

The Changing Land Use & Allocation Patterns of a West African Community

George J.S. Dei*

Résumé. Cette étude de cas examine les changements et continuités concernant l'utilisation et l'affectation des terres dans la communauté rurale de Ayirebi non loin de Akyem Oda, au Sud du Ghana. Le document étudie précisément les disparités d'ordre sexuel et socio-économique au niveau des foyers en matière d'affectation et d'utilisation des terres comme principale ressource productive de la société. Il montre la manière dont, progressivement, les tendances générales et/ou changements en cours dans le domaine de l'utilisation et de l'affectation des terres sont entrain de tourner au désavantage des couches les plus pauvres de la communauté. En conclusion, l'auteur soutient que ces micro-études sont utiles pour la planification de l'économie nationale et les recommandations de politiques relatives aux réformes agraires.

Introduction

Between July and December, 1989, the author conducted field work in the town of Ayirebi in southeastern Ghana. It was a follow-up study to a 1982-83 research which examined the adaptive responses of the rural people to seasonal food supply cycles, as well as other economic and socio-environmental stresses of the 1980s (e.g. drought, economic recession) [Dei, 1986, 1990b]. The manner of the collective responses of the town residents to the crisis raised questions about the possibility of future intra-village stratification. The primary research focus in 1989 was to examine the extent to which coping strategies have been continued long after the 1982-83 drought, and to note gender as well as socio-economic differentiation among households with respect to the allocation, exploitation and use of the productive resources of society. Particular attention was paid to changes and continuities in land use and allocation among farming households. The learning objective was to ascertain the extent to which landholding patterns observed in 1982-83 have continued or undergone changes in the aftermath of the drought and economic recession of the early 1980s (Dei, 1987). The research information presented here deals specifically with the aspect relating to changes and continuities in the relations of production and property relations.

The Study Community and Research Methodology

Ayirebi is a peasant community of 5,805 people¹. The inhabitants are Twi-speaking belonging to the matrilineal Akan subgroup, Akyem. The town is

* Department of Sociology and Anthropology, University of Windsor - Canada N9B 3P4.

1 This figure is made up of 2,783 males and 3,022 females and based on the 1984 national population census data obtained from the Government Statistician.

situated in the moist semi-deciduous forest zone of southeastern Ghana, about 45 km from the nearest urban centre, Akyem Oda, and nearly 180 km north of the Ghanaian capital, Accra. The town covers an area of over 2 sq. km. The overwhelming majority of the local residents (90%) are food farmers, producing such staples as plantain, maize, cassava, cocoyam, rice, yam, green leafy vegetables, as well as citrus fruits. Among the non-food cash crops cultivated on a limited scale are cocoa, kola nuts and oil palm. The local articulation with the national economy involves the sale of farm produce, arts and crafts, and wage labour on the urban markets of Akyem Oda, Akyem Swedru, Koforidua, and Accra.

The study focussed on 450 households, representing over one quarter of the total households in the town². This figure includes 407 of the 412 households randomly selected for the 1982-83 study³. The breakdown of 1982-83 sampled household heads by sex was 316 (76,7%) males and 96 (23,3%) females. Corresponding data for the 407 households in the 1989 sample are 315 (77,4%) males and 92 (22,6%) females. The data for the total 450 households of 1989 are 348 (77,3%) males and 102 (22,7%) females. The addition of 43 randomly selected new households to the original sample of 1982-83 was to reflect the growth in the number of Ayirebi households, as well as the return of agricultural migrants from northern Ghana. Most of the predominantly farm labourers (representing 7% of the town's population) had left Ayirebi during the stress period of 1982-83 when their presence and services had become redundant. The previous study (Dei, 1987), found the rate of household formation in Ayirebi for the decade (1970-1980) to be 16.3%. The 43 households were chosen largely from the expanding sector of

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- 2 The household refers to a group of people usually (but not necessarily) living in a house or compound who have a common food supply, pool the incomes for common support, and regularly use and share the contents of a cooking pot. In terms of kin composition, a household may consist of a simple elementary family (man, wife and children, and occasionally kin of one or both spouses). The household can also be grouped around a segment of the matrilineage (an elder woman and her sister or her daughter; or a man and his sister or his sister's son). The household may also consist of a combination of the above two types (a man, his wife and children and his sister's children). (see Fortes, 1974; Dei, 1986).
 - 3 Among the latter 412 households, between 1983 and 1989, one male headed household had left the town while another 4 female headed households had been amalgamated into other households through marriage or re-marriages. Two of these 4 households are actually in the 1989 sample size since the female heads married into households represented in the 1982-83 sample. The loss of a household status in such cases was due to their new post-marital residence and a resulting change of household head. In other instances, although household heads could have changed (e.g., deceased) the household existed for re-study. There was no change in the sex composition of household heads for 1982-83 and the corresponding data for 1989. Four household heads among the 1982-83 sample had died by 1989. These were 2 males and 2 females who were either divorced or widowed. The female heads were succeeded by a sister and an elder daughter, and the male heads by two elder brothers.

the community, the site for locating new houses since 1984, including those of the agricultural migrants. In presenting the research findings of this case study, where feasible statistical data for the 450 households have been broken down to isolate the 407 households represented from the 1982-83 sample size, it is hoped that one would get a clearer picture of continuities and changes in land use and allocation through such breakdown and analysis of the data. The adequate representation of the migrant agricultural population should also give a balanced picture of the domestic economy.

