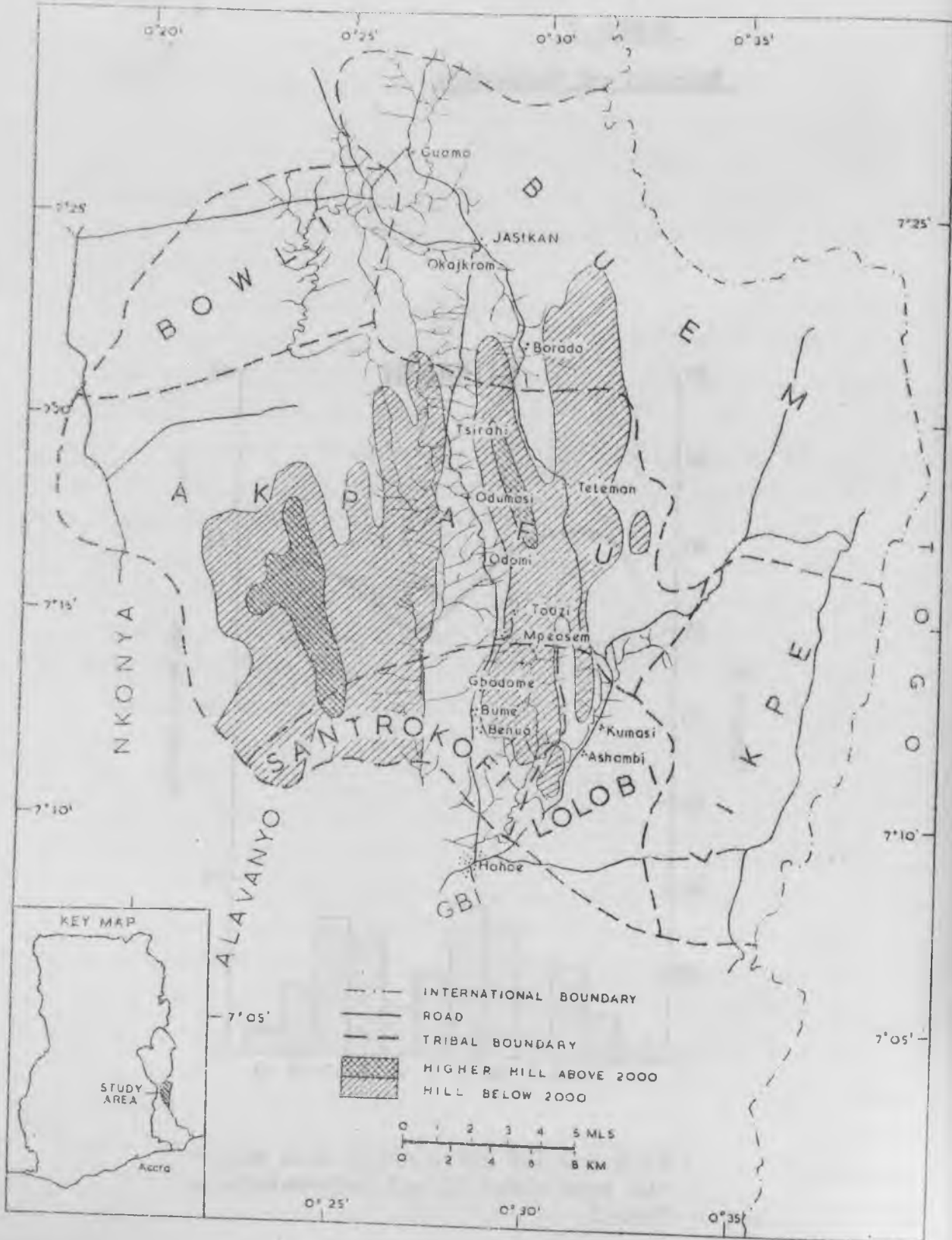
### B3. Drainage

The interaction between the topography and the climatic conditions of the area account for the existing drainage system. In the area under study a significant number of streams and rivers can be found - the biggest being the Dayi River. The Dayi flows along the ridge of Hohoe and Lolobi-Kumasi township into the Volta, the longest and most important river in the country. Rainfall during the rainy season is torrential and the Dayi very often rises high enough to flood the bridge that crosses it.

A large number of streams drain the Santakofi and Akpafua traditional areas (see Map. 2). The Aklowore Tokoeba Fio, Awora, Ikparakpakuty, Kabebledi and the Kokoko drain Akpaf Adomi, while

Fig 11

BUEM AND SURROUNDING AREA





Santakofi Gbodome is drained by the Teeku, Ofaakele, Fifete and Leetu. Some of these streams dry up completely during the dry season primarily because they depend solely on rainfall for their source of supply. Others which depend on springs shrink in size without completely exposing dry gulleys. The discussion of drainage - and the need for irrigation - is of significant importance to the technical aspects of rice production, since, as we have discussed in Chapter II, rice is an aquatic plant and thrives best under flooded conditions for most of its growth. Further, it is of socio-economic relevance since there is a lack of irrigation or water control within the area.<sup>10</sup>

#### B4. Vegetation.

The Buem area falls within the vegetation type described as the moist deciduous forest (Ibid: 39). This type of vegetation coincides with the wet semi-equatorial region (discussed above) where there is an annual rainfall between 125-175 centimeters - with a long and a short rainy season and a short and a long dry season. As a forest it is of tremendous economic importance for its timber. However, its moist deciduous forest, it is only the trees in the lower elevation which remain green throughout the year.

As of now this vegetation belt has largely been cleared of its original forest and most of what remains is the secondary forest. This has come about because of the rapid expansion of agriculture and the cocoa industry in particular. The secondary forest vegetation consist of climbers, shrubs, and soft woody plants, while a few giant trees remain standing on farmlands in order to provide shade. Dickson (1970: 39) further noted that frequent use of farm lands within the forest zone results in the appearance of grass species in the secondary forest vegetation. This ecological change is noticeable in the Buem speaking area.

### C. THE PEOPLE AND THEIR HISTORY

With the Buem as the main area of study, we will focus on the socio-economic background of the people, with the aim of demonstrating in very general terms, the development of their social life so as to articulate the activities involved in rice production. We will examine rice production not as an isolated activity but one whose development is closely linked with the totality of social life; an activity whose development has been influenced to varying degrees, by various aspects of social practice. It should be noted however that the term "Buem" as applied to the people could be very misleading and therefore requires some clarification.

In general terms Buem is used in reference to the area North of Hohoe up to Jasikan and the surrounding areas (see Map II). Hence, the Akan speaking people who fall within the Jasikan Administrative District are also referred to as Buems. It follows that many of the people in the area speak either the Twi or Ewe language and a substantial amount speak both language. Within the Buem area there are no fewer than six and possibly more languages. According to Dickson (1969: 28) the individual languages spoken in Buem are unrelated to one another and obviously brought to the area by refugees who continued to stream in from elsewhere many years after the end of the seventeenth century. Thus, the linguistic groups within the Buem area vary considerably. Among them are: the Akpafu, made up of three township of Akpafu Memepeasem, Akpafu Todzi and Akpafu Odomi. There are also the Lolobi Ashiambi, Lolobi Kumasi and Lolobi Haussen. As for the Santakofis there are Santakofi Benua, Santakofi Gbodome and Santakofi Bume. The Akpafus and the Lolobis speak what is referred to as the Siwu dialect (with minor variations) while the Santakofis speak the Santakofi dialect. It should be noted however, that the list of different sub-groups in the area is not exhaustive; there are for example the Fitemans, the Baglos and the Likpe.

On the whole, with the probable exception of the Akan speaking towns, cultural similarities cut across the different linguistic and cultural groups in the area. First, most people speak the Ewe and/or Akan languages. Second, linguistic differences between the Akpafus and the Lolobis can be ignored as both speak the Siwu dialect with minor variations. And thirdly, some similarities - from a religious standpoint - do exist between the Akpafus and the Lolobis; they worship the same gods, the chief of which is the Ibokpakor God. Occupationally, the Akpafus and the Lolobis as well as the other Buem villages are rice growers, by tradition. However, it is significant to note that the Akans as a group in the Buem area have not been actively involved in rice production - though it would be both unfair and unreliable to make any categorical statement on this point. It should be noted however that the term "Buem" is, to a great extent, used synonymously with rice growing people.

From the above discussion it is clear that the term Buem cannot be used to identify any cultural or linguistic or ethnic group but more so to denote geographical area. For the purposes of generalization, however, the term Buem as used implies an administrative area in its totality, whether it is Akan speaking or not - even though the Akan speaking people of the area delineated as Buem resent, to some extent, being identified as such.

#### C1. Social History

Oral tradition constitutes the main source and basis of the earlier historical account of the peoples under study. The rice growing peoples of the Buem and Hohoe areas trace their ancestral home to Notsie - like the Fekis and other Ewe groups. The account of the people from Hohoe and Peki seem to suggest migration in the company of other groups such as the Guans. Oral evidence also seems to suggest that the Akpafus and the Santakofis also migrated in their company. According to Dickson and Bennet (1970: 164) the

original Buem settlers chose the area primarily for security reasons because of the incessant wars during those days. The Buem area (as discussed earlier in this chapter) offered an excellent refuge and defensive position primarily because of its rugged relief and dense vegetation. These "refugees", as it were, like their Ewe neighbours to the South, located their settlements with the principal consideration of defence, and the present day location of some of the settlements reflects this earlier state of insecurity during that period.

