

THRIVING INFORMAL LAND MARKETS AND PATTERNS OF ENTITLEMENT REDISTRIBUTION AMONG PEASANT HOUSEHOLDS: THE CASE OF CEREAL PRODUCING CENTRAL ETHIOPIAN HIGHLANDS

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1. INTRODUCTION

For over two and a half decades now, land redistribution practice in rural Ethiopia has been basically resorted to as an administrative choice of dealing with shortages. Yet, clearly this practice cannot meet the insatiable demand for agricultural land that is triggered primarily, but not exclusively, by the sustained increase in agricultural workforce. It does not address the shortage as such but attempts to provide security in terms of making sure that farmers would have access to agricultural land. This social security function, however, may not necessarily deliver, or may even deny, the necessary economic impetus for both increased agricultural production and improvement of the lot of the majority of the agricultural producers.

An inevitable outcome of executing such a practice on a repeated scale is that it diminishes size of holdings over time. Official statistics indicate that about 92.26% of rural households operate on holdings whose sizes are two hectares or less; this constitutes 72% of total cropped area. The number of households who operate on holdings whose size is less than or equal to one hectare alone would constitute 72.1% of the total. Still, 46.7% of the total households command holdings whose sizes were 0.5 hectare or less (CSO 1993). The national average holding size is estimated to be about 0.8 hectares with remarkable inter-regional variations.

This process has not been accompanied with productivity increases because the practice of frequent land redistribution, which was meant to serve primarily as a social security function, has in fact contravened with the economic security function with its ultimate disincentive effects on agricultural investment. As a combined outcome of these (i.e., emergence of miniscule plots and low level of agricultural productivity) a large number of peasant households do not produce enough to meet their minimum consumption requirements (see Berhanu 1991; Tesfaye 1989; Omitti 1994) let alone producing voluntary marketable surplus.

The legal imperative for such a 'rationing' practice is provided by the state ownership of agricultural land, which not only prohibits the development of private land



ownership but also resists the functioning of formal land markets. The justification given is that, because the extent of rural poverty and deprivation is so massive and deep that rural land privatization and liberalization of its markets would compel peasants to sell their land to few wealthy individuals, leaving themselves landless and without any means of livelihood (TGE 1991). Therefore, the land policy is conceived by the state as preventive of massive peasant displacement and as providing a fall back position and safety-net instrument for the majority of poor peasants.

However, despite the fact that the development of formal land markets has been discouraged, in many areas of rural Ethiopia different forms of informal land markets grafted themselves onto the state administered land redistribution practices playing several functions. In effect, we may find at least two major parallel forms of land transfer mechanisms coexisting in rural areas: *the state rationing* on the one hand, and that of *informal rural markets* on the other.

This paper sets out to present the main features and functions of the informal rural land markets and attempts to relate it with the functioning of the other factor and product markets in the context of cereal producing peasants of central Ethiopian Highlands. I'll argue that the functions of informal land markets are socially differentiated; and cannot be properly understood by confining analysis only to land markets without linking it with markets for other factors and products. An important methodological step towards capturing the differentiated functions of informal land markets would be to reject the assumption that peasant producers are homogenous units. Clearly, peasant households in different groups face dissimilar opportunities, capacities and constraints. In this context informal land markets, far from being impersonal transactions that occur at random between agents, would constitute institutions that define and dictate the personalized relationships between groups of unequal bargaining positions. The study is based on an analysis of survey data collected from four peasant associations in Ada (of East Shoa), and Hetosa, Limmu and Bilbilo *Woredas* (of Arssi) during 1996/97 production year. Section 2 briefly touches upon some of the theoretical foundations that would provide competing explanations for the existence and development of informal land markets. This will be followed by section 3, which addresses the main features of the informal land markets in the study areas. Then section 4 outlines their main functions as relates to the process of agricultural production and rural livelihood. Section 5 concludes the paper.

2. WHY AND HOW COULD INFORMAL LAND MARKETS THRIVE? THE 'EFFICIENCY' VERSUS 'EXPLOITATION' THESIS SURROUNDING THE INSTITUTION OF TENANCY

Although informal land markets could appear in several distinct forms, the relevant literature identifies share-tenancy as their definitive model and attempts to provide a theoretical explanation for the existence of such an institution. In this regard, two

dominant rival schools of thought could be identified. First is the neoclassical economics school that treats share tenancy as an institution that strives towards efficient resource allocation. In a general and simple description, it views share tenancy (or more specifically, share-cropping) in terms of its substitutive role for fully working factor and product markets (see Ellis 1988:146). Since rural markets in poor countries are characterized by imperfect information and missing markets, share tenancy is considered as an institution that plays roles of risk sharing (missing insurance markets), cost sharing (wealth constraints) and minimizing problems of adverse selection and moral hazard i.e., by reducing transaction costs, providing incentives, and facilitating screening (see Stiglitz 1986; 1989; Binswanger and Rosenzweig 1984; Bliss and Stern 1982). The most apt manifestation of the way in which share tenancy achieves these multiple objectives is through interlocking of several markets together in which the transaction in one market (e.g., land) is dependent on transaction in another market (labor, or credit, etc).

The second view concerns the Marxian tradition which depicts share tenancy primarily as an exploitative institution which leads to concentration of economic power in the hands of landlords, ultimately making it possible for the livelihoods of tenants and landless to be determined by the powerful groups. It ascribes the persistence of share tenancy to the pursuit of the landowning class to extract surplus from landless tenants in a most direct way (see Ellis 1988). The exploitation model is not essentially inconsistent with the efficiency argument of neoclassical economics in that the landlords strive to make sure that production is organized in an efficient manner and that markets are interlocked (*tied transactions*) to enforce the mechanisms in order to achieve the objective of maximizing the share of the landlord (surplus) at the expense of the share of tenants (see Bhaduri 1973). Hence, the major controversy between these schools of thought does not lie on whether share tenancy organizes production in an efficient manner as such, rather than the extent to which the benefits of the consequent increased output can be shared between the actors (i.e., the landowners and the tenants).

