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Full Length Research Paper

Assessment of livelihood assets and strategies among tobacco and non tobacco growing households in south Nyanza region, Kenya

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This study assessed household assets and livelihood strategies among tobacco-growing households in comparison to non-tobacco-growing households in the south Nyanza region, Kenya. It was meant to provide basic information that could be used to advice on local enforcement of Article 17 of the WHO Framework Convention on Tobacco Control (FCTC) through crop and livelihood diversification as an alternative strategy to tobacco farming. A multi-stage and stratified random sampling procedure was used to select and survey 440 households (i.e. 210 tobacco and 230 non-tobacco) from the study area. The survey was carried out using a standard questionnaire with both structured and non-structured questions which was supplemented by four Focussed Group Discussions. The study established that an annual net income of a non-tobacco farmer is higher than that of a tobacco farmer with an average annual difference of $ 198 which is a significant margin in rural areas. Moreover, a tobacco farming household spends more income ($ 35) per year on healthcare services than a non-tobacco household, an indication that the latter group is prone to illnesses. In terms of social life, tobacco farming is labour intensive and evidently encourages polygamy though to a large extent, it is also a common cultural practice in the area. It was also noted that majority of the non-tobacco farming households have better housing quality and educational levels, and higher enterprise diversity than their counterparts. In conclusion, although households engage in tobacco farming to improve their living standards, tobacco farming is basically responsible for poor and un-sustainable livelihoods in the region. Hence, there is need to provide other alternative livelihood strategies to tobacco-growing households.

Key words: Tobacco, livelihood assets, livelihood strategies, Kenya.

INTRODUCTION

Tobacco is a cash crop grown widely in most developing countries in the world. Wealthy multinational companies owe its existence as growers, traders and manufacturers. The FCTC which entered into force on 27 February 2005 was developed in response to the globalization of the tobacco epidemic (WHO, 2005). The framework asserts the importance of tobacco demand reduction strategies as well as its supply issues.

The core supply reduction provisions in the WHO FCTC are contained in article 17. This article gives a pro-vision of support for economically viable alternative activities for tobacco growing households by stating that "parties (to FCTC) shall, in cooperation with each other and with competent international and regional intergovernmental organizations, promote, as appropriate, economically viable alternatives for tobacco workers, growers and as the case may be, individual sellers". Article 18 further indicates the need for alternatives so as to protect the environment in respect of tobacco cultivation and manufacturing. The tobacco farmers themselves are ready to switch to alternative crops if they are supported technically (ITGA, 2007).

Tobacco is a cash crop that is being consumed world wide and has been cultivated in Africa since the end of the 16 century. However, commercial cultivation began around the 19 century. For decades, the tobacco industry

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has encouraged countries and families to grow tobacco claiming that it would bring them prosperity though for many households, the reality has been very different. All over the world, especially in developing countries, the expansion of tobacco farming has been encouraged and financed by major cigarette companies. This has created a situation where farmers are competing to sell tobacco to the companies at the least possible prices. They are barely making a living, producing a crop that is labour and input intensive and at the same time brings with it health and environmental dangers (WHO, 2004, 2008a and 2008b).

The Kenyan government also treasures the tobacco firms because of the revenues generated through taxes. Despite this widespread perception of the economic importance of tobacco leaf, independent data suggest that tobacco makes a minimal contribution to Kenyan exports. Between 1961 and 2001, the maximum contribution that all tobacco exports made in dollar terms to Kenya's total merchandise exports was 4%. Since then, the proportion has fallen to between 0.05 and 2%. Over the same period, leaf exports alone contributed only between 0.1 and 0.8% (Patel et al., 2007).

Often, farmers under this category find themselves heavily in debt to the companies and since the companies control the prices paid to them, they are unable to extract themselves from tobacco cultivation (World Bank, 1999). For many tobacco growing households, they continue growing the crop because there is often little support for production of alternative crops.