The total 1989 research sample had a population of 1,722 people. Their age and sex distribution show 822 (47.7%) males, 900 (52.3%) females. The youth population defined as 0-20 years is 739 (42.9%) and the adult and elderly, 983 (57.1%). The active adult population (i.e., 21 to 64 years) is made up of 403 (45.7%) males and 479 (54.3%) females. The elderly population (64 years and above) has 40 (39.6%) males and 61 (60.4%) females. With regard to primary occupational characteristics of the 450 household heads, 427 (95%) were farmers, hunter/trapper (1); herbalist (1), fetish priest (1); tailors and seamstress (2); trader (7); police officer (2), school teacher (2); shoe repairman (1); transport driver (3), concert promoter/barber (1); and hairdresser (2). It should be pointed out that even the 23 heads who do not list farming as a primary occupation consider it as secondary activity. Two Ayirebi scholars (undergraduate students of the University of Ghana) helped as local research assistants conducting household interviews and administering questionnaires on demographic, ecological, and economic parameters.

Land and Crop Production

Dei (1987) discussed the various modes of land ownership, acquisition, and cropping patterns as crucial to understanding the nature of the Ayirebi domestic economy. Traditionally, all land was communally owned, held by either the community (stool) and/or group (matrilineage). All citizens had usufructuary rights to the use of such community or group land. Changing economic conditions associated with the market economy and/or wage labour introduced other forms of landholding rights such as tenancy, leasehold, outright sale and purchase, and mortgaged or pledged lands to the traditional communal forms of lineage, spouse and stool lands (Okere, 1983; Dei, 1987). The farming household's dependence on these varied sources of land and the cropping systems employed provide a picture of a multiple land use system in the community (Okigbo, 1988; Mook, 1986).

The average farming household has between 2-3 separate farms which could be a garden, field of permanent tillage, an intensive fallows system and/or bush and extensive cultivation field. Most of the staple crops like cocoyam, plantain, yam, maize and cassava are produced on intensive fallow systems. Vegetables, particularly tomatoes, onions, peppers and okras are usually cultivated on the gardens and fields of permanent tillage closer to

the homesteads. Cash tree crops (e.g. cocoa, oil palm, kola) are planted largely on the bush and extensive fields farther away from the homesteads. Farming methods adopted to ensure effective cultivation of agricultural lands include allowing dead leaves, grass, plant roots, branches and other organic material to decompose and fertilize bush and extensive farm fields during a fallow period. All farming households concede fallow periods have shortened over the years with a current average length of 3 years for most fields. For fields of permanent tillage and the gardens, local farmers practice crop rotation and mixed farming, i.e., planting a variety of crops at the same time on the same plot. The farmers also replace soil nutrients removed by cultivated plants through the incorporation of crop residues (vegetable manures), wood ashes, compost of animal (livestock) and occasionally human excreta or refuse, and artificial fertilizer into the soil. A few households construct terraces and contour banks against soil erosion. In a study of the farming systems and processes adopted by the sample of 450 households in 1989, 410 (91.1%) practice mixed farming; 362 (80.4%) crop rotation, 410 (91.1%) bush burning as clearance of vegetation; 79 (17.6%) construction of terraces and contour banks; 194 (43.1%) bush and extensive shifting cultivation; 438 (97.3%) permanent tillage Dei, 1990a; Ruthenberg, 1980).

A study of the responses of the 1989 sample household regarding the chief source of land acquisition of the main food farm cultivated within the last five years show an increasing use of individually purchased and stool lands⁴. Table 1 compares the 1989 data with the household responses obtained in 1982 and 1983. The data for 1989 shows that the rapid acceleration of trends and the differential in rates of change in land acquisition and use first recognized in 1982 have continued.

Between 1983 and 1989, for example, at least 26 households (i.e., taking the sample size of 407 households in 1989) did not rely on lineage lands for their main food farm plot. This represents 6.3% of the 1982-83 household sample size and a changing rate of about 4.3 households per year. The shift is largely reflected in the increase in land obtained through individual outright purchase, i.e., 21 households. When the total 450 sampled households are considered, a notable change is the rise in stool and rent lands. This can be explained by the decision of the local polity to release stool land to the migrant agricultural workers for farming following their return to Ayirebi in the migrant drought period. A related explanation may be the desire of the workers themselves to re-enter into tenancy arrangements with wealthy and sometimes absentee landlords.