Therefore, since analysis of such an institution as share cropping is informed by such conceptual handles, interpretations would vary considerably. And importantly, each approach has a certain ideological function to serve. In the 'efficiency' type models, what concerns analysts is the determination of an economic optimal solution and whether the 'actual situation' significantly deviates from it. Whereas in the exploitation models, the analysis is engrossed with chasing the magnitude of the surplus and extent as well as form of its appropriation. The former assumes a voluntarily cooperating team of economic agents both of whom are striving towards achieving economic efficiency. The logic of voluntary contracts to pre-capitalist production relations seems to be inapplicable because the sanctions underlying these relationships are often based on extra-economic coercion, rendering the standard maximizing calculus on the part of the agents to be somewhat out of place (see Bardhan 1989). Marxists on the other hand, in desperate search for the surplus, quite too easily assume the landlords as always the beneficiaries of share-cropping, and tenants as

the losers in the arrangement. The tendency to overlook the microeconomic rationale of the existence of these institutions has even led some Marxists to believe that these would constitute institutional obstacles¹ to development in a poor agrarian economy (see Bardhan *ibid.*).

This paper attempts to present a context in which informal land markets perform a socially differentiated economic function, which transcends both the arguments surrounding the 'efficiency' hypothesis and that of the 'exploitative' model. To that end, peasant households are classified into distinct strata (Table 1) and the functions of informal land markets vis-à-vis the relative position of households in each stratum are analyzed.

Table 1. Households Classified as RICH, MIDDLE and POOR by PA

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PA	S T R A T A						Total Household Number
	RICH		MIDDLE		POOR		
	Number	%	Number	%	Number	%	
Wachu Lencha (WL)	16	3.79	193	45.74	213	50.47	422
Arerti Chellebba (ACH)	27	12.27	65	29.55	128	58.18	220
Lemu Chemerri (LCH)	6	1.80	176	52.70	152	45.51	334
Lemu Guna (LG)	27	7.71	203	58.00	120	34.29	350
Total	76	5.73	637	48.04	613	46.23	1326

Source: Fieldwork survey conducted by the author (1996/97). See also Abebe (2000).

As can be seen, the majority (more than 50% in WL and ACH, 46% in LCH and 34% in LG) of the households in each PA are considered poor according to the perceptions of local people.

3. PREVALENT LANDHOLDING PATTERNS AND MAJOR FEATURES OF THE INFORMAL LAND MARKETS

The study areas are rather familiar in many respects. They possess a good agricultural potential and are physically the most accessible; historically, they have been hosting a series of 'rural development' ventures, and are characterized by a relatively high degree of intensification of agricultural production. Peasants in the area are considered to be more market-oriented than their counterparts elsewhere in the country as depicted by their highest marketed surplus. Cropping patterns do vary from place to place owing to agro-ecological and socio-economic factors, but peasants in Ada tend to concentrate on teff production; while those in Chilalo mainly produce wheat or barely (Table 2).

Table 2. Median Distribution of Percentage Acreage Share of Barley, Teff and Wheat in Total Cultivated Land by PA and Year

PA	BARLEY		TEFF		WHEAT	
	1995	1996	1995	1996	1995	1996
ACH	0.00	0.00	56.61	61.93	8.26	14.56
LCH	62.50	65.79	0.00	0.00	12.50	13.00
LG	33.11	38.02	2.17	0.00	45.23	36.36
WL	12.75	13.00	13.23	13.17	52.55	55.05

Source: Fieldwork survey conducted by the author (1996/97). See also Abebe (2000).

As could be seen, high degree of concentration in teff, barley, and wheat is evident in ACH (Ada), LCH and WL (both in Chilalo) respectively; and this is irrespective of years. Together these three crops accounted, in 1996, for over 83 % of total cultivated area in LG and WL and for 90 % for LCH as well as 79% for ACH.

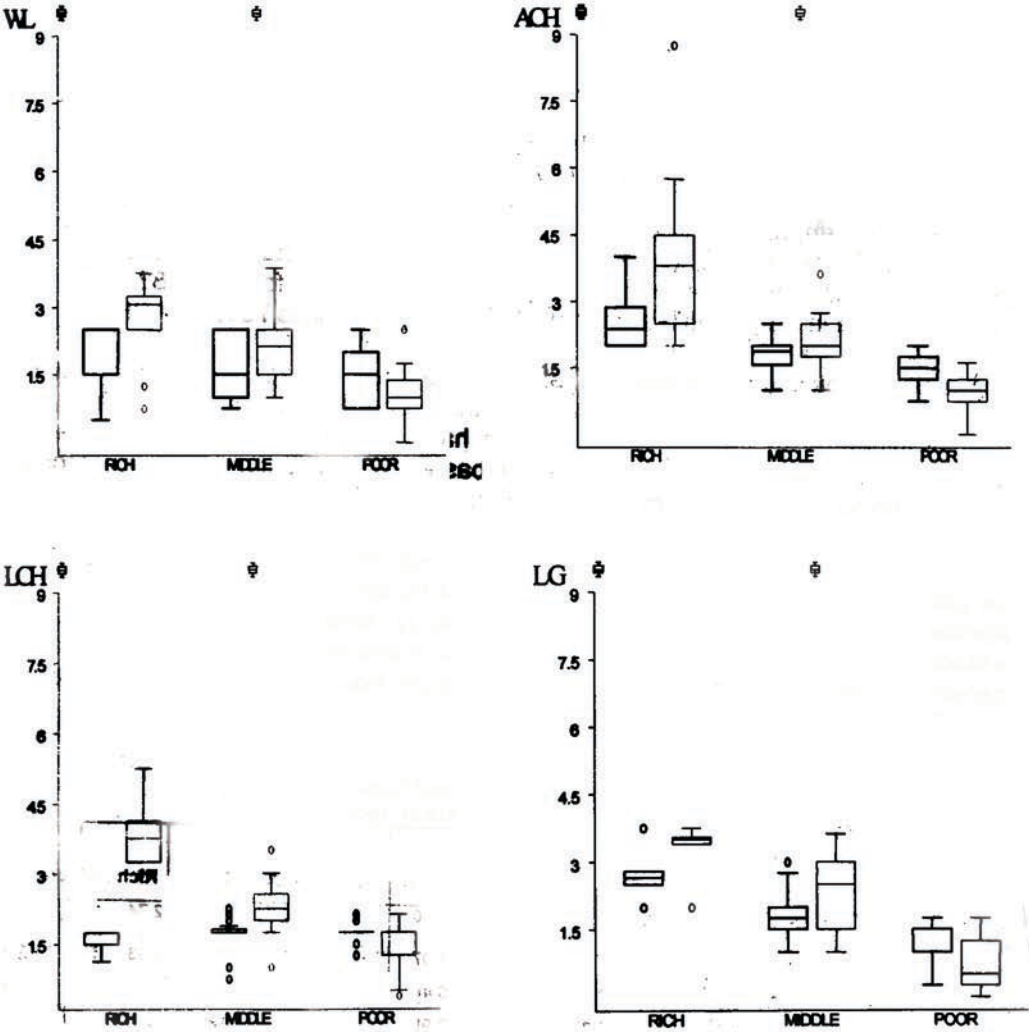
Increasing population pressure on arable land has perhaps engendered such a relatively high tendency of concentration in the production of few crops. Clearly, one of the outcomes of the 1975 land reform has been that of swelling of the rural population as land claims were primarily based on residence with the effect that average holdings became smaller over time. This led not only to concentration of production, but also in the decline of livestock holdings as pasture and fallow land was increasingly put under plow. In the study areas the available land is perceived to be generally insufficient by the vast majority of households. There is a considerable number of new land applicants in all the study areas, and officials of peasant association are rather apprehensive about how these could be accommodated. The general pattern of distribution of allocated land per household is shown in (Table 3)² and (Fig. 1).