The WHO (2000) and Rimmer and Willmore (2004) indicate that the companies are "strangling the growers" and each year they come up with a new way to squeeze them tighter while attempting to put a "human face" through corporate social responsibility programs. It could fur- ther be mentioned that the hypothesis, tobacco farming is associated with poverty rather than wealth, is still part of a controversy triggered by the tobacco industry and its agricultural lobby organizations (Yach, 1996; Pancha- mukhi, 2000; Salooje 2004; Keyser, 2007; Patel et al., 2007; WHO, 2008b). Increasing evidence points to the fact that tobacco farming indeed increases economic vulnerability but continues to contribute to surplus generation among tobacco companies, both leaf traders and cigarette manufacturers. Data from the Kenya's ministry of agri-culture also suggest that a shift to other cash crops could provide far greater revenues to Kenya's tobacco farmers. In the eastern province (1999), for example, mangoes were 37 times more profitable, where-as papaya and cot-ton each similarly dwarfed farmers' earnings from toba-cco (Patel et al*,* 2007). Therefore, it can fairly be assume-ed that tobacco farmers and their families are not nece-ssarily better off than non tobacco growers and this study supports this reasoning.

Approximately 35,000 small scale farmers grow tobacco in 3 regional clusters in Kenya: Nyanza province (Kuria, Migori, Homa bay and Suba districts), western province (Bungoma, Busia, Teso and Mount Elgon districts), central province (Kirinyaga, Muranga, and Thika districts) and eastern province (Meru, Kitui and Machakos districts). In all, 4,500 hectares of land is devoted to tobacco farming, representing 0.19% of total arable land in the country (Patel, et al, 2007). British American tobacco company Ltd (BAT) has a contractual arrangement with around 20,000 of these small scale farmers and it offers them crop inputs and advice and buys leaf from them once dried (cured).

The history of tobacco production in Kenya dates back to the year 1935 when BAT, started experimenting tobacco growing in Oyugis, Rangwe and Kisii areas in Nyanza province but failed claiming that the areas were not suitable for tobacco farming. However, this was mainly due to the resistance from the Adventist church which had strong roots in the region. The experimental sites were also prone to frequent hailstones (Chacha, 2002). Later, other companies like the mastermind tobacco Kenya Ltd and alliance one international Ltd joined in.

Due to the introduction of the Swynerton plan of 1954 that aimed at improving agriculture by the then Kenyan colonial government, a tobacco factory was constructed in Nairobi but until 1960s there were low tobacco production activities in Kenya. BAT organized tobacco production in Kenya on the concept of contracting farming (a system whereby schemes of companies use smallholder farmers to produce cash crops).

In the late 1960s and early 1970s, the company intensified its advertising campaigns and established several centers for tobacco growing in Kuria, Migori and later Homa bay and Suba districts. These historical factors explain why 80% of the country's tobacco production is taking place in the south Nyanza region (mainly in Kuria, Migori and Homa bay districts) (GOK, 2002a,b,c,d; Ministry of Agriculture, 2004a,b,c,d), thus being the primary or leading growing area.

The land under tobacco farming in south Nyanza has continued to grow rapidly at the expense of traditional food crops and livestock activities. Tobacco farming has also been castigated for deforestation and water pollution in the area (Kweyuh, 1994; Heald, 1999; Chacha, 2002; Melby and Pendleton, 2004; Ochola and Kosura, 2007, Patel et al., 2007). It therefore threatens food security in the area.

Tobacco has health and environmental hazards, yet rural communities depend on the crop for employment and cash income (Kibwage et al., 2006, 2007a and 2008 a,b,c). Children and women are more vulnerable than men to tobacco related health risks since they spend most of their time in the occupation (Kibwage et al., 2005; 2007b; Ochola and Kosura, 2007).

This paper captures household livelihood assets and strategies used by tobacco farmers in comparison to non tobacco farmers in the south Nyanza region. It was meant to provide basic information that could be used to promote local enforcement of the framework convention on