4 Stool land is community land under the immediate and sole political authority and jurisdiction of the Ayirebi town chief. Rent land include those obtained through tenancy and leasehold (Dei, 1987; Okere, 1983).

Table 1 - Responses of Household Heads Regarding Chief Source of Land Acquisition for Main Food Farm Plot Cultivated in Farming Seasons (1)

Research Period	lineage ²		Outright purchase		Rent		Stool		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
1982 (n = 412)	308	74.8	75	18.2	21	5.1	8	1.9	412	100.0
1983 (n = 412)	305	74.0	71	17.2	27	6.6	9	2.2	412	100.0
1989a (n = 407)	279	68.6	92	22.6	20	4.9	16	3.9	407	100.0
1989b (n = 450)	288	64.0	98	21.8	37	8.2	27	6.0	450	100.0

(1) See also Dei (1987; 1990c)

(2) Lineage land could include land acquired from a spouse's lineage which is held as long as the marriage lasts.

Table 2 is a breakdown by income status of the sampled households of 1982-83 and 1989. In defining and determining the status categories for 1989, the same procedure and basis used in the 1982-83 study have been followed (Dei, 1987, 1990b)⁵. The income brackets expressed have been chosen arbitrary and the incomes do not reflect actual purchasing power. The higher income brackets are assigned for 1989 to reflect rising national inflation levels following the devaluations of the local currency, as well as, the increases in the minimum daily wage and local food prices over the years (Dei, 1990c). An in-depth study of the changes in income status of

Tableau 2 - Income Status of Research Sampled Household Heads for 1982-83 and 1989

Status	1982-83 ¹ n=412		1989 a ² n=407		1989b n=450	
	No.	%	No.	%	No.	%
Wealthy	66	16.0	67	16.5	69	15.3
Middle rich	185	44.9	161	39.5	167	37.1
Poor	161	39.1	179	44.0	214	47.6
Total	412	100.0	407	100.0	450	100.0

1. See Dei (1987) for definition of status categories of 1982-83

2. Where for 1989:

Wealthy = Annual cash income (market proceeds of all economic production) of \$20,000

Middle Rich = Annual cash income of \$10,000-\$20,000

Poor = Annual cash income of \$10,000

Where: one cedi (¢) = US \$0.0035 or US \$ 1 = ¢ 282

- 5 Since income alone may not always give a complete and accurate picture of the economic status of the individuals involved, the income data was supported by additional considerations of other important assets in the form of immovable property (house and land). In reaching conclusions on economic status, the income data and research observations of household property (e.g. land, house) have been compared with the views of other community members regarding economics status of some of the sampled households. On the whole analysis of the research findings confirmed that cash income is a good index or a close approximation of economic status.

households represented both in 1982-83 and 1989 shows that one middle rich household of 1982-83 has moved up to the wealthy group of 1989, while 33 have dropped to the poor category of 1989. However, 10 poor households of 1982-83 have also moved up to the middle rich category. The wealthy group has remained stable over the years, and the 5 households of 1982-83 not represented in the 1989 sample belonged to the poor category.

The overall increase in the size of the poor population may reflect the harsh national economic conditions that have impoverished the majority of Ghanaians since the late 1970s. While income may not be a total and accurate assessment of one's economic status, given present economic circumstances it is the only purchasing power for such modern acquisitions as land and house outside the traditional inheritance system. Such property serve as the symbol with which community members identify the wealthy and poor in their midst. The large portion of the new households in the 1989 sample are from the poor category.

With regard to gender differences among household heads by income status, Table 3 shows that generally female households are slightly better off than their male counterparts. The coping successes of female heads during the crisis period of 1982-83 may account for the stability of their income status categories. Their involvement in group farming, as well as trade and marketing of collected forest products, locally made soap and cooking fat, all helped to generate additional household income in the aftermath of the drought. Other contributing factors may be the possession of land by most female heads and the extended matrikin composition of most female headed households. Such group membership encourages the pooling of economic resources. The poor female headed households are usually headed by unmarried or separated women, divorced women previously involved in polygynous relationships who prefer to maintain separate households even after re-joining their matrikin in the large compound⁶. These latter households (including single unmarried female heads) are a more recent phenomenon.