Table 3. Mean Land Distribution Pattern and Subsistence Units (Allocated and Total Cultivated) by Strata in Hectares (1996)

Summary	WL			ACH			LCH			LG		
	Rich	Middle	Poor	Rich	Middle	Poor	Rich	Middle	Poor	Rich	Middle	Poor
Allocated land per Household	1.98	1.66	1.55	2.51	1.78	1.50	1.58	1.69	1.73	2.74	1.86	1.30
Subsistence units (AE)	6.02	4.50	4.13	7.17	5.01	4.07	7.13	5.61	4.92	6.53	6.47	3.57
Allocated land per AE	0.39	0.41	0.41	0.40	0.41	0.46	0.25	0.35	0.40	0.43	0.30	0.47
Total cultivated land Per HH	2.73	2.02	0.98	4.09	2.27	0.98	3.60	2.33	1.49	3.24	2.39	0.73
Total Cultivated land Per AE	0.56	0.59	0.29	0.57	0.52	0.35	0.54	0.46	0.34	0.50	0.39	0.22

Source: Fieldwork survey conducted by the author (1996/97). See also Abebe (2000).

Figure 1. Comparative Box-plots Distribution of Allocated Land and Cultivated Land (hectares)



The first and second boxes in each PA and stratum respectively measure the initially allocated and total cultivated land respectively.

With the exception of LCH³, the prevalent pattern of allocated landholding distribution per household seems to have favored the rich and disfavored the poor. Part of the explanation for such a discrepancy would lie in the inter-strata differences in demographic characteristics since land redistribution is primarily based on family size. It could be seen that mean levels of AE (a standardized measure of subsistence units) are larger for higher stratum and lower for the poorer groups. F-statistic would suggest that inter-strata mean differences in AE are significant⁴ for ACH and LG.

The distributional pattern of AE by strata corroborates the observation that it is characterized by larger AE for the richer stratum and smallest for the poor. Therefore, the observed inter-strata differences in per-household allocated landholding distribution could have come from differences in AE distribution.

When per AE considerations are brought into the picture, inter-household differences in land allocated per AE tend to disappear suggesting that redistribution practices have apparently taken care of inter-household variations in family sizes. F-statistic suggests that inter-strata mean differences in per AE allocated land are not statistically significant suggesting that on the whole a somewhat egalitarian pattern of land distribution has been prevalent.

Definitely informal land markets do change the distribution pattern of holdings as usufructuary rights are transferred between households. In the study areas active informal land markets have developed in their multi-dimensional forms. The most important ones include *land rental* and *share-cropping*. Land rental mainly involves a cash-renting of a piece of land for an agreed number of (often not exceeding two) agricultural seasons. The rent varies with the quality of the land, its location, scarcity, the time or season at which the contract takes place (cheaper during *kremt* and expensive in *bega*), the extent to which the person who would lease out land is at distress thus in need of immediate cash, etc. Overtime, the rate has risen quite dramatically. This is understandable given the high growth rate of the landless and the land-hungry households whose single most important course to accessing land is through resorting to such land markets.

Share-cropping, on the other hand, concerns a mutual arrangement by landowner and tenant in which land could be worked and inputs contributed either jointly or by the tenant only, but in which both could lay claims on the output. Like rental rate, the share varies with a lot of factors including the terms of arrangement, quality of land, its scarcity, the extent to which the landowner is desperately needy, etc. The share of the landowner can range from one-third to one-half. For example, within the same PA, notwithstanding similarity in land quality and other factors, it was found that while those in the middle stratum who share-cropped part of their land could receive one-half of the crop, the share of the poor was only one-third.

Forms of land rental and share-cropping as well as their rate vary by region as well as strata in the same region. Thus, in areas such as WL and LCH where the degree of crop specialization and commercialization is relatively the highest, cash-rentals are the commonest forms. In LG, on the other hand, share-cropping is the dominant form of informal land markets. Likewise, almost all rich farmers opted for cash rentals whereas those in the middle either combined both or sharecropped. Rates (of share and rent) also follow the same pattern; LG features the lowest and ACH and WL the highest; the poor received the least and the middle the highest prices of land rented out. Where sharecropping is practiced, high demand for land have raised the share of the landowners; i.e., former arrangements in which all inputs could be contributed and output equally shared have gradually left their place to an equal sharing of output without the landowner having to contribute any input except land.

Participation in these land markets characterizes the upper and the poorer strata with practically all households in these strata entering into land-lease markets - i.e., as 'tenants' and 'landlords' respectively. Those in the middle also participate in the market but this is limited both in extent and neatness as compared to the others. This is in stark contrast to the presumption of the Marxist tradition that holds a perfect symmetry between land ownership and wealth on the one hand, and tenancy and landlessness or poverty on the other.

The introduction of these informal land markets into the analysis completely alters the overall scenario. Analysis of variance would suggest that in all cases inter-household mean differences in total actually cultivated land have turned statistically significant (Table 3). Richer households have significantly improved their access to agricultural land on the basis of either per household or per unit of AE, while poor households have forfeited a significant portion of their allocated land.