What is probably the best oral account of the process of migration of the Santakofis was given by a Reverend Minister named Agbodza. Rev. Agbodza was born sometime about the end of the 1890's.<sup>11</sup> He considered himself a German scholar and lived in the Region when it was under German colonization (Germany lost that part of present day Ghana after World War I). According to Rev. Agboza there were three waves of migration among the Santakofis. The main reason for the movement from the first to the second settlement was because of the lack of iron ore.<sup>12</sup> He further explained that with the introduction of iron/steel tools from Europe the iron-ore industry declined. At the same time the increasing appearance of manufactured commodities and the gains of commerce became increasingly apparent to the people. The people were thus lured down from their mountain settlements to the second settlements by promises of European manufactured goods.

Dickson and Benneh (1970: 164) made mention of the role played by the Germans in promoting cultivation for export. First, it should be noted that this not only laid the foundation for a mono-agricultural, cash crop, export oriented economy and the destruction of an independent subsistence economy but led to the growth or emergence of one dependent on the Germans one. Second, the changing pattern severely stifled the iron-ore industry in the area. Third, with the promotion of cash crop cultivation in the area at the expense of food crop cultivation for consumption, the depen-

dence on the Germans, even for food-stuffs, was intensified. The importation of commodities into the area not only had an adverse effect on the local industry - iron ore - but also led to the emergence of an agrarian structure that was (and is) oppressively unsuited to the food requirements of the people. With time the reliance on the Germans (and later the British) for European manufactured goods evolved into a pattern of life.

From the above, it can be inferred that the lack of iron ore at the first settlement, and the need to acquire European manufactured goods, were mutually reinforcing factors which contributed to the migration of the people to the present area. Since the nearby Akpafu iron ore deposits are mapped<sup>13</sup> as the mineral deposits with major significance in the Region, one cannot agree fully with Rev. Agbedza's explanation that it was the exhaustion of the ore deposits which forced the people to migrate; it probably had more to do with the ineffectiveness of the indigenous mining implements.

The Lolobis also trace their original home to Togoland, then part of the Dahomey Empire. No mention is made of the Notsie here, but Notsie are in the Republic of Togo so that this does not contradict the possibility that these rice growing villages have a common origin. From the Republic of Togo they came through Likpe and settled at Likpe-Mate, but due to the lack of water they abandoned the area. Thus, the present-day home of the Likpe-Mates was earlier inhabited by the Lolobis.

Like the Santakofis, the Akpafus see their present settlement as a result of migration - the most recent being not too far from the present location. There are two versions of the story told of the Akpafus' movement. One version has it that they migrated from Nigeria and settled in Notsie; from there they moved and settled at Mount Awobe before moving to their present site. The second version is that they were formerly living at Alavanyo (between Nkonya and Kpandu). The two versions, however, are not contradic-

tory since the villages mentioned in the second version were probably located near or on Mount Awobe.

The significance of Notsie in this discussion is that the rice growing ethnic groups trace their ancestral home to it. This fact has been documented by Ewe scholars such as Manoukian (1952: 9-12). The Ewes also claim they migrated from Notsie but trace their original home to Keta or the Oyo State in the Yorubaland in Nigeria.

## C2. Occupation.

The earliest occupation of these people, according to tradition, was the cultivation of rice and yam which were their major staple foods. Vegetables such as okro, tomatoes and pepper were also grown. According to Dickson and Benneh, where cocoa cultivation was introduced into the area roughly before the First World War by the influx of people from older cocoa growing areas, the inhabitants also took it up as a new form of occupation.

Another major occupation of the people, as noted earlier, was iron smelting. This was the major occupation of the Akpafus on whom the people from the neighbouring areas relied for the supply of their tools. The metal was extracted from iron stones mined from the laterite while the smelting furnaces were built of laterite soils and fuelled with firewood. This occupation existed side by side with a certain level of farming activity - not ignoring a certain level of division of labour.

The cultivation of rice itself has been in practice among these people for so long that no one seems to remember anything about its introduction. However, some of the reasons given for rice cultivation suggests its nutritional value (which is the basic quality of the grain); also, there seems to be some religious significance to the grain. Some (respondents) praise rice for its nutritional value. Some respond with, "it is palatable and easy

to cook", others claim "it is non-perishable" while others commend it for its medical value - with the claim that rice has the potential to restore lost appetite. Some informants claim that rice cultivation has always been a traditional occupation. The Santakofis claim that they were growing rice when they left their first and second settlements.

At Akpafu-Odomi, an elderly man told me the story of how rice was first seen growing round a Tokpaikor shrine whereupon it was picked, prepared, and found to be good. This story of course does not explain how rice got there; nonetheless, it introduces one of the crucial elements religion, in rice cultivation as a historical activity. This is very important since the cultural practices of most traditional people are inextricably bound up with what we might describe as the religious factor of socio-economic history. It is also significant to note that the religious rationalization for the sustenance of rice growing as an activity was necessary if this food producing activity was to be continued. This point is very important especially when viewed against the importance (within Government circles) which has been placed on commercial crops and the monetization of the rural sector since the end of the last decade of the nineteenth century. Further, it is the religious significance which we must point to in the continued cultivation of rice, as certain rituals and customary rights must be observed with food prepared from rice.

The cultivation of rice has at the moment declined considerably because of the expanding influence - socially and physically - of more competitive cash crops especially cocoa. It is important to note that unlike in the Northern rice growing areas where men are more actively involved in rice production, in the Volta Region rice cultivation is almost exclusively a female occupation. When asked for an explanation, the Chief at Akpafu Odomi said that rice cultivation is a very tedious job involving long hours

of continuous bending to which women are more suitable, i.e. they do not suffer waist pain as easily as men do. However, the fact is that men have increasingly been moving towards cash/commercial crops such as coffee and cocoa. One explanation offered by a group of women at Lolobi-Kumasi, which seems fitting to the socio-economic condition, is that, rice harvesting coincides with cocoa harvesting which creates an unbearable demand on their labour resources. Hence the men concentrate on cocoa, which has a higher economic value while the women devote their attention to rice cultivation. From a sociological point of view the division of labour is significant at two levels; first, it is the subordinate position of women in relation to men (which determines) their respective relations to the social division of labour of crops produced. Secondly, within the family structure it is important to recognize that the women are held responsible for providing the basic necessities such as rice, corn, cassava, and so on, while the men are responsible for the income procured from cash crop earnings to meet the needs for additional consumer goods such as sugar, milk, kerosene, oil etc. A higher social status is thereby placed on the production of cash crops because of the "purchasing power" of the commodity or commodities produced.

From the foregoing discussion it can be seen that it is the lower monetary expectations of rice growing which has forced much of the available resources, namely labour, from the traditional activities of rice growing. As it is, rice cultivation has remained a predominantly subsistence activity while other cash crops have developed at its expense. In Table V below I attempted to demonstrate the lower incomes derived from rice as opposed to other cash crops, especially cocoa. Below is the average annual income for the past three years (1977 - 79) given by ten farmers:



Table V

FARMERS' INCOME AND THEIR SOURCES

NO.	SOURCES	INCOME (CEDIS)
1	Rice	400
	Cocoa	2,000
2	Rice	1,000
	Cocoa	8,400
3	Rice	4,000
	Cocoa	2,000
4	Rice	5,000
	Cocoa	20,000
5	Rice	1,000
	Cocoa	5,000
6	Rice	400
	Cocoa	1,000
7	Rice	1,000
	Corn	5,000
	Cocoa	2,000
8	Rice	1,000
	Oil Palm	3,500
	Corn	1,240
9	Rice	6,000
	Pharmacy	5,000
10	Rice	1,200
	Cocoa	2,000

Source: Data Collected 1979.

From the above data it is quite evident that cocoa and other cash crops are far more important than rice. However, it should

be pointed out that there is a hidden element which does not manifest itself in the above Table and that is, what percentage of the rice produced by the farmer has been consumed by him and his family as compared with cocoa?

One of the most deterrent factors facing the rice industry is the shortage of labour. (As discussed above, this is so partly because the rice crop season coincides with other agricultural crops. This can be explained by the fact that all these crops depended on rainfall). Most farmers mentioned weeds as another major problem. There are three reasons which can explain why weeds are a major problem facing rice farmers: first, the broadcasting of "dry seeds" is practiced in the area, as opposed to the practice of broadcasting pre-germinated seeds (the preparation of the soil in the latter case has an adverse effect on weeds, whereas with the former the seeds and the weeds start growing at the same time); secondly, it seems that rice fields have been invaded by a particular weed called maurina which is similar to rice plants and cannot be readily identified by someone who is not familiar with the differences between the two plants; and finally most weeds in rice fields, including maurina, can be easily treated with woodicides such as malathion; however, most farmers in the area have never heard of malathion and the extension officer in the area who is to advise them had not been seen by more than 79% of the 110 farmers interviewed.

Even though it has been suggested that there is no real land problem partly because rice farms are usually found in swampy areas which are considered "useless", this suggestion seems very relative because land may be said to be available only in relation to the supply of other factors of rice production - especially labour.