They are in the extreme minority and closely approximate the single parent households (matrifocal families) in western industrial societies. Men are usually under pressure to maintain separate and independent households (even within a larger matrilineal compound) if they can. On the whole, females who cannot support themselves are not encouraged to set up separate and independent households. The rise in the number of males in the poor category between 1982-83 and 1989 can in part be attributed to the presence of the migrant agricultural workers who have overwhelmingly male headed

6 It is important to stress that female heads of households are generally better-off than the majority of ordinary females (e.g., those married and living with spouses in male headed households, single unmarried adult females) in the community. A good portion

households. Of the 33 household heads of 1982-83 that dropped from middle rich to the poor category in 1989, 23 (69.7%) are males and 10 (30.3%) females. The 10 household heads moving up from the poor category in 1982-83 to the middle rich in 1989 are 5 (50%) females. The 5 poor households of 1982-83 not represented in 1989 sample were made up of a male head and four female heads.

The income status and sex of household heads depending on lineage, outright purchase, rent and stool lands respectively for the 1983 and 1989 sample sizes were examined. Of the total 96 females heads in the 1983 study sample, 91 (94.8%) utilized lineage land and the remaining 5 (5.2%), outright purchase land. In 1989, of the 92 females heads represented from the 1982-83 sample, 83 (90.2%) utilized lineage land and 6 (6.5%) outright purchase land, and 3 (3.3%) stool land. In the larger sample of 1989, of the total of 102 female heads, 83 (82.3%) utilized lineage land, 11 (10.8%) outright purchase and 7 (6.9%) stool land. Corresponding data with regard to male headed households show that in 1983, among the total of 316 male heads, 214 (67.7%) utilized lineage land, 66 (20.9%) outright purchase, 27 (8.6%) rent, and 9 (2.8%) stool land. For the 315 male household heads of 1982-83 represented in the 1983 sample, 196 (62.2%) used lineage land; 86 (27.3%) outright purchase, 20 (6.4%) rent, and 13 (4.1%) stool land. For the larger sample, in 1989, of 348 male heads, 204 (58.6%) used lineage land, 87 (25.0%) outright purchase, 37 (10.6%) rent and 20 (5.8%) stool land. The data show that female headed households disproportionately utilize lineage land in comparison with their male counterparts. Specifically, among female headed households, the poor and middle rich disproportionately lineage land; the wealthy use outright purchase land. This socioeconomic difference among the female heads is not however marked. While wealthy and middle rich male headed households also depend on lineage land, they disproportionately cultivate farm lands obtained by outright purchase when compared with their female counterparts. The poor male heads similarly utilize rent and stool lands when compared with their female counterparts.

No female heads rented land. The increased use of outright purchase land between 1983 and 1989 is attributed to the rising income of some female heads from their involvement in trade, especially produce marketing, in the

of female heads are widowed, separated or divorced and unlike the spouses of male household heads, they do not have to give their income and economic services for appropriation by the men. These female heads receive farming assistance (e.g., clearing of bush vegetation) from their brothers and sons, as well as utilise wage labour. A breakdown of the marital status of the 102 female heads in the 1989 study sample shows 43 (42.2%) as married; 30 (29.4%) divorced; 3 (2.9%) separated; 24 (23.5%) widowed and 2 (2.0%) single. The category of married female heads refers largely to individuals involved in polygynous marriages who live in their maternal homes away from their spouses, or in separate households established for them by their spouses. In such cases, the man may either live with one of his wives or with members of his maternal kinsfolk.

aftermath of the drought and economic recession of the early 1980s. The additional incomes received enabled some women to buy lands (Dei 1990c). Until quite recently, stool land was given to men in preference to women. In 1983 all 9 household heads utilizing stool lands were males, 7 of whom were poor. Of the 27 heads in 1989, 20 were males and 7 females. The presence of poor female headed households depending on stool land in 1989 may be attributed to two related factors. First, is the economic successes of Ayirebi women who obtained stool land for group farming in 1983. Second, is the subsequent pressure put on the traditional authorities by the Town Development Committee (TDC) and the Committee for the Defense of the Revolution (CDR)⁷ to allocate land to other women farmers upon request. The financial contributions some of the successful women made towards community self-help projects also helped this cause. The rise in male renters of farm land between 1982-83 and 1989 is due in part to the return of the migrant agricultural workers.

Land sale and Purchases

The socioeconomic and gender differentiations among households in relation to landholding and use patterns indicate an on-going gradual restructuring of the relations of production and property relations in the community. Since land rights and use are pivotal to the economic and adaptive successes of farming households, questions of who sells, buys or rents land are significant. Given the problems of land litigation, individuals usually keep good and reliable records on land transactions. An acre of farm land now sells for over ₦6,000, an increase of over 650% from the base price of ₦600-₦800 in 1982-83⁸.