4. DIFFERENTIATED FUNCTIONS OF THE INFORMAL RURAL LAND MARKETS

One of the advantages of stratifying peasant households into different strata is that it helps capture the differentiated functions of the informal land markets for the different strata of peasants. For example, there is a clear pattern in all the PAs that as the size of total cultivated land increases for the richer stratum it declines for the poorer stratum. From Table (3) it can be discerned that the poor households lost a remarkable share of their allocated land while the other strata added up to their initial capacities quite significantly. It could also be seen that the minimum total actually cultivated land for some households within the poor stratum could be reduced to zero, suggesting that in extreme cases some of the poor have completely relinquished their access to land, thus becoming landless. The predicament is not very different whether the figure under consideration is per household or per person. The picture that is portrayed is that there is a consistent trend that informal land markets have redistributed cultivated land towards the richer and away from the poorer households.

Even though taking only two consecutive years cannot adequately capture the trend of land mobility (concentration and dispossession) over time, a comparison of total cultivated land for the years 1995 and 1996 would show that more land had been on the market in 1995 than in 1996. It can be noticed that the rich and middle stratum accessed to lesser amount of land while the poor regained in 1996. This should be compelling to search for a possible explanation for such a state of affairs, particularly as to what occurred during the preceding few years. At the national level, in 1993/94, agricultural production declined by 5.3% in volume terms (a record cut since the drought in 1984/85) mainly caused by drought, erratic rainfall, and pest infestation⁵. Grain prices skyrocketed even in these regions; and the spill-over effects of these years have clear impacts on the poor. Crises are times for asset deprivation of the poor and enrichment of the better ones.

This situation would have impacts on other processes. For those households who managed to expand their cultivated land through the operation of these informal land markets, it would improve the land/person ratio and raise average productivity of their family labor. But it would also shape the behavior of the informal labor market in terms of making the labor of the poor redundant hence readily available for employment by the richer households often at low wage rates.

From Table (4a) it could be seen that mean values of LE (standardized measure of labor units) tend to be larger for the rich and smaller for the poor. Richer households are characterized by larger consumption units as well as labor units as compared to the poorer ones. A comparative distribution of LE per unit of allocated land and total cultivated land would show the differentiated role of land markets for different strata of households; i.e., it tends to reduce the land pressure for the richer and middle stratum thus lowering LE per unit of cultivated land while quite the opposite force is at work for the poor (Table 4b). The circumstance has to be seen in view of the significantly larger figures of LE and AE per unit of initial landholding for the rich relative to the poor. This has clear implications on return per person measured either by marginal or average products, which in the final analysis determines livelihood. In the context of general land scarcity and labor abundance, loss of land renders labor superfluous especially in a situation where it cannot be absorbed in any meaningful manner either within agriculture or nonagricultural sectors.

Table 4a. Distribution Pattern of Labour Units

LE	WL			ACH			LCH			LG		
	Rich	Middle	Poor	Rich	Middle	Poor	Rich	Middle	Poor	Rich	Middle	Poor
Per Household	4.45	3.13	3.03	5.85	3.30	2.93	5.75	3.95	3.75	4.75	4.11	2.50
Per Unit of Allocated land	2.29	1.96	1.93	2.44	1.90	1.94	3.83	2.43	2.15	1.77	2.36	2.81
Per Unit of Total cultivated land	1.59	1.64	6.71	1.44	1.62	4.43	1.69	1.76	3.55	1.47	1.99	6.47

Table 4b. Relative Change in Labor Supply due to Land Markets (in LE)

LE per Unit Of Cultivated Land	WL			ACH			LCH			LG		
	RICH	MID.	POOR	RICH	MID.	POOR	RICH	MID.	POOR	RICH	MID.	POOR
Initial Pattern	2.29	1.96	1.93	2.44	1.90	1.94	3.63	2.43	2.15	1.77	2.38	2.81
With land Market Change (LE)	1.59	1.64	6.71	1.44	1.62	4.43	1.69	1.76	3.55	1.47	1.99	6.17
Change (%)	-0.70	-0.32	4.78	-1.00	-0.28	2.49	-1.94	-0.67	1.40	-0.30	-0.37	3.36
Change (%)	-30.6	-16.3	247.7	-41.0	-14.7	128.4	-53.4	-27.6	65.1	-17.0	-15.7	119.6

Source: Fieldwork survey conducted by the author (1996/97). See also Abebe (2000).

Three different ways in which agricultural labor can be employed could be identified in the study areas: *daily labor*, *piece-meal contract labor*, and *long-term contract labor*. The first two are characterized by demand that fluctuates from season to season following the rhythm of agricultural operations. Wage rates do not significantly vary by region as they do by task and type of contract. In all the study areas the rate was about five birr per day, and fifty birr for a contractual agreement involving five up to six days of work per person. The rate of payment for longer-term employment is more complex; it includes cash whose amount varies with age, the specific tasks expected of the employee, access to land called *guluma* which is to be cultivated by the oxen of the employer and whose output accrues to the laborer, etc.

(Table 4b) shows the swiftness with which labor is becoming redundant for the poor households and the relative sluggishness of the demand creation for it in the other strata with the operation of informal land markets. Obviously, this would create a necessary condition for labor to work for the richer households at low wage rates. Thus, children of the poor are often absorbed as cattle keepers and/or farmers at low wage rates (birr 60 - 100 per annum) while female members of such a family usually take up work for food in richer households. In other cases, for example in WL, the resort to temporary migration to nearby towns has been palliative measures.

The same process would help release part of the family labor of the rich and makes it available for human capital formation and/or running small family businesses in the nearby towns. It is no accident that most of the children of the richer peasants would go to school (Table 5) while those of the poor are hired as cattle keepers-cum-farmers by the rich.

Table 5. School Enrolment of Children with Age of Six or More by PA and Strata.

PA	Rich			Middle			Poor		
	Total	enrolled	%	total	Enrolled	%	total	enrolled	%
ACH	28	19	67.9	38	10	26.3	33	4	12.1
LCH	20	15	75.0	85	31	36.5	65	19	29.2
LG	18	6	33.3	64	9	14.1	18	0	0.0
WL	37	32	86.5	48	42	87.5	34	24	70.6

Source: Fieldwork survey conducted by the author (1996/97). See also Abebe (2000).