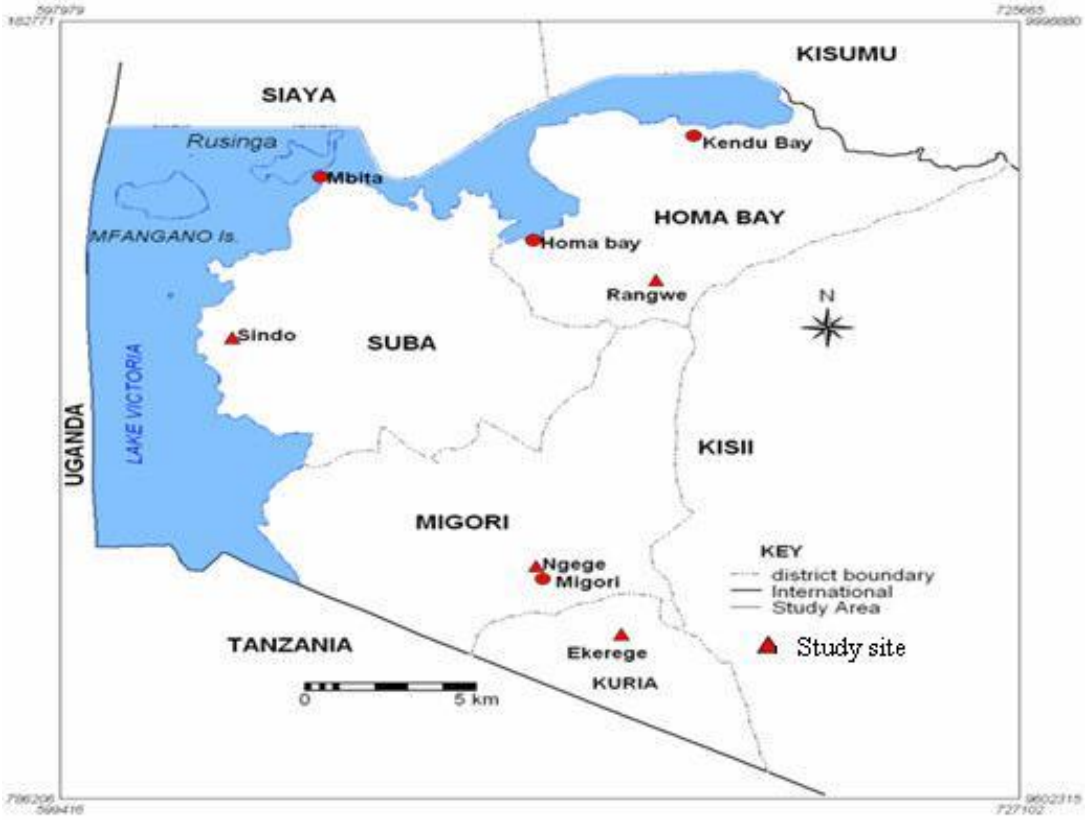

Figure 1. Study area sites in south Nyanza, Kenya. **Source**: Adapted from GOK, 1989.

tobacco control (FCTC) through livelihood diversification.

METHODOLOGY

The study was carried out in 2007/2008 in the south Nyanza districts or region (Figure 1). The region is located in the south- western Kenya and covers an area of about 7,778 sq. km, which is 48% of the Nyanza province's land area. This region is mainly inhabited by the Luo and Kuria communities. Majority of the rural population depend on agricultural crops such as tobacco, sugarcane, maize, sorghum, sweet potatoes and cassava among others.

Two interactive approaches were used in data collection. First, four focussed group discussions were carried out, that is, one in each of the study sites where livelihood mapping was done. The livelihood mapping process entailed identification and ranking of basic life support resources used by the smallholder farming households. In every study site, 30 farmers that is,15 tobacco and 15 non tobacco and Kenya government agricultural officers participated in the livelihood mapping exercise.

Secondly, a multi -stage and stratified random sampling procedure was also used to select 440 smallholder farming households that is, 210 tobacco and 230 non tobacco households from the 4 study sites (Ikerege, Ngege, Rangwe and Sindo in Kuria, Migori, Homa bay and Suba districts, respectively) (Figure 1 and Table 1). However, there were no tobacco farmers sampled in Suba district as most of them had abandoned the activity. One administrative location with the highest concentration of tobacco farmers was selected from each district through stratification where a proportional sample was randomly selected for the study.

The survey was carried out using a standard questionnaire with both structured and non structured questions relevant to the study. The questionnaires were developed and tested during a pilot survey. Data were analyzed using statistical package for social scientists (SPSS) and excel with a general framework of contrasting the assets and livelihood strategies for both groups of households studied.

This research design and methodology fits the WHO (2008a) and Perondi et al. (2008) recommendations. The inclusion of non tobacco growing households means the establishment of a control group which helps to debunk the myth of tobacco crop profitability created ("socially constructed") by the tobacco industry. The best practices of participation were observed including gender sensitivity where adult men, women and youths were included. The livelihoods approach was meant to give an understanding of the farmer's strengths (assets or capital) which according to Bebbington (1999), is crucial in the analysis of how people convert their assets into positive livelihood outcomes.