In a random sample of 25 household heads who rented out farmlands in 1989, 17 (68%) were males and 8 (32%) females. The majority of these landlords, 21 (84%) were wealthy, comprising of 14 male heads and 7 female heads. No poor heads rented out land. Corresponding data for 14 household heads renting out land in 1983 show 8 (57%) male and 6 (43%) females. Eleven of the 14 heads were wealthy, comprising of 6 males and 5 females. Given the ratio of male household heads to female heads in the community it can be argued wealthy female heads disproportionately rent out

7 The members of the Town Development Committee (TDC) are selected by the local chief in consultation with his elders. Membership of the Committee for the Defence of the Revolution (CDR) is open to all town residents. This latter body was formerly called the People's Defence Committee (PDC). It is a more recent political action group, the idea of which was introduced nationwide by the ruling Provisional National Defence Council (PNDC) government since 1982.

8 In 1982-83, the exchange rate of the local currency, cedi, (¢) was ₦2.75 to US \$ 1.00. By 1989, the rate had dramatically gone up (following successive government devaluations of the cedi) such that US\$ 1.00 was worth ₦282.

land more than their male counterparts. The tenants (rentees) mostly work on a sharecropping basis with landlords receiving half of farm produce or the monetary equivalent (i.e., *abunu*) after the sale of produce. While rentees are responsible for farm maintenance, capital replacement is the duty of the landlord. In the case of tree cropping, specifically, cocoa farming, the tenuous arrangement is a sharecropping system in which the proceeds from the sale of produce are divided into three equal parts (i.e., *abusa*), a portion to the landlord, the tenant, and the third utilized to maintain the farm. With regard to land sellers, of 24 household heads in 1989, 22 (91.7%) were males and only 2 (8.3%) females. The income status of the males show 9 wealthy, 10 middle rich and 3 poor. One of the 2 females was wealthy and the other poor. A change from the 1983 data worthy of note regarding the income status of land sellers is the presence of the poor in the 1989 data. There were no land sellers from the poor category in 1983. In fact, of 21 land sellers in that year, 19 (90.5%) were men and only 2 (9.5%) women. The 2 female heads and 13 of their male counterparts were wealthy. The remaining 6 males were middle rich. In contrast, 14 (58.3%) of the 24 land sellers of 1989 were from the middle rich and poor categories.

In Table 1, some household heads indicated outright purchase as the chief source of land acquisition for the major food farm cultivated in a farming season. The traditional land sellers are the community leaders (custodians) such as the local chief, sub-chiefs and elders, lineage and family heads, as well as other individuals in the community. For example, of the 98 heads cultivating outright purchase lands in 1989, 17 (17.3%) obtained such lands from the town chief, 14 (14.3%) sub-chiefs, 49 (50%) lineage and family heads, and 18 (18.4%) from "other" individuals⁹. The latter include individuals selling land for economic and humanitarian reasons, and those with tracts of farmland previously acquired through such traditional avenues as pledging and mortgaging or as a gift from the chief in recognition of past services to the community. For the 18 individuals involved here as land sellers, one sold land previously acquired through pledging/mortgaging; 4 land acquired as a gift from the local chief in appreciation of their previous services to community; 8, land obtained through a previous outright purchase; 2, land that previously belonged to the matrilineage but legally ob-

9 The distinction between lineage/family and "other" individuals is on the basis of whether the land in question was individually owned or lineage property.

tained from their parent (fathers) through the system of sasamanisie¹⁰; and 3 sold family land without the required prior group consent. The latter sales are still the subject of litigation in the community. Of these land sellers 8 (44.4%) are wealthy, 4 (22.2%) middle rich and 6 (33.4%) poor.

The chief reasons given for the sale of lineage or communal land by custodian are to obtain funds for a group or family project (e.g., house, farm), to help defray outstanding funeral expenses and, as in the case of the local chief, to assist in the establishment of a community self-help project (e.g. K.V.I.P. toilet, road construction, celebration of royal funerals or an annual town festival). Humanitarian reasons, such as the rehabilitation of a town member returning from a sojourn in the city, occasionally encourage family land sales provided group consent is given for the transaction. The major factor accounting for land litigation within families, lineages, and in fact, at the wider community level between the people and a chief or sub-chief, is when the rank and file perceive (and sometimes with justification) that group or communal land has been sold by the custodian for personal reasons or self-aggrandisement. Even when prior group consent has been secured for such land sales, improper accounting procedures can result in family and community disputes over the sale. Data collected from the local chief and the CDR show that between 1983 and 1989, 17 land litigation cases have come before the chief's court for arbitration and settlement. So far, 11 cases have been settled peacefully while 6 are pending. In the 11 resolved cases, 4 of the transactions were revoked; in the other 7, land sellers were asked to put the money obtained to group (i.e., family) use. One seller was destooled losing his social position as a minimal lineage head. In the history of the town, community leaders (including a chief) are known to have been destooled after admitting to fraudulent land transactions for self-aggrandisement. Among the 6 land litigation cases pending in the chief's court in 1989, there was talk among the family members of 2 of the cases about taking the matter before the legal courts in the city.