Finally, probably the most important factor responsible for the decline of the industry is the political factor which mani-

feats itself through the work of Governmental agencies and/or personnel. From the field survey it became very clear that agricultural agencies were primarily concerned in assisting those who were involved in growing cash crops. Out of a random selected sample of 25 individuals none of them had received any governmental assistance in the form of weedicides, fertilizers or seeds. Most rice farmers stated that they had never seen an agricultural officer. At the same time a few farmers mentioned that agricultural extension officers sometimes go and spray farms without consulting or advising the farmers.<sup>14</sup> On the whole the relationship between farmers and extension officers is most discouraging. This is partly a reflection of the objective political character of governments in the recent past eg. the process of alienation of poor farmers, and partly of the general attitude (or training) of agricultural officers as discussed in Chapter I.

In spite of all these constricting and strangulating influences on the development of the rice industry it would be an overstatement to conclude that the rice industry will decline considerably below the present near-subsistence level in the Volta Region. As a traditional crop it is closely tied up with the socio-cultural lives of the people. As such it will not die off that easily. Besides, the availability of female labour - which otherwise would have been reduced to the drudgery of domestic slavery - is sufficient to maintain the industry at a significant level. On the other hand it is evident - given the available resources - that with drastic governmental decisions the industry in the area could be boosted to save the worsening food situation not only in that locality but in the country in general. The extent of this concern however calls for a "humanist revolution" by which I mean not only the articulation of new ideas, but a transformation of attitude of the dominant sector toward putting these ideas into action.

## CHAPTER IV

### FACTORS AND TECHNIQUES OF PRODUCTION

#### A. INTRODUCTION.

In the previous chapter we discussed the geographical conditions of the area under study and their significance to the technical and social conditions necessary for rice production. We have also focused on the historical background of the people who traditionally grow rice. In this chapter we will investigate the factors of production (Land, Labour and Tools, as discussed in Chapter I) and the manner in which peasants and farmers relate to them. Further, we will discuss the techniques and methods of rice production employed at the different stages - production, processing, transportation and marketing - within the industry.

It is hoped that through the discussion in this final chapter it will become clear that the techniques of rice production are **determined**, at least in part, by the factors of production, and how the different productive units (the peasant family, household and so on) are related to them. As we have articulated in Chapter I, to every agrarian society, no matter the level of development, certain factors of production are indispensable - even for the realization of minimum productivity.

#### B. INSTRUMENTS OR FACTORS OF PRODUCTION.

##### B1. Land.

Given the agrarian character of the area under study and the importance of land as the major factor of production we will begin by discussing the availability and/or distribution of land among the peasants, farmers and even non-producers. In discussing the availability of land we will try and explain how different clans, families and individuals exhibit access, control or rights

over a particular piece or pieces of land. The access or control over land will, we hope, help to reflect the scale of production, hence the significance of social labour that goes into rice production.

The relations pertaining to land as the major factor of production manifest themselves through a complex form of ownership which determines the nature of control over and use of land, as well as the appropriation of its resources and produce. These relations however very often appear, or present a general appearance, which is much simpler.

In the Buem area of the Volta Region the form of land ownership is predominantly communal, with the clan as the unit of ownership rights over some particular piece of land. However, there are cases where some clans complain of not having any land at all, while others have so much that some of it is leased out. This disparity between the amount of land owned by the different units repeats itself in the individual family units comprising the clans, so that some families claim to be dispossessed of land within the clan. The position that land is not individually owned is confirmed by a Mr. E.A. Asare (interviewed at Akpafu Odomi); at Akpafu Odomi, for example, there are four clans and these constitute the units of ownership through which all transactions in relation to land must pass.

The claim by clans and individual families of being landless has been disputed by an elder (interviewed at Gbodome) who argued that "no native of the area is without access to land" and that he was not aware of the existence of a clan or a family which had no land for its use within the existing form of communal ownership. While this argument may be significant to the predominance of a communal form of land ownership in the area it seems to contradict the actuality of landless families within the clans - and perhaps landless clans too.

Further information furnished by Rev. Agbodza and his son - a retired educationist - seems to confirm the disparities in land distribution, or accessibility to land, and the landlessness of some families within the clan. More often than not the explanation given for this disparity was based on traditional claims to land, whereby hunters could lay claim to the land they "discovered" - as their hunting expeditions often took them far into the heart of the forest. As a result of this traditional mode of laying "claim" to land, those who specialized in such craft as blacksmithing as members of their clan emerged as a kind of landless aristocrats. It therefore seems plausible that with the introduction of European tools and the subsequent decline of blacksmithing in the area as a social and economic activity those who had earlier been blacksmiths were to be poorly provided with land for agricultural purposes. This discrepancy may be explained partly by their not being party to the tradition of "discovering" of lands or sharing in the use of lands "discovered" by other members of the clan or family; and partly in terms of the increasing value of land as the basis for producing cash crops - especially with the increasing tendency towards monetization of the rural sector.

From the foregoing explanation it can be seen that despite the predominance of a communal form of ownership, commercialization trends are discernible, to varying degrees, in the position of individuals in relation to land as the major factor of production and the manner in which individuals relate to one another in issues arising over land. Table VI below shows the distribution of land, based on a random sample, in the four villages where data was collected.

Table VI

No. of Acres Owned by Household Head or Community

	<u>NO. OF HOUSEHOLD HEADS</u>	<u>PERCENTAGE</u>
0	16	14.6
$\frac{1}{2}$ - 4	11	10.0
5 - 9	7	6.3
10 - 14	8	7.2
15 - 19	10	9.1
20 - 24	7	6.3
25 - 29	8	7.2
30+	6	5.5
Communal	37	33.8

Source: Data Collected 1979.

As can be seen from Table VI above 16 families owned no land of their own. This comprises those who have rented land from others especially around Hohoe. After the harvest and sale of paddy a rent of approximately  $\text{¢}30$  -  $\text{¢}40$  is paid to the elder of the clan responsible for renting out the land. Some tenants from Lolobi who rent land belonging to the people at Wegbe at the cost of  $\text{¢}40$  per acre stated that after much work is done on the land the landlord/lady often demands extra money to be used for placating the gods. This however has not passed without serious protest from the tenants who claim that payments for placating the gods are contrary to the rental agreements. So, despite the predominance of the communal form of ownership of land, monetary considerations are increasingly governing the allocation and the use of land. This also reflects the increasing value of the land in a monetary sense.

It should further be noted that (1) as the commercialization trend increases it allows some people to have only use rights over land which is owned, and ultimately controlled, by others and (2) the production of cocoa and other cash crops are at the expense of rice i.e., food crops. This is so because of the increasing emphasis on the production of cash crops - hence monetization - which compels the peasant and poor farmers to opt for cash crop production.

Further observation from Table VI shows that despite the strong claim of communal ownership, only 37 household or 33.8 percent of our sample cultivate land that is communally owned (two of the 37 individuals mentioned are employed at the Government owned hospital at Hohoe). It seems that the complexity of the land tenure system, not only in the Volta Region but throughout Ghana, is yet to be carefully deciphered. Many individuals in the area under study, who claim ownership rights over small holdings which they cultivate have a fairly narrow conception of ownership. For them, repeated use of the same plot or plots of some family or clan comes to constitute ownership. They begin to assume ownership rights over these plots. This conception of ownership was dismissed by all the four Chiefs in the area. This notion is reflective of the proprietary tendencies of peasant cultivators over the land they till, and this is so to a great extent because of the recent trend towards commercialization of land. It can also be pointed out that the nature of the crops cultivated sometimes affects the character of one's relation to the land cultivated. In this respect it should be noted that those who grow perennials such as cocoa, coffee, coconuts and so on have greater control over the lands they cultivate, whereas with respect to annuals such as rice, corn, maize and so on, once the harvesting is over the land comes under the supervision of



the clan head or his appointees.

On the other hand there are individuals who own the land they cultivate, in the actual sense of having gained property rights acquired through monetary transactions which are legally sanctioned. Such land owners are those who own individual holdings of over 36 acres - and it should be mentioned that these holdings are most often fragmented. It should be further pointed out that the coincidence of large scale producers and those who have acquired their land through monetary transactions is indicative of the emerging commercial character of these enterprises. It is the impact of increasing monetization of the rural sector, and at the same time the denial of access to capital through financial institutions (discussed later) which has infested the patriarchal relations which manifest themselves through the dominant form of land ownership.

In the town of Akpafu-Odomi the clan heads who have large acreages at their disposal lease some out to those who need land for rice cultivation. The difference in relations involved in the locally acquired land, and land rented from other localities is expressed in the form of rent paid. Whereas the latter attracts rent in the form of cash, the former - i.e., land rented from local clan head, releasing the land for use, is a quantity of paddy, say 2-3 Kerosene tins, depending on the yield from the farm (this is usually a relatively small percentage of the harvest). Where the yield is very poor as a result of natural disaster, the clan head invariably waives the agreement binding the tenant cultivator. Several clan heads noted that it is difficult to find a defaulter of the agreement binding him, since a tenant hopes on the basis of good conduct to secure another plot in the future.

As it is, this form of relation gives the cultivator token "possession" rights over the land, but the form of the rent suggests that this right is very slim and inarticulate. Moreover,

it suggests the subjection of the influencing monetary character of the relations to the patriarchal communal character. It is therefore not surprising that the paternal considerations shown by clan heads to members of the clan are, to some extent, enjoyed by this tenant (or quasi-tenant), though to a lesser degree.