Because informal land markets are interlocked with markets for other factors and products, they have a function of credit channelling in terms of facilitating the screening process as well as reducing the likelihood of bad debt. This could be made possible because loan applicants who would 'volunteer' to rent their land out to a potential lender are the most likely acceptable ones. The institution of informal land markets would facilitate the collateral arrangements in terms of bringing the land of the borrower under the full control of the lender for at least the duration of the loan. Such an arrangement would allow the richer households to exercise a high degree of control over the exchange processes (rates and terms of payment, etc.) of not only land transactions but also that of other factor and product markets.

One of the most important reasons as to why the poor have to rent out their land, therefore for the existence of informal land markets, is lack of a pair of oxen. Nearly 37% of all households in the sample as well as 87% of the poor have either no ox at all or have only one. Those without oxen alone would constitute about 23% of all households in the sample and more than 60% of the poor. In particular PAs such as ACH about 88% of the poor are without oxen. Compared with the oxen-deficient at the national level⁶, the one obtaining in the study areas seems to exhibit a far better scenario. Nevertheless, it is still quite a significant proportion given the fact that access to oxen is consequential and involves strict exchange mechanisms, unlike land whose skew distribution can be rectified through redistributive measures.

That the ox-plough requires a pair of oxen meant that those with either none or only one have to depend on others to execute critical agricultural practices. This dependence shapes the relations in which the oxen-deficient households ought to enter with others such as the informal land markets would involve. Several institutions of accessing oxen have developed including (i) *meqenajo* (yoking) in which two households each with a single-ox has to contribute and plough their fields alternately; (ii) *minda* or *megazo* where households with surplus oxen hire it out (for an agreed amount of grain) for an agreed number of seasons (usually one) in which caring for the ox is the sole responsibility of the tenant while the owner regularly makes the supervision; and (iii) *exchange for labor* in which the ox-deficient households have to work for others in return to the use of oxen on their fields. These institutions have provided effective means for those in richer stratum to increase seasonal landholdings (via the operation of the informal land markets), and/or to lend oxen to the poorer ones and secure access to their labor. An excess ox is mostly used to improve access to land rather than being hired out, thus making the oxen market itself quite narrow. So, in most areas where these institutions are not developed enough so as to weaken the link between "ox-ownership" and "plough", households without oxen would continue to lose access to land.

A linear regression of total cultivated area on number of oxen owned and AE shows a strong correlation and highly significant coefficients. The equation is estimated thus:

$$A = \alpha + \beta_1 OX + \beta_2 AE + \epsilon \quad [1]$$

Where 'A' is total cultivated land; α is a constant term; β_1 and β_2 respectively represent partial correlation coefficients of oxen ownership (OX) and Adult Equivalent (AE); and ε is an error term. The results are reported in (Table 6).

Table 6. Regression Results of Total Cultivated Land

PA	SAMPLE SIZE	β_i VALUES (SLOPE COEFFICIENTS) OF:			Adjusted R ²
		β_1	β_2	α	
WL	44	0.489 (6.154)	0.054* (1.156)	0.719 (3.509)	0.61
ACH	43	0.784 (6.156)	0.194 (2.74)	0.745* (0.236)	0.73
LCH	51	0.417 (7.30)	0.108 (2.746)	0.648 (2.866)	0.62
LG	34	0.330 (4.443)	0.179 (2.473)	0.140* (0.405)	0.64

*Not statistically significant at 0.1prob. level. Figures in parenthesis indicate t-values.

Both the magnitude and significance of β_1 values would show, after sweeping out the impact of AE, that the power of oxen ownership has been quite considerable in explaining inter-household variations in total land cultivated. Its impact is much more pronounced where crop-livestock competition for land has led to disappearance of pasture, therefore limited both the size and composition of livestock. Even in areas where mechanization has been practiced for ploughing and harvesting operations, which make the extent of dependence on oxen somewhat loose, the importance of oxen ownership in explaining variations in total cultivated land has been substantial. The statistical insignificance of α values might suggest that land cultivation without oxen ownership would be almost hopeless, implying that even if households are given land through redistribution, unless they own oxen they are forced to transfer their land-use rights to those with extra oxen (for example, ACH and LG).

Informal land markets have a function of redistributing not only land, labour, and other resources, but also that of output and through it the direct production entitlement of households. Significant inter-strata differences could be observed with respect to the volume of production not only of the major crop but also in all crops produced. The rich produce the largest and the poor the lowest. Table (7) summarizes the distribution pattern of per household, per AE and per LE grain production⁷ by strata for each PA.

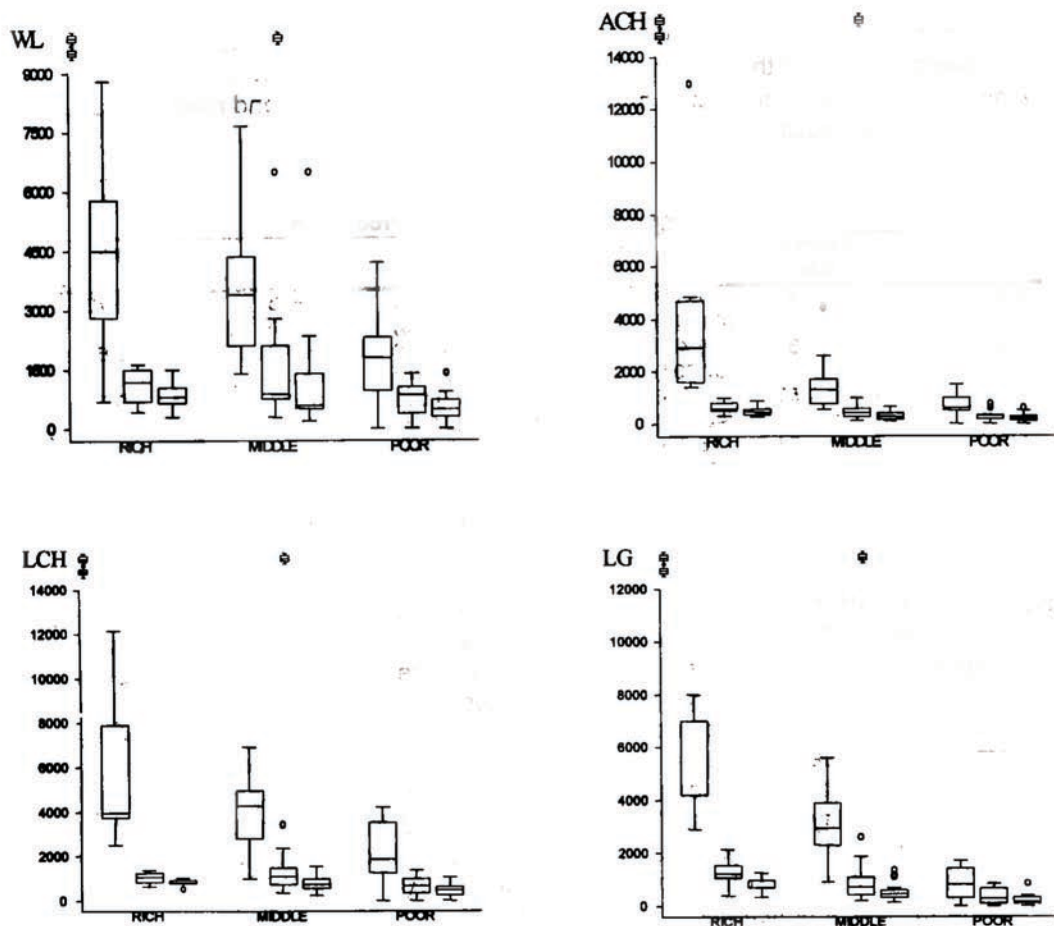
Table 7. Inter-strata Comparison of Productivity by PA (mean values in kgs)