Farm Size

The majority of Ayirebi farmers do not intensify their crop production by adopting improved methods such as improved seeds, and artificial fertilisers. They increase total farm output through an extensified crop production, i.e., increase land acreages (Brown, 1990). Table 4 shows the total size of all farm plots in possession of the sampled households of 1982-83 and 1989.

10 Sasamansie refers to lineage land lawfully transferred from a father to his children and/or wife who would otherwise not be entitled under the matrilineal system of inheritance. The matrilineage recognises the capital investment made by the man on the land and to compensate him would reach a mutual (verbal) agreement allowing him to dispose of a portion of the land to the non-lineage members just prior to his death or thereafter.

The majority of households (about 65%) have total farm sizes between 0-6 hectares. There are no marked differences among households by sex of household head, except for the fact that male heads have a slight edge over their female counterparts in the category of 12 hectares and over. Looking at the general picture, any marked difference between the 1982-83 and 1989 data is in the categories of 0-3 hectares and the 12 hectares and over. The increase in households with total farm plots between 0-3 hectares may be explained by a number of factors. There is the return of the agricultural migrant workers who initially set up small size farms, and the fact that in the aftermath of 1982-83 crisis when conditions appeared to stabilise a few farmers might have cut down on their individual farm acreages. It is also possible age shifts could have affected farm sizes if one considers the original sample of 1982-83. The availability of farm hands could also be a factor since the drift of some town youth to the cities and urban centres in the post drought period could have affected some households (e.g., the poor who could not afford to compete with the wealthy for wage labour). The drop in the 9-12 hectares category appears to be compensated for by the slight increase in the over 12 hectares category. This increase may also be related to the responses of Ayirebi wealthy households to the 1982-83 crisis when they took advantage of poorer households buying additional lands to increase their farm acreages. The data presented in Table 5 regarding the income status of farming households and the amount of land in their possession show the wealthy and middle rich have more extensive farm sizes than the poor. There is an overall expansion in total land under cultivation in the Ayirebi community from the TDC estimate of 450 hectares in the 1982-83 farming season to over 550 hectares cropped in the 1989 season. Among the reasons for this are the increased group and communal farming activities, the re-emergence or slight resurgence in tree cropping (cocoa, oil palm), tomato and beans production for commercial purposes, as well as the rise in the number of Ayirebi households resulting from increased population growth and the return of the agricultural migrant workers.

The Competition for Land: Food and Tree Crop Production

As already pointed out, the overwhelming majority of Ayirebi farmers are food producers. Tree cropping such as cocoa, oil palm, and citrus fruits have not been a major part of the domestic economy. In fact, earlier attempts in the 1920s and 1930s at systematic tree cropping, particularly cocoa, failed (Dei, 1990b). Since 1984, a series of government price incentives and the presence of some agricultural extension workers in the community have encouraged some local farmers to take tree cropping seriously. These farmers are still in the minority and of the 450 sampled households, only 69 (15.3%) had established cocoa farms and 22 (4.9%) oil palm fields with land obtained largely through outright purchase. The average farm size is 2 hectares for cocoa and nearly one hectare for oil palm fields. The Ayirebi rural bank

Table 4 - Total size of all farm plots in possession of sampled farming households by sex of household head¹

Farm Size (hectares)	FARMING PERIODS							
	1983 (n = 412) ²				1989a (n = 407)			
	M	F	Total	%	M	F	Total	%
	No.	No.	No.		No.	No.	No.	
0-3	96	28	127	30.0	104	22	126	30.9
3-6	113	27	140	34.0	100	29	129	31.7
6-9	59	27	86	20.9	61	27	88	21.6
9-12	32	9	41	10.0	26	8	34	8.4
12 + over ³	16	5	21	5.1	24	6	30	7.4
Total	316	96	412	100.0	315	92	407	100.0

1. Figures for the farm sizes refer to all farm plots in household's possession which may not all be necessarily cropped in a farming season.

2. See also Dei (1987)

3. Largest = 16.5 hectares.

Table 5 - Total size of all farm plots in possession of the 450 Sampled farming Households of 1989 by Income status

INCOME STATUS	Farm sizes (hectares)											
	0-3			3-6			6-9			9-12		
	No.	%	% ¹	No.	%	%	No.	%	%	No.	%	%
	(households)											
Wealthy	-	-	-	-	-	-	23	25.6	(33.3)	24	70.6	(34.8)
Middle rich	11	7.2	(6.6)	71	49.3	(42.5)	67	74.4	(40.1)	10	29.4	(6.0)
Poor	141	92.8	(65.9)	73	50.7	(34.1)	-	-	-	-	-	-
Total	152	100.0		144	100.0		90	100.0		34	100.0	
										30	100.0	

1. The given percentage (in brackets) are based on a calculation using the known income status of the sampled households, i.e. wealthy (69); middle rich (167); poor (214).

provides credit to households going into tree cropping as well as tomato and beans production (Dei, 1990c).