Opposed to those tenants who pay rent in kind in their own locality, those paying rent in the form of cash for land acquired in other localities share or enjoy a stronger economic relation with those letting out land. All the same, it should be noted that the latter too, do not pay for the real value of the land as the present value is influenced by - even though not exclusively based on - family, clan and/or ethnic considerations. Thus in this case too, land as an object entering into commodity relations, has not been sufficiently developed to attract a value systematically determined on the basis of economic calculations.

At the same time it has been observed that land is sometimes leased out by clan elders who make no claim even to the token form of rent in kind. This is not to indicate a low conception of land as the most essential factor of production but the laxity with which land is leased in areas where there is little strain on its supply. As the earnings from these lands become apparent to the elders and clan heads they begin to wake up to the economic potential of the leased-out plots and seek to express their ownership rights by beginning to make claims on a portion of the tenant's produce - even if the initial claim is a token one. Property relations begin to take form in the clan head as he gives out land, and by his own prerogative waives payments or even token fees for the use of land, in spite of the fact that such token rents are to be received not on his own behalf but on behalf of the clan which he heads.

Thus, it seems that each form of land ownership or tenure system has its own internal dynamics even though they are all

subjected to changes in the type, scale and character of productive activity within the rural setting. These changes are, of course, the effect of the interaction between the social, economic, political and cultural processes of the national setting in general and the rural sector in particular. More specifically, it can be said that at the most basic level these changes are the result of the increasing emphasis of the commercialization of agriculture i.e., the increasing production of cash crops in response to the socially determined "national" needs. In concrete terms, we find that with the modernizing of the rural sector not only does the scale and character of productive activity change, which in turn affects the form of land ownership, but these changes lead to a scarcity of land which increases its value in monetary terms.

In the Buem area land shortages are real. Characteristic of this area is a type of group farming that is organized on a seemingly cooperative basis. This however is an organizational response to the shortage of land. On these farms the acreage cultivated gives the appearance of a big cooperative farm, when in fact they are made up of small, fragmented, individually cultivated plots. These peasants' plots are demarcated by raised soils or bounds and flag-bearing posts. When the land loses its fertility, after two or three years of cultivation, the group shifts to another spot, leaving it to lie fallow for 5-7 years before returning to till it. Along with these farms there are the usual cultivated plots either on the mountain side or in the swampy lowlands (discussed in Chapter III) where upland (brown) and swampy (white) rice are cultivated respectively. These different varieties of rice are not exclusive in the respective areas mentioned.

## B2. Land Disputes.

Given the relations pertaining to land it should not be of any surprise that land litigation is a common feature of towns

which are so land-hungry. Two land disputes of significance in the area will illustrate the point:

- (a) that between the people of Hohoe and those of Santakofi
- (b) that between the people of Santakofi Gbodome and those of Akpafu.

(a) It is contended by the Santakofis that in the past they attached little importance to the grass land lying between themselves and the Hohoes, even though they could claim (and articulate) communal property rights over it. One account has it that the Santakofis cleared a path up to a point in the direction of Hohoe, whereupon the Hohoes cleared up to where the Santakofis left off. At that time they naturally, and without any dispute, claimed ownership over the grassland lying on both sides of the path they had cleared. However, the savanna seemed to present so little in terms of economic potential that the Santakofis gave up what was rightfully theirs by tradition.

Over the years the Santakofis refused to clear the path up to the original meeting point. The Hohoes took advantage of the Santakofis' negligence by weeding into the Santakofi section of the path. Hence, gradually and without any real concern the Santakofis were ceding part of their land to the Hohoes. With the demand for land and its economic potential increasing attempts are being made by the Santakofis to retrieve that part of the land which they consider to be theirs. To demonstrate their claim the Santakofis have started to put up buildings close to the Hohoe section of the disputed area.

It is doubtful, however, whether this strategy will enable the Santakofis to wrestle back the land which is apparently lost to the Hohoes. A native of Hohoe denied the claim made by the Santakofis and told a different version of the story. The crucial point for us to bear in mind is that land disputes will continue to emerge because of the economic viability of land until the ne-

tional government takes a firm policy on land and land tenure problems in general.

(b) The second area of dispute is the area between the Santakofis and the Akpafus. It is, specifically, a dispute between the Santakofi Gbodomos and the Akpafu Mempaseams over a stool land roughly six miles on one side and twenty-eight on the other or approximately one hundred and sixty-eight square miles. The first arbitration on this disputed land occurred in 1911 and 1913, under the German Missionaries (with Hansen Grunner, as their head). The case was decided in favour of the Santakofis Gbodomos as rightful owners of the land. However, the dispute resurfaced in 1945 even though the (British) District Commissioner, Mr. C.A. Polla had in 1935 confirmed Mr. Grunner's arbitration. That, however, has not resolved the issue, and in any case the Akpafus had received no legal backing. In 1959 the case was brought to the Lands' Court presided over by Justice Van Lare. Once again the court decided in favour of the Santakofi Gbodomos. Later that year they appealed to the Supreme Court of Ghana which dismissed the case.

During the early stages of the dispute the Akpafus sought permission from the Gbodomos before using the land in dispute, and until 1973 a token sum of 12 pesewas was paid to the people of Gbodome in recognition of their legitimate (or seemingly legitimate) claim to the land. However, in recent times they (the Akpafus) have pushed the boundary pillars further into the Gbodomos' territory. And on October 10, 1979, a case concerning this dispute was reported to the Police at Hohoe.<sup>15</sup>

The crucial point however, is the social significance of these land disputes. They are concrete manifestations of the effects of the disputes between different social groups or individuals, in their interaction over land as the major factor of production. And with the reinforcing impact of monetization of the area and the cultivation of cash crops a consequent increase in the value of

land has been witnessed. It is obvious that with the increasing emphasis on the value of land these conflicts will be intensified.

As we have discussed, both in Chapter I and earlier in this Chapter, land is only one of the major factors of production. A discussion of the labour resources (and other factors of production), their supply and distribution, and the manner in which producers relate to them should lay bare the nature of the problems facing the peasant producers which have a defastating effect on the economy (vis-a-vis food production).

### C. LABOUR.

Labour is the human factor of production. Without human labour there can be no production, and land and other factors of production, i.e. tools will lie idle. It is the ability of men and women to affect the given resources - through physical and mental activity - which contributes the labour capacity to deliver the goods for human consumption. Human involvement is the most crucial factor within the productive process.

Human labour presents its unique problems to production - especially agricultural production. And this is especially true in the development of the food sector to which the rice industry belongs. The area under study shows the extent to which labour constitutes a peculiar problem to the rice industry.

One of the basic problems with labour is its short supply and its high cost. Prior to June 4, 1979 (when the Armed Forces Revolutionary Council came into being) over ₦10.00 was charged for the clearing of one acre.<sup>16</sup> The Government stipulated price i.e. controlled price, for clearing one acre was said to have been ₦6.00 for forest lands and ₦8.00 for grasslands. However, in the course of field work (1979) it was discovered that it was not possible to have an acre cleared for less than ₦10.00, though prices were not consistent. The price inconsistencies in land clearing seem

to suggest how little impact the "controlled price" in labour had on actual transactions. Though the controlled price ranged between £5 - £6, one informant said that in order to procure labour to clear lands some richer farmers entered into secret arrangements with workers promising up to £15 - £20 for clearing of one acre. Whilst these figures may be considered an exaggeration, it is an exaggeration which is reflective of the high cost of labour.

In some cases, especially at Lolobi, apart from the charge of £10 to clear one acre, there is the cost of transportation, sometimes as far as Hohoe or Abege. Besides the wage and the transport cost which must be borne, labourers are sometimes provided with two meals per day.

#### C1. Source of Labour.

Normally the various families constitute a vital source of labour supply, made up of the wife (wives), the husband and the children when they are on vacation as nearly all the children of school age are in school. It was found that during the holidays the students, after helping their respective parents with farm work, organized themselves into a form of labour force to work for those farmers who could not obtain the necessary labour. The organization of the students into work groups reflected neither a charitable act nor a patriotic conscientiousness, but rather a desire to earn some money. Within the rice industry in particular the crucial point to note is that these students' work groups constitute an invaluable source of labour supply.

On the whole, exchange labour is practiced on a relatively minor scale. It was, however, a common practice in the past. The major reason given by most informants is that exchange labour requires a relation of mutual trust and cooperation among partners - which, in recent years, have been marked by suspicion as a result of strained relations. This suspicion is bred by the fact that out-

put of work may fall depending on whether one is working on his own farm or on the farm of another member of the group. Informants also noted that excuses are often given when it is time to work on the farm of another person. Excuses like poor health and the call to attend some relative's funeral are quite common. One prominent rice grower stated that he has not been a party to exchange labour system for the past six years because all of his trusted friends had left the town.

With increasing monetization the trends in labour exchange will continue to deteriorate.<sup>17</sup> At Akpafu the monetization tendency is expressed thus: if Mr. X owes Mr. Y a day of exchange labour, Mr. Y can employ Mr. X on the farm of Mr. Z. Mr. Y then collect a day's wage from Mr. Z for work done by Mr. X.