Production	WL			ACH			LCH			LG		
	Rich	Middle	Poor	Rich	Middle	Poor	Rich	Middle	Poor	Rich	Middle	Poor
per Household	4586.4	3531.8	1775.7	3875.0	1465.6	680.9	6048.0	4011.8	2191.7	5260.0	3319.4	844.1
per AE	1119.8	1476.2	695.8	621.0	468.0	291.3	1023.2	1176.5	668.8	1262.9	898.1	352.4
per LE	835.9	1198.4	521.8	485.9	304.4	213.8	804.4	776.5	465.8	840.5	535.6	241.7

Source: Fieldwork survey conducted by the author (1996/97). See also Abebe (2000).

First, starting from the obvious, inter-strata differences in grain production per household are very significant; the rich produce the largest, while the poor the lowest. Second, inter-strata differences in per LE production are also significantly different for all PAs; again the poor perform the least. Third, inter-strata differences in per AE production are even much more pronounced than that in per LE; the poor exhibit the lowest. Fig. (2) explores the inter-strata differences in level of grain production (per household, per AE and per LE). Note that the pattern of inter-strata differences in grain production is similar across the different PAs.

Figure 2. Box-plots Distribution of Total, per AE, and per LE Grain Production by Strata



The first, second, and third box-plots from left to right represents respectively the level of grain production per household, per AE and per LE.

The same result could be attained by regressing total grain production on ox owned, LE, and land leased (in or out):

$$\ln Y = \alpha + \beta_1 OX + \beta_2 LE + \beta_3 LZ + \varepsilon \quad [2]$$

where $\ln Y$ equals per household grain production (in logarithmic values); LZ is land leased, α is a constant term; β_i 's are slope coefficients; and ε is an error term. Leased land, instead of total cultivated area, was included in the equation, taking note of the prevalent egalitarian distribution of owned land. So if any variation in production comes about as a result of variation in land cultivated, then it should be ascribed to the movement of land through the mechanism of the informal land markets. Both the magnitude and significance of β_s attests to the fact that informal land markets have an important output redistributive function.

Table 8. Regression Results of Grain Production

	SAMPLE SIZE	α	β_1	β_2	β_3	R^2 Adjusted
WL	42	7.333 (63.470)	0.106 (2.147)	0.070 (2.046)	0.613 (7.175)	0.73
ACH	39	6.414 (37.007)	0.217 (2.476)	0.099 (2.046)	0.112 (1.817)	0.66
LCH	50	7.326 (42.305)	0.109 (1.776)	0.085 (2.344)	0.267 (3.261)	0.53
LG	34	6.394 (13.604)	0.235 (1.855)	0.104* (0.726)	0.337 (1.941)	0.40

Figures in parenthesis are t-values.

* Not significant at 0.1 prob. level; all unmarked figures are significant at less than 0.01 probability level.

Such output redistributive function of informal land markets could be directly transmitted into income redistributive function via the operation of product markets. The significance of the inter-strata differences in value of production could be easily detected from Table (9) and Fig. (3) in which inter-strata differences in value of grains produced are significant; in all cases the poor performed by far the least. The same pattern could also be observed when per AE and per LE issues are considered. It can be seen that total value of production, labour productivity (value or production per LE) and grain availability per AE of the poor has been the lowest throughout while total value of production has been the largest for the rich throughout. As a result, direct production entitlement of the poor is reduced as less output could be produced, rendering the household vulnerable to external shocks. This is significant in view of the fact that the majority of rural households are food-insecure for most of the seasons, on the one hand, and the extremely limited opportunity for wage employment in agriculture on the other hand.

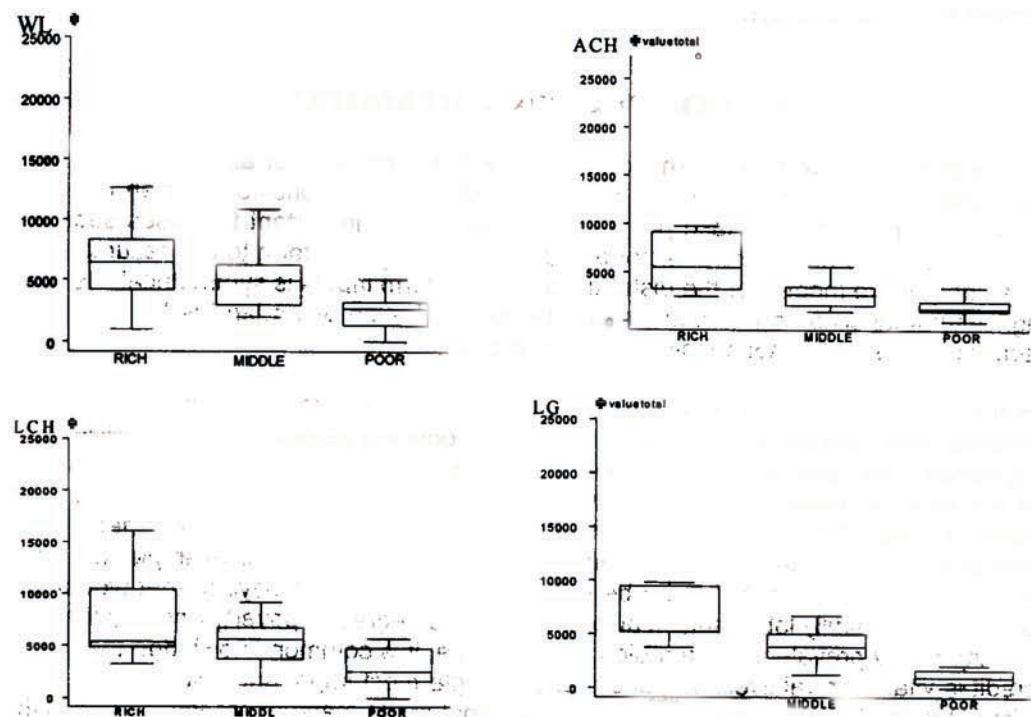
Table 9. Value of Crops (in birr)