A study of the income status and sex of heads of households engaged in cash tree cropping shows that wealthy male headed households are those largely engaged in tree cropping (e.g., cocoa). These male heads can readily secure credit from the banks because they can provide immovable assets as security for such loans. Until the early 1980s, females were traditionally discriminated against by the banks in the granting of farm credit. On the 69 household heads that had cocoa farms in 1989, 39 (56.5%) made up of 33 males and 6 females are wealthy. Of the remaining, 25 (36.2%) made up of 22 males and 3 females are from the middle rich category. The other 5 (7.3%) heads are all poor males. The wealthy household heads can buy land, invest in cash crops and are able to hire farm labour which in time allows bigger area to be cropped.

The emergence of cocoa production into the predominantly food farming economy of Ayirebi in the late 1980s may pose new land tenure and food supply problems, as well as a gradual competition for land between cash and food crops. In the short interim, these effects have not been felt in the community. Among the reasons for this is the fact that the establishment of cocoa farms invariably calls for the planting of food crops, notably plantain and cocoyam, to provide temporary shade to the young trees. Furthermore, cocoa production continues to be on very limited scale, and the problems of land allocation and use noted in other Ghanaian rural communities where the best lands are reserved for cash cropping are yet to be experienced in Ayirebi (Nyanteng, 1980). However, the higher price demanded by land sellers for tree cropping than for food production, and the general resentment of the matrilineage when group land is utilized for tree cropping are indications of future problems. The family or lineage resentment is explained by the argument that tree crops tie up land for a lengthy period and consequently limit the opportunities for other family members to have access to the land for food production. This would explain why would be tree croppers (e.g., cocoa and citrus fruits) and other cash crop producers (tomato, beans) are utilising more and more of outright purchase lands.

Farm Labour

The extended family remains the chief source of farm hands outside the household production unit. However, there is a growing trend towards the use and dependence on hired and seasonal wage labour. In the 1983 sample of 412 households, 249 (60.5%) depended on extended family labour, 131 (31.8%) hired-wage labour, and 32 (7.8%) friends in labour partnerships

(*nnoboa*)¹¹, as the major source of farm labour assistance outside the household production unit. Corresponding figures for the 450 households of 1989 are 232 (51.6%) on extended family labour, 157 (34.9%) hired/wage labour, 29 (6.4%) labour partnerships. 32 (7.1%) households utilised no external labour assistance. Examining responses of household heads by sex and income status wealthy male heads are found to utilize wage labour more than their female counterparts who largely depend on the extended family. A major reason for this relates to the nature and composition of male and female headed households pointed out earlier. Most wealthy and middle rich female headed households are grouped around matrilineal kinsfolk (as the basic production unit) who readily serve as farm labour supply. Male headed households usually (but not always) consist of the couple, children, and one or two kinsfolk of a spouse as the basic production unit (Dei, 1986).

Generally, poor households also utilize more of the extended family labour and labour partnerships or, do not depend on any external source at all. The gradual shift to the use of wage labour is more on the side of the wealthy and middle rich than on the poor. This may be due to the rising cost of farm (wage) labour over the years (Dei, 1990c). The situation could intensify as a gradual labour shortage leads to a competition between the wealthy and the poor segments of the community. It is important to note that the number of households reporting no use of external farm labour assistance are predominantly in the poor male category. Significantly, no female heads are recorded due in large part to the 'extended' nature of female headed households.

Wealthy households hardly engage in labour partnerships. Among the poor and middle rich, however, such form of labour is an effective adaptive response to the problem of labour shortage and other stressors on the use of farm hands by farming households. The 1982-83 research period had witnessed a resurgence in the use and dependence on labour partnerships among the local farmers. There is no significant change in use of this form of labour in the 1989 data, except perhaps a slight decline among some households, particularly, middle rich, male headed households. As already pointed out, some of the latter are involved in cash cropping utilizing more of wage labour than such labour partnerships. As cash cropping increase labour partnerships decline. Looking at the overall ratio between male and female headed households as represented in the research sample, it may be argued that female heads use of labour partnerships is substantially higher than that of male heads. Of the 32 households depending on labour partnerships as the chief source of external farm labour assistance in the 1983 farm-

11 Labour partnerships (*nnoboa*) are collective self-help group of age mates and friends who assist each other in farming activities (Arhin, 1983; Dei, 1988).

ing season, there were 23 male and 9 female heads. The additional households in the total 1989 sample were virtually male headed households, and among the 29 households that depended on labour partnerships, there were 21 male and 8 female heads. Such partnerships usually take the form of helping mates or friends in the clearing of vegetation, harvesting, and transportation of food crops from the farms to the markets.