From the above discussion it is clear that labour is in short supply - especially as related to the rice industry. Apart from its scarcity and the precariousness of its supply there is the prohibitive cost which makes the supply of labour available more easily to farmers raising cash crops such as coffee and cocoa. Thus, it has become apparent that rice producers must compete with other cash crop growers for labour. The problem for the rice grower - even those growing rice in large quantities - is that he does not have easy access to capital from financial institutions for investment in the rice industry.

#### D. TOOLS AND OTHER INPUTS.

In bringing the resources of the land into the realm of production, man employs tools<sup>18</sup> which, to varying degrees, reduce the labour capacity necessary for a particular unit of work. Different types of tools are required for different types of work, but this is not to suggest that tools are in themselves unifunctional, that is, that a particular tool be used for a particular type of work. We find that tools such as the cutlass and hoe are multifunctional. However, it is also known that some tools are more



efficient than others depending on the structure of the tool itself and the nature of the task that needs to be done.

In the area under study there are not many different kinds of activities. In fact most of the productive activities revolve around the land. So that most of the tools in use in the area are used in cultivating the land. The fact that some tools are more efficient than others for the cultivation of rice is obvious. The most common tools employed in the production of rice are the hoe and the cutlass during the early stages of land preparation. (Axes are sometimes used for clearing the forest which are crucial in clearing and preparing the land for sowing). The use of tractors has dwindled to the point of near non existence.<sup>19</sup> During the reaping or harvesting period the sickle or grass knife, as it is popularly known, is the main tool employed. The use of self-propelled combines which are common in the Northern part of the Volta Region and the Northern and Upper Regions are alien to the majority of producers in the area. A board measuring approximately 6 feet by 3 feet is used for threshing. At the processing level we also see the predominance of traditional tools in the form of mortars and pestles.

Basically, the tools and the techniques involved in rice production at the different levels are predominantly traditional. Out of the 110 respondents only three used animal drawn ploughs to prepare the land for cultivation as opposed to the 107 who used hoes. Only one individual from our sample used a combine to reap his paddy - the rest used sickles. The same individual who used combine to harvest his paddy also stored his paddy in a factory and used mechanical processing as opposed to the 109 individuals who store their paddy in their "home" built storage and process their paddy with mortar and pestle.<sup>20</sup>

It is therefore the very simple tools and techniques in rice production which predominate in the Buen area. This is indicative

of the subsistence mode of production and the small scale on which the peasants are engaged. Table VII shows clearly the amount of land which is devoted to rice cultivation. It would be misleading however if we attempted to explain the low involvement in rice production by the use of simple tools e.g. hoe and cutlass since it is these very tools which are responsible for the development of the cocoa industry. Thus, it is neither the tools and techniques nor the social relations of production which are responsible for the low participation in the rice industry but the encouragement given to the commercial cash crops on the part of Government agencies, such as the banks, extension agricultural officers and so on.

Rice and other food crops have received very little in the form of Governmental assistance. It is only recently that the processing stage of the rice industry witnessed some innovations - two rice mills - one located at Santakofi Gbodome and the second at Worawora. The mill at Worawora is the Oti Mill, which is, strictly speaking, in the service of the Northern section of the Region. The smaller mill at Gbodome has been servicing the surrounding villages but has been out of operation for the past three years as a result of the breakdown of the machine and the absence of spare parts.

The only mill of any significance in the Region is the Oti Rice Mill located at Worawora about 29 miles north of Hohoe. The fact that the mill deals primarily with the 'Northern' section and hardly at all with the 'Southern' section explains the relatively insignificant scale of production in the Southern section of the Region.

Worawora is not a rice growing town. According to one enginger the area is unsuitable for rice cultivation because the land is "not savanna" and therefore very difficult to clear and to prepare. He noted that in order to bring any significant acreage under rice cultivation D8 Caterpillar tractors would be needed. He further noted that these machines are very costly to

procure and maintain. However, the land at Amanya and Abotoase, about five miles away, is considered ideal for wet rice agriculture but is not being used for this purpose.

It seems that the only reason why the mill was established at Worawora is because the town has a post office which provides saving facilities. It also has a telephone link with Jasikan, and for that matter with other parts of the country. There is also a modern teaching hospital (formerly owned and operated by the Evangelical Presbyterian Church but taken over by the Government) as well as a secondary school (formerly privately owned) which operates on Government assistance.

Currently there is a Chieftaincy dispute in the town involving two factions, one supporting a Mr. M.T.O. Asare as the Chief of Worawora, with the other group supporting a Mr. Owusu who occupies a managerial position as head of the G.N.T.C. bottling division. This dispute seems to be a major impediment to any form of social or economic progress in the town, since the factions seem to oppose each other for the sake of opposition rather than out of any type of constructive opposition.

The people of Worawora are essentially cocoa farmers. They produce foodstuffs such as yam, plantains, cocoyam and so on primarily to meet their subsistence needs, but manage to sell a small surplus in order to supplement their earnings from cocoa. Farmers in the area point out that the type of grassland vegetation in the area makes it unsuitable for wet rice cultivation. Some women work together with their husbands on the farms while others are involved in trading. Worawora was the main market centre until 1964 when it was overtaken by the new market centres which sprang up along the Volta Lake, coming into being with the construction of the Akosombo Dam.

Established in 1972 the Oti Mill is owned jointly by the National Investment Bank and the Agricultural Development Bank.

Its labour capacity has not been realized primarily because of low wages which has led to a high turn over in labour. The Mill is managed by a Managing Director (a graduate in Agriculture). He was transferred to this position in Worawora after he had worked with the National Investment Bank. There is also a mechanical engineer and a chief mechanic, who, according to the engineer is properly trained.

It should be noted that the workers of the Mill have converted a fire alarm as a device to scare away birds which feed on the ripen paddy.

The Mill also has its own rice farms at Dambai (in the Nkwanta District) and Kapandu with 500 and 300 acres respectively. There are also 6,000 and 10,000 acres of uncultivated land respectively in these areas. In order to increase cultivation, however, there is the problem of proper infrastructural development, such as drainage, irrigation, feeder roads and so on which do not facilitate easy or ready cultivation in the area.

The Mill engineer expressed the opinion that instead of setting up their own farms they (the management of the Mill) should concentrate on purchasing paddy from the producers in order to keep the mill running. His reason was that if the Mill is to operate at full capacity it will require 50,000 acres of paddy annually, and the number of acres owned by the mill is insufficient to keep the mill operating at capacity.

It seems that both the engineer and the Managing Director were more concerned with the processing aspect of paddy rather than the productive sector of the industry. Based on my own empirical evidence there is no reason why the mill in this area could not concentrate at different levels, that is, on production, as well as transportation, storage, processing and marketing. This, will, of course, require more systematic planning in the form of an integrated industry.

### D1. Other Inputs

Inputs such as insecticides, weedicides and fertilizers should also be discussed. These inputs are not considered major factors related to rice production, not because the people are not aware of their function but primarily because of inadequate supply and secondly because of their high cost. As a result we find that the application of these inputs is very low when compared with cocoa and coffee production, where growers avail themselves of these inputs with considerably less difficulty. In fact in answering questions relating to the provision of improved seed varieties, insecticides weedicides and fertilizers only one of the 110 respondents said they received adequate suppl. The rest received none at all.

Many peasants and farmers, not only in the Volta Region but throughout the country, are making strong demands for inputs such as fertilizers. However on closer examination the relationship between weed control and the use of fertilizers is seen to be imperfectly understood. Agricultural extension officers should embark on an educational programme to correct this situation. Weed control, either uprooting by hand or spraying by weedicides, is of paramount importance in fields where fertilizers are to be used. If the weeds are not controlled, fertilizers become useless. For instead of fertilizing the rice plant it is the weed which will, in fact, be fertilized. This in the long run is both a waste of time and money.

The present condition under which rice is cultivated is far from satisfactory. Its significance within the social division of labour (as opposed to the sexual division) is not very strong and cannot compete with other cash crops which enjoy much higher cash earnings for the limited quantity of inputs which find their way into the markets accessible to peasants. At the same time this inadequacy of inputs makes it likely that the shifting type of cultivation will continue, placing much greater strain on the land needs. We

can also point to the economic factor, that is the demand of peasants for loans from the banks and other financial institutions to procure these inputs. Peasants are caught in the so called traditional mode of production not because they cannot break away from "traditional" techniques of production but, more so, because of the institutional constraints set on them by the dominant sector of the society.

#### E. TECHNIQUES OF PRODUCTION.

The techniques of production involve an articulation of the human involvement in the process and the use of tools and other implements to meet their productive requirement. As we have demonstrated in our discussion on "factors of production", prominent in the rice industry is the use of tools. However, because of the use of "simple" tools an enormous amount of human labour is necessary to produce one acre of rice. Further, we found that the present techniques of production have been developed on the basis of shifting cultivation - a system which ensures that a certain proportion of the land will lie idle to fallow, in order to regain its lost nutrients after being cultivated for a number of years. With a proper systematic and scientific manner of crop rotation (e.g. corn one year, and beans the following year) there is no need to let the land lie fallow since the nutrients extracted by such crops as corn are being replaced by such crops as beans. There is also much talk about techniques of "inter-cropping" (see Crist 1975: 156). This technique however is not new to the Buem rice growers. I observed several fields planted with (dry) rice, cocoa-yam and sweet potatoes.