Value	WL			ACH			LCH			LG		
	Rich	Middle	Poor	Rich	Middle	Poor	Rich	Middle	Poor	Rich	Middle	Poor
per Household	6600.6	5138.4	2578.9	7640.7	3013.5	1419.7	8006.2	5418.3	2989.9	6700.6	4192.2	1025.6
per AE	1191.1	1732.5	758.1	941.6	629.0	460.2	1065.6	1049.4	630.4	1066.4	673.5	298.8
per LE	1597.6	2133.0	1008.0	1207.5	963.3	622.9	1353.6	1586.5	901.6	1595.3	1133.2	435.1

Source: Fieldwork survey conducted by the author (1996/97). See also Abebe (2000).

Evidently, such an institution would also help the richer households to internalize some of the externalities in terms of improving direct production entitlement as more food is produced on the farm rather than being purchased. This is significant in view of the fact that richer households are characterized by larger units of subsistence units and tend to absorb additional labor into their household on a longer-term basis, bidding the household demand for food to be higher. That food is directly produced rather than purchased meant that these households are not vulnerable to market uncertainties and undesirable food price rises.

Figure 3. Box-Plots Distribution of Value of Grain Production by Strata



It goes without saying that access to additional cultivated land generates additional farm incomes, which are used either to increase consumption or used to expand production capacities mainly in terms of financing non-farm businesses (shops, flour mills, trade, etc.). Since informal land markets redistribute land towards the richer and away from the poorer households, and since this in turn redistributes production in favor of the former causing per AE grain production to increase, it is conceivable to hypothesize that informal land markets could have a marketed surplus creating and redistributing function; the latter could be primarily but not exclusively towards non-agricultural sectors as the output produced in excess of consumption requirements is marketed. Hence, one could argue that informal land markets have an accumulative function for the higher rural stratum.

From the vantage point of those households in the poorer stratum, even though much of the functions of informal land markets that facilitate accumulation for the rich does not seem to particularly benefit the poor, in absence of viable alternative mechanisms, they have some important functions to perform without which conditions for poor households could have been perhaps worse. Informal land markets are part of the social networking mechanism in which not only the rich but also the poor could derive some indirect benefits in terms of improving access to farm resources (e.g., oxen through labor exchange), facilitating access to credit (cash and kind), providing limited seasonal employment opportunities, etc.

5. CONCLUDING REMARKS

In a sub-competitive market environment, it is the ownership of all farm inputs (not just land) or the ability to muster them, which dictates the conditions for an efficient agricultural production to take place. This is particularly important for cases such as Ethiopia's where neither rural factor and product markets conform to the assumptions of a competitive model nor the distribution of these farm inputs is symmetrical. Hence, agricultural land use rights could easily be forfeited even when land is the scarcest farm resource for the household or person in question.

In this paper, I have attempted to outline the major features and functions of the informal land markets in the context of cereals producing peasants in some Ethiopian highlands. The operation of informal land markets depends on the severity of scarcity of the factor in question as well as whether or not formal markets for the factor in question exist. It also depends on the existence and functioning of the other factor and product markets—e.g., labor, credit, marketed surplus, etc. For example, the use of wage labor requires that there be sufficient land to work on beyond that would be performed by family labor only. It also relates to the degree of poverty and deprivation and inequality prevalent in the region. For instance, it is common knowledge that rural credit is vital for rural livelihood and that the single most important collateral for such a credit is land itself. In such a situation, informal credit markets are interlocked with informal land markets.

The analysis in this paper would shed some light on the significance of transactions involved in informal land markets as personalized relationships that would have asymmetry of impacts on different groups. I have argued and attempted to demonstrate that the functions of informal land markets are socially differentiated. Its redistributive functions would include agricultural land, labor, output, farm incomes and human capital formation towards richer households; and access to draft power, credit, and limited seasonal wage employment towards the poorer ones. As a result, direct production-led entitlement is redistributed in favor of the richer and away from the poorer households. This process exacerbates dependence of the poor on the rich not only during 'hungry seasons' but also beyond it in various terms. The process must be viewed from the perspective that farming constitutes the most important source of employment, income, and livelihood for the majority of peasants. Low performance in terms of reduced production and incomes at a particular year will have cumulative impacts on subsequent opportunities and livelihood processes, on shaping the form in which social relations are to be mapped out, and on the broader issue of supply responsiveness of peasant agriculture. The accumulative functions of informal land markets (as interlocked with labor markets) for the rich could also be expressed in terms of freeing part of family labor and making it available for human capital formation and/or running family non-farm businesses. To the extent that informal land markets could play such roles, there is also a legitimate concern to suspect that they might have a subsidizing function for the family-run non-farm businesses.

Finally, three important areas that this paper has not addressed deserve mentioning. First, although per AE considerations reveal the inter-household differences in important variables, as averages they, however, can conceal significant intra-household distributional inequalities between different age and gender groups. If for a given region it could be assumed that the social division of labor and distributional premium attached between the different persons in a household is more or less the same, then as the relative position of the poorer groups at a household level deteriorates it would mount a lot of pressure on the disadvantaged groups within the household. Decreased output per unit of AE or LE does not necessarily imply that the burden of poverty would rest on all members of the household equally. It does not automatically imply that an improvement of the relative position of the richer households would necessarily entail an improvement of the situation of all members of that household either. Hidden laborers in terms of domestic workers, children, and women are among those who do not get according to their labor productivity. Therefore, analysis should permeate the household boundary to explore the functions of informal land markets within the intra-household dynamics.