Discussion

The supply of land in Ayirebi is adequate. Much of the land under cultivation is held and worked by the small-scale peasant farmers. The traditional system of collective ownership of land is generally upheld. However, there is a gradual shift from the household's traditional overemphasis on access to lineage and communal land for productive purposes to include other sources of individual land acquisition. Such lands are for the most part utilized by wealthy male headed households to cultivate cash crops. Contemporary trends in land allocation and use patterns are generally serving to the advantage of the wealthy in society.

In a 1982-83 study, the author examined the varied access that community members and individual households have to the productive resources and valued goods of society (Dei, 1986; 1987). In this instance, access to land was isolated as vital to an individual's or the household's ability to cope with some of the fundamental economic changes and socio-environmental stressors that the society faced in its contemporary adaptation. Individual and group land allocation and use rights played significant roles in the successful adaptation of households to stress on the local food economy resulting from the drought and national economic recession of the early 1980s. The agricultural successes of some town residents (e.g., wealthy farming households) during the crisis period raised questions about the possibility of future dimensions of intra-village stratification (Dei, 1988). A learning objective in the 1989 study of the continuities and changes in land allocation and use rights was to explore this pattern.

The research findings presented here highlight the fact that the community is neither a homogeneous entity nor an undifferentiated mass. The process of peasant differentiation can be related among other things to the degree of household involvement in the cash or market economy, the use of wage labour, as well as the patterns of land allocation and use rights among groups and individuals in the research community (Watts, 1984). A local peoples confront the exigencies of their social and natural environments,

there is a strategic application of indigenous knowledge on the exploitation and use of local productive resources to solve basic human problems (Eckholm, 1982; Riesman 1984). In the absence of an acute problem of land pressure, increasing crop output through land extensification may be a viable alternative to land intensification. However, as the local population increases, the competition and search for land intensifies¹². The present and future task of Ayirebi local authorities and other community leaders is to safeguard the existing traditional institutional mechanisms that provide all town members with equal access to land.

In many rural communities of tropical Africa, individuals and groups have differential and unequal access to and control over land. In some communities, powerful minority is attacking the ideal of group landownership and individual usufructuary rights which have long protected the right of all members to a portion of farmland irrespective of socioeconomic status or privilege. This assault on group lands has severely limited the access of the group's rank and file to available farmlands. The Ayirebi case study shows that given the income differentiation among farming households, the wealthy and most powerful minority could take advantage of a land policy that would seek broad privatisation and sale of communal and group lands. The minority could always buy the land away from the poor when the customary restrictions on the sale of group lands are no longer in place. As the poor continue to lose their landholding rights to the wealthy and most powerful, their poverty intensifies. The poor would be unable to capitalise on their traditions of sustainable forestry and cannot be expected to make the kinds of investments in land, labour, and capital that would help redress the deteriorating environmental conditions and improve their economic lot (Dei, 1989, Brown and Wolf, 1986, Horowitz, 1988; Rose, 1985).

Hinderink and Sterkenburg (1987) have pointed out that one of the major development questions of sub-saharan Africa is how to encourage rural peasants primarily engaged in food production to become market oriented, i.e., to produce food surplus over and above their own demands and/or to devote land and labour to new crops for sale. For much of the African sub-continent, the attempts being pursued to promote agricultural commercialization so far have actually served to increase local dependency on external demand and widened existing socioeconomic inequalities principally through the appropriation of land and labour from the poorer segments of society. Land reform policies or measures designed to increase production by small-

12 As Hinderink and Sterkenburg (1987) and Timberlake (1985) have pointed out, in parts of tropical Africa, the growing pressure on land has forced farmers to abandon fallow systems altogether and to cultivate more and more of marginal lands with resulting environmental degradation.

holders and to encourage rural socioeconomic development would only succeed if rooted in the indigenous knowledge base, culture and politics of the purported beneficiaries of the reform process (Warren, 1989; Breemer, 1989).

It is essential that the on-going processes of change at the micro-levels of rural communities be understood (Cohen, 1980, Horowitz and Painter, 1986). Micro-level studies of gender and income status differentiation among households in the use of societal resources are relevant for economic planning and policy recommendations. Usually, generalizations are made about rural communities and households without noting socioeconomic status as well as gender differences in these societies. Yet, such information could be helpful in the design and implementation of policy goals to benefit the right people, to illicit or achieve the right response or objectives (Ameyaw, 1990). It is important that the search for general solutions to human problems be complemented with a search for specificity.

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