Let us now turn our attention to what is directly involved in the techniques of rice production.

#### E4. Land Preparation.

Land preparation begins in April and May, just prior to the long rainy season. Land preparation involves first of all the clearing of the vegetation, which includes the felling and burning of the trees. The soil is then loosened, either by hoeing or ploughing. One can expect a reasonably good yield (approximately 10-12 bags per acre) for two or three successive years. In the flat grassland areas where the water supply is relatively good for wet rice there can be two harvests from the same plot, but generally, farmers complain that after the first and second crop the rice plants in the fields are usually dominated by weeds.

The grassland is very difficult to prepare without the use of machinery such as tractors. Despite this difficulty, farmers in absence of tractors are forced to use cutlass and hoe to clear the land. From empirical evidence it is obvious that the forest area is much easier to prepare for sowing than the grassland. This is so because the felling and burning of the trees makes it relatively easy to hoe the earth as opposed to hoeing the grassland, which usually has heavy fibrous growth which cannot be easily turned over with a hoe. Out of the 110 respondents who were asked "what Government services do you think could improve the rice industry", 61 respondents said tractors would be ideal while 27 respondents said loans would be best. Of the latter group some saw loans as a means of procuring mechanized services for clearing and preparing the land. But as we have pointed out earlier mechanized service is not easily available in the area.

Several rice growers complained of one tractor owner who in 1978 charged ₱60.00 for ploughing one acre and an additional ₱60.00 for harrowing it. The tractor owner collected the ₱120 in advance and after ploughing the field disappeared, leaving the land unharrowed. Experience has shown that land ploughed by tractors, without harrowing, creates extra problems while at the same time reducing any

technical advantage of mechanize ploughing. In essence it becomes a case of, "a job half done is worse than a job not done at all".

## E2. Sowing and Cultivation.

There are a number of techniques involved in the sowing of paddy. After the land is prepared, i.e., hoed or ploughed the seeds are sown. In the Volta Region the most common method of sowing is the broadcasting of "dry" seeds. The other techniques used in the country are the transplanting of seedlings (in the Upper Region, particularly in the Vea and Tono schemes), and the broadcasting of pregerminated seeds (practiced in the Northern Region) which, as in the case of transplanting, has one distinct advantage over the broadcasting in that the weeds are destroyed before the (germinated) seeds are sown giving the rice plant a head-start over weeds. Another method of sowing paddy seed is "corn planting". A dibble stick is used for making a hole in the ground and a few seeds are placed into the hole, then covered. The distinct advantage of corn-planting over broadcasting of dry seeds is that the seeds cannot be eaten by birds. On the other hand the task is very tedious and time consuming.

With the cultivation of rice certain conditions become a prerequisite for maximizing yields. Factors which are important in this respect are: soil preparation, adequate control of water, good quality seeds, weed and insect control and the proper use of fertilizers. It should be pointed out that, so far, insects have not been a major problem in Ghana. This, I think, could be attributed to the new improved seed varieties, which are less resistant (than those that are well established) to local insects and pests, have not been widely used in the country.

In the Buem area the lack of any type of drainage and irrigation makes rice cultivation completely dependant on natural conditions. As a result yields are meagre - especially when the expected climatic conditions do not prevail. As pointed out earlier, under unfavourable



conditions the paddy grains may be deprived of full maturity (see Chapter III). Thus a strong case can be made for investment in an efficient drainage and irrigation system. This will ensure favourable growing conditions for the crop despite changes in the climate conditions. It should be noted however that providing drainage and irrigation schemes for peasants and farmers - and more so for food production - is not only an economic, social and technical issue but more importantly a political issue, and must be treated as such.

The issue can be termed political because empirical evidence (see Thakur 1978) have shown that even when all the necessary inputs such as water, insecticides, weedicides and fertilizers are adequately available, production may decline. As discussed in Chapter I the availability of these inputs cannot in themselves accentuate production. The predisposing condition for production is the human element. Attempts, knowingly or unknowingly, to alienate peasants and farmers from the social, economic, and political process have proven to have very serious repercussions in relation to productivity.

Other factors which can help to boost the rice industry in the area are the control of weeds, pests such as rodents, insects, birds and so on. Weeds should as much as possible be kept out of the fields as they compete with rice plants for scarce nutrients and water available in the soil - which increases water losses through evapotranspiration. In light of short supply and relatively high cost for labour, rice farmers find it extremely difficult to keep their fields free from weeds. This is compounded by the problem of severe shortage of weedicides.

The ravages of birds, grass-cutters and mice will [ ] for a long time to come [ ] continue to take its toll the produce of paddy fields. There are no systematic techniques for controlling these "rice destroyers". Peasants, mostly women, scare away birds by beating metal, shouting and setting up scare-crows. The task of scaring birds

away is carried out on a rotation basis. In order to realize the yield commensurate with the amount of labour and acreage cultivated, peasants - mostly women - must be at the farm very early in the mornings and late in the evenings including weekends, to ensure that birds do not feed on the maturing rains. Peasants and farmers are working on innovative means (as in the case of the Oti Rice Mill at Worawora) to keep birds from destroying the crops. One farmer from Hohoe stated that he had been successful in keeping birds away from his rice farm with the "blasting" of his transistor radio. He however lamented that because of the scarcity and cost of batteries this is not possible any longer.

### E3. Reaping and Thrashing.

The reaping of paddy usually takes place in November. Unlike in the Northern and Upper regions where reaping is done extensively by mechanized means i.e., combines, in most of the Volta Region, and particularly the area under study, reaping and thrashing is done manually. The crop is reaped, (or cut) with a sickle or "grass-knife". Only one of the 110 respondents stated that he used a combine to harvest his crop. This can be explained by the fact that most peasants cultivate between  $\frac{1}{2}$  - 4 acres (see Table VII). The practice involves cutting the paddy-laden stalks about 12-16 inches from the grains. These are left to wither for a day or two before they are bundled and taken for thrashing.

The thrashing of paddy is also carried out by non-mechanical means, that is, with the use of a thrashing board measuring approximately 6 feet by 3 feet. The grains are hit against the thrashing board which separates them from the stalk. After thrashing the paddy is carried in bags or tins and stored in homemade silos.

### E4. Processing.

The processing stage of rice production involves the de-husking of the paddy, thereby making the paddy ready for cooking and con-

sumption. The traditional method of processing employs the mortar and pestle in pounding the shell off the grain. The more advanced stage is the use of mechanical hullers. As noted earlier, the different stages within the productive process are dominated by the use of traditional methods of processing in the area. By and large this stage, like other stages of production, is dominated by the use of female labour. A number of women are directly involved in "primary" production, that is, the production of paddy, whilst others are involved in the "secondary" aspect, that is, the purchasing of paddy from producers and processing of it for sale in the market, especially at Hohoe.

Mechanical processing came into the area with the construction of the mills at Santakofi Gbodome and Worawora. But as noted earlier the Santakofi Mill has been out of operation for the past three years. The Oti Mill at Worawora, 29 miles to the North of Hohoe, does not attract paddy sales from the Buem area, partly because paddy is not being produced in quantities which necessitate mechanical processing, and partly because of the high cost of transporting paddy to the Oti Mill.

#### E5. Transportation and Marketing.

The marketing and transportation of rice (in the country in general and the Volta and Western Regions in particular) stands on the opposite end of the spectrum of the cocoa industry. The underdeveloped nature, (and the scale) of the industry manifests itself in the absence of any organized marketing system. Individual producers must arrange the sale of their paddy directly with independent purchasers. In the Buem area there are no cooperatives through which the rice producers could readily, and without great cost, dispose of their paddy. There is also a clear absence of any price guarantee; as a result the price fluctuates very considerably, depending on the season.

The scale of rice production in the Buen area is relatively small. The marketing aspect is even less developed than in other areas, since rice is produced primarily for consumption. There are however, a few individuals who produce rice on a commercial scale. Table VII below gives an indication of land under cultivation and the amount devoted to rice.

Table VII

NUMBER OF ACRES CULTIVATED AND THE AMOUNT UTILIZED FOR RICE PRODUCTION.

Size of Acres Cultivated	No. of Household and Amount of Land Cultivated.		No. of Household and amount of land under Rice Cultivation.	
0	16	15.5	16	14.5
$\frac{1}{2}$ - 4	47	47.8	77	70.0
5 - 9	28	25.4	12	10.9
10 - 14	9	8.1	4	3.7
15 - 19	1	0.9	-	-
20 - 24	4	3.7	-	-
25 - 29	1	0.9	1	0.9
30+	3	2.0	-	-
N.R.	1	0.9	-	-
Total	110	100	110	100

N.R. = No Response

Source: Data Collected 1979.

During the harvesting season, merchants from other surrounding areas travel to rice producing towns in order to purchase paddy. These paddy are resold in other non-producing areas in the Region. These individual merchants can be seen carrying kerosene tins (which is the local form of measurement) moving from house to house and then to a central point where the paddy is bagged and taken away by lorries. Rice can be considered relatively costly, not so much because of low production in the area but more so because of the price manipulation of these individual merchants.