Second, since it wasn't the primary purpose of this paper to investigate whether informal land markets would enhance efficiency, the data could not permit such an analysis. However, there can be several ways of assessing if informal land markets have an efficiency enhancing function. For example, one way of doing it would be to compare the productivity differences of the same plot of land between two scenarios: (a) rented land as worked by the tenant with (b) if the land wasn't rented and, hence,

could have been worked by its holder (often the poor). Another approach would involve an evaluation of the productivity differences on rented land with that of owned land after allowing for fertility differences between the two sets of land. A third proximate option would be to compare productivity differences of the poor groups (who tend to rent out land) with that of richer ones (who are inclined to rent in land). If the former, on the average, is significantly lower than the latter, then it might lead to the conclusion that informal land markets would improve production efficiency. Common sense has it that because those who rent in land are resourceful ones they would have a better capacity to improve the productivity of the land than if its initial holders (i.e., the resource poor) worked it. Additionally, there is an incentive element in land renting apart from the subsistence objective. That is, a rented land should cover its expenses and be able to generate some profit to its operator. On the other hand, since informal land markets are of short-term nature functioning in a highly unpredictable policy environment, significant investment on rented land is simply the exception rather than the rule. A comparative distribution of yield levels by strata is given in Annex (1) in which it could be seen that inter-strata differences in yield levels of individual crops are not significant. This would suggest that informal land markets might not necessarily have an efficiency enhancing function as they work now. However, in the light of the above remark, sufficient care should be exercised in interpreting this result, and more work needs to be done in this important area.

In view of such a state of affairs as described in the paper, the relevant policy questions that would evolve would be (a) what would be the likely impacts of privatization and liberalization of rural land markets on agricultural productivity and rural poverty? And, (b) which alternative institutions could be reaped to harness local capacities in addressing the objectives of agricultural growth and reducing rural poverty in a better way? To the extent that such issues are consequential, they should form an integral part of the agenda that guides future development research direction.

NOTES

¹ There is an undercurrent, which runs from classical to some modern development economists, that presumes that the landowning class as a whole had a high propensity to spend surplus that accrues to them as rent on prodigal consumption rather than on productive investment.

² Statistical tests for normality (based on skewness/kurtosis) and homogenous variance (Bartlett's test) indicate that the assumptions of variance analysis are not satisfied always. The differences are not just in variances but also in the distributions (shapes) as could be seen from box-plots. Hence significance tests would in some cases be inappropriate.

³ The reason why LCH seems a special case is that availability of irrigation facilities made it possible for the richer households to switch part of their cultivated land to the production of potatoes rather than grains. In fact, following the dismantling of the PC, land was redistributed in a strictly egalitarian manner on per household basis (irrespective of differences in family sizes). Therefore, caution is necessary in interpreting the above distribution pattern.

⁴ It seems that the normality assumption can be maintained at 0.05 probability level for all but the rich stratum in ACH. Similarly the assumption of homogenous variance seems to be satisfied (at 0.05 probability level).

⁵ National Bank of Ethiopia, Annual Report, 1995.

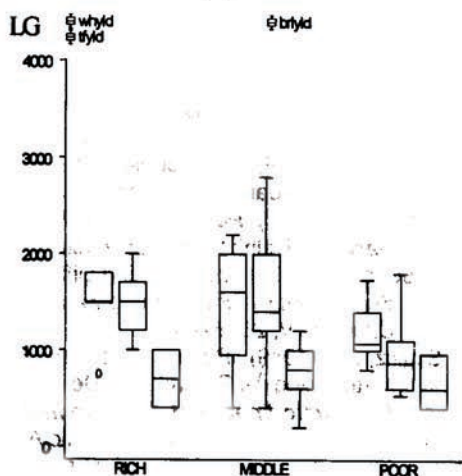
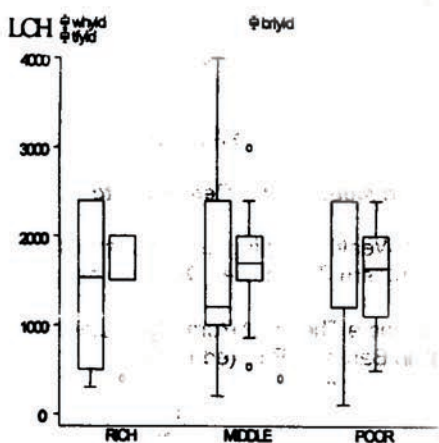
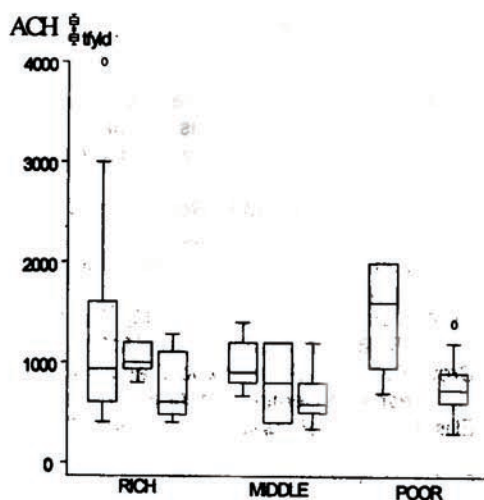
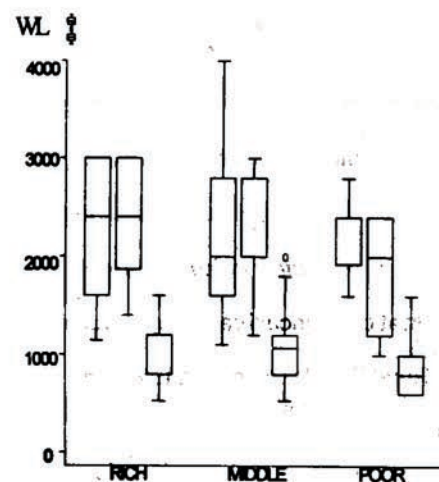
⁶ The national average figures indicate that those with no oxen and with only one ox constituted 29% and 34% respectively, bringing the total who have to depend on others to 63%.

⁷ Inter-strata production comparisons won't be affected by inter-regional variations in cropping patterns as long as the latter do not differ significantly between strata.

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ANNEX 1. BOX-PLOTS DISTRIBUTION OF YIELD PER HECTARE OF GRAINS BY STRATA



The first, second, and third box-plots from left to right represent respectively yield levels of wheat, barley and teff.