In the final analysis the absence of an advanced marketing system (which we have earlier referred to as the secondary aspect of the industry) is to be expected given the underdeveloped nature of the primary or productive aspect of the industry in the area. At the same time it is obvious that a real boost to the rice industry will require Governmental intervention, that is, through easy access to land, loans and other inputs necessary to accelerate production.

#### F. GOVERNMENTAL AGENCIES.

To effect any meaningful agrarian revolution, that is in the scientificity of the methods and organization of production, there is an urgent need to bring into operation governmental institutions and agencies to provide the necessary financial, technical and organizational assistance. This is a necessary precondition to transformation of the haphazard and disorganized nature of the present mode of production.

The situation of farm productives, or inputs, in the area suggests that the Agricultural Services Departments of the Ministry of Agriculture have been lax in fulfilling their responsibilities. Other Government establishments such as the banks, especially the Agricultural Development Bank (A.D.B.) have not been any better. The A.D.B. has provided some of the farmers with loans. However, like other Banks the A.D.B. has turned down the application of the

majority of those cultivating rice who have applied for loans.

From our survey sample:

45 rice cultivators applied for loans

21 rice cultivators have been granted loans - partly because they are also cocoa growers.

22 rice cultivators have been refused loans.

The rest of our sample gave the following explanation of why they never applied for loans.

- (a) unaware of such an avenue for financial assistance
- (b) problems of repayment if they should die
- (c) poor income from rice
- (d) too small farm - no security
- (e) part-time rice grower - no security
- (f) application process too cumbersome

In any case it may seem an achievement on the part of the Banks to accommodate 21 of the 45 individuals who applied for loans. However, there seem to be a strong case against the Banks in their contribution towards development. First, the loans granted were relatively small, ranging from \$200.00 - \$300.00 which must be repaid within a very short time. Some rice growers said they were pressured to repay their loans before their crops were sold. Secondly, the interest for these loans was pegged at eighteen percent, which is very high - especially within the agricultural sector. On the other hand one Bank Manager pointed out that the Bank is not a "charitable organization, and like other institutions its concern is to show a healthy balance sheet". This calls into question the role of the Banks, especially the A.D.B., and their relationship towards development.<sup>21</sup>

From the above discussion it is quite clear that the banks and other financial institutions do not operate in the interest of the poor - those small scale food producers. In fact several Bank Man-

gers and other Government Officials argue (and from their respective class position quite rightly) that most poor people do not have any collateral or guarantees to back their loans; as such, they are considered "high risk", and are refused. Many poor peasants who have attempted to obtain loans through Banks became victims of bureaucracy.

Refusal of loans to peasants and other poor people only compound their already dehumanized conditions. The fact that we live in a monetized economy i.e., a commodity economy, where money is required for most transactions in our daily social interaction - whether for the payment of ploughing services, for the purchasing of fertilizer or palm wine or even for the payment of bride price - is an indisputable fact. So what alternatives are the poor left with? They are forced to turn to the rural money lenders - their only alternative - whose interest rate is up to fifty percent. Basically, this means that if a poor peasant borrows four hundred cedis (¢400.00) he is forced to pay six hundred cedis (¢600.00) at the end of the year. In this case, the Government and its agent - the Bank - contributes directly to underdevelopment.

If the A.D.B., which is controlled by the Government, is interested in the well-being of the people and development in general then a system should be devised to provide poor peasants with short term, low interest loans. Repeatedly the question is asked: is the A.D.B. a financial institution operating at the same level as other commercial banks for the purpose of showing a healthy balance sheet at the end of the year? Or, is it supposed to demonstrate how much it can contribute to the development of the nation?

CHAPTER V.

CONCLUSION

In the foregoing discussion we have attempted to establish the nature of the relationship between dependancy and underdevelopment and the manner in which it contributes to the presistance of poverty among the peasant rice growers in the Volta Region in Ghana. The historical overview points directly to the colonial and neo-colonial policies which, through the financial institutions and governmental agencies, not only dictate the kinds of crops that must be grown but how they must be grown. Given the exogenous as well as the endogenous constraints on the rice industry two important conclusions can be drawn. First, the process of agrarian underdevelopment in Ghana is one of the most blatant forms of growth of dependancy, that is, the abandoning of the production of food crops in lieu of cash crops. Transnational companies - both agricultural as well as industrial - including the Government and some of its more influential agencies, such as the Banks, have placed considerable strain on land and labour for food production because of the financial and other technical incentives given to the growing of cash crops, especially cocoa. These technical and financial incentives are denied to peasants growing food crops. Second, the Government through the Agricultural Bank has set severe limitations on the potential as well as the ability of poor farmers and peasants to produce. The denial of access to capital denies the peasants the preconditions to production, and as such, contributes to underdevelopment.

These conclusions have a number of implications not only for the practical politics of agrarian development in particular, but also for theories of development in general which support and conform to the objective character of the Government and the institutional arrangements of power. Basically, theories of development which have guided official policies of development have been nothing



more than what Pierre Van den Bergh refers to as "a handmaiden to the government and the class it represents" (see Gutkind and Waterman 1977: 2). These so called official policies have been nothing more than a subtle continuation of colonial policies within the narrow structural framework inherited from the colonizer and held intact by the class which has taken over the reins of power. It is these political, economic and bureaucratic elites who have, exclusively, managed the affairs of the country in their own class interest. Because of their exclusive domination of the decision making process within the agrarian sector, attempts to bring about social, economic and political transformation of the most abject conditions of existence cannot be easily realized by the masses of the peasant producers.

It is within this general framework that we attempt to place in context the underdevelopment of the rice industry and the manner in which the climatic, economic, social and technical conditions impede or facilitate production. The existence of relatively favourable climatic conditions in the Buem area as well as the social history of the people suggests that rice cultivation has been an integral part of the cultural as well as the religious tradition of the people.

The productive lag within the industry cannot be explained simply in social, economic and technical terms but demands a more rigorous holistic approach to the study of human problems. The problems of land distribution, or access to land, labour resources and necessary capital place considerable constraints on the transformation of the traditional rice growing sector. As we have demonstrated land tenure is the most vexed question in agrarian underdevelopment. Like people in most traditional societies many Ghanaians hold land in high reverence even to the point of deifying it. Sociologically, the problem arises when the social conditions, or traditional institutions allow land to lie idle while some people are

land hungry. It is a known fact that many individuals, who have emigrated to Accra, New York or London still lay claim to land in the village where they were born and argue that "land is not a commodity and cannot be bought or sold"; some even argue that "the land is there for the generation yet unborn". But we know that land is being bought and sold, among every group, regardless of the traditional rules which govern land distribution. Land, as we have pointed out is a very sensitive issue yet every Government - civilian or military - has treated the problem as a taboo.

Land, as we have noted in Chapters One and Four, is one of the crucial factors related to agricultural production. But land cannot be productive if it is not put to use. Letting land lie idle, while someone in New York or London lays "birth-right" claim to it, is like letting a factory lie idle. Under these conditions there can be no production - hence no development. We are not arguing that anyone should have the right to squat on land belonging to others. What we are arguing is that it is the duty of the Government to make certain that anyone or everyone who wants to produce should have access to land.

We also found that within Governmental agencies - such as the Agricultural Extension Services and the Banks - there is an inherent bias against food crops in favour of cash crops. This bias inhibits or impedes any meaningful assistance which is in fact the pre-condition to developing the industry and the social well being of those involved. Agricultural Extension Officers should be the connecting link between the Government and the peasants. The inability of these Officers to make any meaningful impact can be explained by two factors. One, their elitist attitude toward the problems of agrarian development based on their educational and social background; and two, the general state of affairs in the country (the shortages not only of agricultural inputs such as fertilizers and insecticides but shortages of

basic food stuffs) where, instead of attending to his job, he is forced to join long queues for sugar and other basic commodities. Furthermore, there may be a lack of petrol for him to visit farms, or, the vehicle with which he should visit the farms may be broken-down and cannot be looked after because there is a lack of spare parts. These problems are, of course, what we referred to as the endogenous factors.

There are also the exogenous factors by which an increasingly larger proportion of what is produced in the country is transferred abroad. This factor is the natural consequence of the dependency relations existing between Ghana, an underdeveloped nation, and the metropolis. Through these relations, which came about as a result of the replacement of a self-sufficient food producing community with a market, export oriented economy the dictates of the dominant social and economic interest continue to have a hold on the productive sector of the nation.

As suggested, the monetization of the economy and the continued emphasis on cash crops (utilizing land and labour for export) has had a severe impact on food prices while at the same time regulating the industry of food production well below subsistence, and creating dependance on the outside world for its food supply. At the same time earnings from food crops are insufficient for the purpose of purchasing implements and inputs such as hoes, cutlasses, fertilizers and other necessary items for consumption such as matches, kerosene-oil<sup>22</sup> and sugar. It should be borne in mind that the distribution of these commodities is in the hands of the business elites in the society who in turn depend on foreign manufacturing interests. The critical process of expropriation of peasants' supplies takes place in the market because of the wide disparity between the prices for food crops and manufactured goods. As we have argued in Chapter One this is an active process of agrarian underdevelopment.

Thus, whereas the objectives of agrarian policies have been, at least in part, to transform the agricultural practices of the majority of peasant cultivators, actual experience has shown nothing more than a negation of these objectives. The heavy capital investments which have been going into the production of export crops have left the food producing sector with limited resources - land, labour and capital - for development. In concrete terms it is the production of food crops i.e, corn, rice, maize and so on which draws the least benefit from credit facilities. This not only reflects the low status of food production but reinforces it.

It has become all too clear whose interest Arthur Lewis' theory on development (or underdevelopment) serves. That we need is an alternative approach not only in theory but more importantly in practice, to development policies. But these changes within the present social order. This in fact calls for a break with the structure of dependence.

FOOTNOTES

1. The problems of debt burden as experienced by Ghana was probably best expressed by Mr. J.N. Mensah, Busia's Minister of Finance, in a statement to the British High Commissioner to Ghana where he stated that ".... the eastern creditors imposed harsher terms on Ghana than the other creditors did, though they also followed the pattern which had been imposed on us and demanded moratorium charges. Ghana's debt to non-IMF member countries i.e., the Eastern Countries were increased as a result of this imposition of moratorium interest by 16 per cent. But our debt to the IMF member countries i.e., the Western Countries increased by 39 percent". In other words the Western nations were (are) charging underdeveloped nations interest rates up to 100 per cent more than the Eastern nations. For a detail discussion on debt burden and interest charges the reader is asked to see Teresa Hayter's Aidas Imperialism, Cheryl Payer's The Debt Trap: The IMF and the Third World and Susan George's How the Other Half Dies.
  
2. In recent years Tanzania's development strategies have been subjected to criticisms both from the "left" and the "right". Members of the "left" who advocate more radical changes criticize Nyerere for his inability to break completely with the past, which not only solidifies class relations, especially in the rural areas, but, more importantly, impedes genuine development in the country (see Shiaji 1976, Fieldman 1975). On the other hand Nyerere is being criticized for "spreading poverty" in Tanzania. His critics, most of whom seem like "overnight exports", compare Dar-es-Salaam's roads, buildings, super-markets and so on with those of Nairobi. The crucial point for us to bear in mind is that Nairobi is not Kenya, and big cores, wide roads and tall buildings do not equal development. The fact that approximately seventy-five percent of a nation's population dwell in the rural areas is sufficient indication of where the emphasis for development priorities should lie, and this we know is not the case in Kenya (for a detailed discussion on the problems of development in Kenya, see Calin Leys 1975. For specific criticism of rural development in Kenya, see Geoff Lamb 1975). It seems that Tanzania's inability to achieve the goals set out in the Arusha Declaration must be analyzed both from the internal and the external constraints which impede or frustrate development. Placing the problems within the Ghanaian context Fitch and Oppenheimer (1966: 83-84) stated that "the failure of the socialist experiment did not lie in the peculiarity of African circumstances, and still less in the psychology in a single man. It failed because the attempt to break with Ghana's colonial past was not made soon enough, and because when it was made, it was not complete enough. In order to under-

stand the failure of the post - 1961 socialist experiment, as well as the earlier failure of the Lewis strategy it is necessary now to analyze more precisely the neo-colonial mode of production in Ghana and the barriers it presented to balanced integrated economic growth" (my emphasis). It should be noted that Professor Arthur Lewis implemented the Puerto Rican model in the Second Five Year Development Plan in Ghana which was dropped because of its ineffectiveness in 1961 by the Ikrumah Government.

3. For an insightful debate on the Philosophy of Science and the heuristic value of paradigm see Karl Popper 1965 Conjectures and Refutations Thomas Khun (1962). The Structure of Scientific Revolution and Brian Easlea (1973, especially Chaps. 1-3 and 5) Liberation and the Aims of Science.
4. There is an interesting story which vividly expresses the attitudes of Government Officers. During one of Schumacher's visits to Africa he was being driven through some fields. Schumacker saw a peasant working in the field, and said he would like to speak to him. The Government Officer told the driver of the limousine to stop, and he was about to call the peasant over when he was stopped by Schumacker, who took off his shoes, rolled up his trousers, waded over to the peasant and started helping him with his weeding. All through their conversation the Government Officer sat at the back of the car looking.
5. The advent of mechanization in agriculture has been seen as having both positive and negative effects (see Gendron 1977). The use of machinery is not however dangerous in itself, as some people have attempted to demonstrate (see Gendron 1977 on the "dystopian" view). The negative or the positive impact of mechanization should be analyzed within the social, economic and political environment within which machines find themselves.
6. One Guyanese dollar is equivalent to 40 (U.S.) cents.
7. For a detail discussion on price manipulation in Ghana by the multi-national corporations see Rhoda Howard's Colonialism and Underdevelopment in Ghana, especially chapter 4.

8. The subsequent failure of the Esiama rice factory came about primarily because the Colonial Government failed to take into account the fact that within the rice industry - seen as a total industry - the processing aspect is more or less a "secondary" part of the industry. And that proper planning and organization is necessary at the "primary" or productive level in order to ensure a sufficient supply of paddy for processing - lest there be nothing to process. To a greater extent this problem is currently being faced by a few of the mills in the Northern and Upper Regions where the paddy produced is trucked across the border to the Upper Volta, partly because the price of paddy there is much higher and partly because of the need for foreign exchange which is used to procure other scarce commodities which are in turn brought into Ghana and sold at exorbitant prices.
9. There is an absence of the full report and/or recommendation made by Clarke and Hutchinson in their 1948 tour. Part of the report on the Northern Territories is available in the Tamale archives. The Accra archives has no trace of the report.
10. It is hoped that an indepth discussion, analysis and recommendation on drainage and irrigation will be made in the major study which is due to be completed sometime in mid 1981.
11. A photograph in Reverend Agbodza's living-room indicated that he was first married in 1914.
12. Reverend Agbodza showed me an anvil (approximately 65 pounds) and a gong-gong which he claimed was made by his father about 84 years ago. I found this bit of information very insightful in that, it destroys the long established myth that Africans could not have developed a high standard of agriculture which had to await the arrival of European iron implements such as the hoe and the plough.
13. I was informed that a team from the University of Science and Technology, Kumasi, has recently surveyed the area and found large deposits of iron ore.
14. Attempts to cross-check farmers' information concerning Agricultural Extension Officers have not been very successful. First, Extension Officers are not easily available and the few that were encountered have been very disappointing, in that, they stereotype poor farmers and peasants as "lazy" and "ignorant".

15. As far as this study is concerned the dispute between the Akpafu Nempeasems and the Santakofi Gbodomes is real. However, we recognize that the version given is from one party and is biased. Several attempts to get the other version of the dispute have not materialized. Again, we wish that the Government would step in and settle these land disputes once and for all. Recent (1979) violent clashes over land in Peki and Wa have proven serious where several people were killed.
16. From empirical evidence it has been found that, in most areas, farmers either do not have a conception of what actually constitutes an acre, or, there is a deliberate attempt on the part of the farmer to inflate the number of acres cultivated. The reason for this inflated figures is that it makes it easier for farmers to procure bank loans.
17. For a detailed discussion on monetization and the breakdown of the system of exchange labour see Thakur 1978, Chapter VI.
18. Harris (1975: 55) defines tools as "an object not part of the user's body, which the user holds or carries during or just prior to use and which is used to alter the form or location of the second object [ in the case of agriculture it is the land which is being altered ] with which it was previously unconnected". This tool may manifest itself in the form of a digging-stick, a hoe, a cutlass or a tractor.
19. It would be a distortion of reality if the impression is given that farmers in the area are not familiar with the use of tractors. From discussion with farmers and empirical evidence it seems that in the recent past the use of tractors, especially for the use of ploughing and harrowing, has been widespread. However, with the lack of proper maintenance and spare-parts most of these tractors are out of service, and can be seen lying near to farms or beside houses.
20. I have had the opportunity to witness the processing of paddy Akpafu-Nempease. Men did the actual work. The traditional paddy must go through two levels of processing. First, the grains are pounded in order to remove the husk which is then winnowed. Second, the grains are then pounded in order to get rid of the brown outer covering over the rice. The second level obviously leads to a high percentage - approximately 60-70 percent - of broken



grains. The processing of the more recently introduced "white" rice is not so difficult. Basically, the grains are pounded in order to remove the shell or husk. The quality of the "white" rice processed in this town is very high (white, with a low percentage approximately 20 broken grains) - even when compared with rice processed by the specialized multi-stage mills in the North. The reason for this high quality locally produced rice is that the paddy is reaped on time with approximately 14% moisture content and kept in relatively cool storage. Rice produced in the mills in the Northern part of the country exhibits a high percentage of broken grains. This is so because the paddy is usually in the fields for a longer period of time waiting to be reaped by combines. The long waiting period in the field reduces the moisture content which facilitates easy breakage during processing. Parboiling of these low moisture content paddy prevents high percentage of breakage as the "soaking and steaming" process glues the cracked grains.

21. On several occasions it has been pointed out that many bank officials demanded bribes from poor peasants and farmers before their application could be processed. This obviously is not a Bank's policy neither is the action condoned by any Bank policy but is a reflection of the high level of corruption within the society.
22. During one of my trips to Tamale in 1979 I saw a woman (from a village about 25 miles from Tamale) who was forced to exchange a chicken costing approximately ₡25.00 for two gallons of Kerosene-oil costing ₡5.00. But as we have argued throughout this study this pattern of unequal barter reflects itself partly in the inequality in the bartering position of the peasants and partly in the high level of corruption within the country.

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