RESULTS

Household socio-economic characteristics

Table 2 shows that the mean age of sampled farmers was 44.3 years. The household size among tobacco families was slightly larger (9.1) than non tobacco families (8.9). There were more housewives (47) sampled among non tobacco farming households as compared to tobacco farming households (25).

Table 3 shows that divorce/separation cases among

Table 1. Sampling frame.

District/ site	Tobacco growing households			Non tobacco growing households			Total
	Male	Female	Total	Male	Female	Total	
Kuria / Ikerege	104	12	116	40	13	53	169
Migori / Ngenge	68	11	79	43	17	60	139
Homa bay/ Rangwe	8	7	15	42	19	61	76
Suba / sindo	0	0	0	40	16	56	56
Total	180	30	210	165	65	230	440

Table 2. Age of household head, household size and position of respondent in the household.

Age of household head, household size, position of respondent in the household (Mean value for sample)	Tobacco farmers n = 210	Non tobacco farmers n = 230	All cases(Average) n = 440
Age of household head (yrs)	43.5	45.1	44.3
Household size (number.)	9.1	8.9	9.0
Household head (%.)	87.1	78.7	82.9
House wife (%.)	11.9	20.4	16.2
Others (number)	2	2	2

Table 3. Marital status of tobacco and non tobacco farmers.

Marital status (Mean value for sample)	Tobacco farmers n = 210	Non tobacco farmers n = 210	All cases (Averages) n = 440
Single (%)	4.8	3.5	4.2
Married (%)	91.8	82.9	87.4
Widowed (%)	2.9	12.7	7.7
Separated/Divorced (%)	0.5	0.9	0.7
Total	100	100	100

non tobacco growing households were high (0.9%) compared to tobacco farmers (0.5%). The proportion of widowed tobacco farmers is low (2.9%) compared to the non tobacco farmers (12.7%). The average number of wives to a household head was 1.4 in the region. However, it is evident in Figure 2 that polygamy is consistently higher among tobacco growing households than non tobacco farming households in the region. Non tobacco households were leading in the one wife category while tobacco farming households were leading in the range of 2 - 4 wives. A testimony by one of the prominent tobacco farmers in Kuria district illustrates the relation between tobacco farming and polygamy:

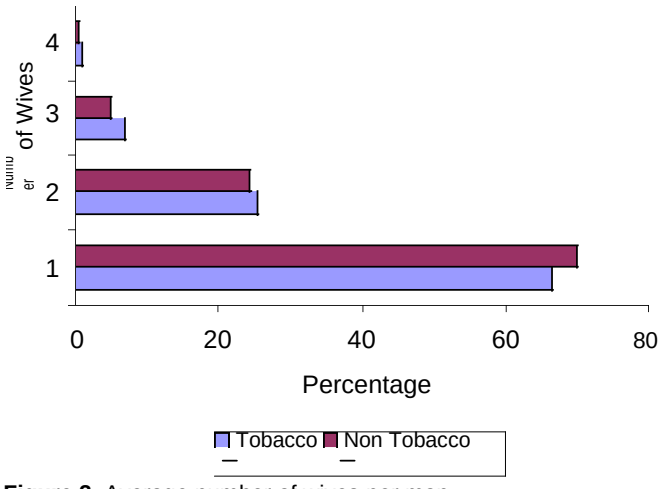

Figure 2. Average number of wives per man.

"I started tobacco farming in 1978 while I was a youth and I do it every season of the year to date. I married my first wife in 1980 to assist me in the then tobacco boom-ing business. I married my second, third and fourth wives in 1986, 1991 and 2005, respectively. I now have 18 children and several grandchildren, especially from my married daughters. My wives and children greatly assist married daughters. My wives and children greatly assist in farm preparation, planting, weeding, pruning, thinning, application of agrochemicals, harvesting and curing. I ca-

Table 4. Education level of tobacco and non tobacco household heads.

Education level (Mean value for sample)	Tobacco farmers n = 210	Non tobacco farmers n = 230	All cases (Averages) n = 440
None (%)	6.9	9.0	8.0
Primary (%)	72.8	66.1	69.4
O- Level (%)	16.8	18.0	17.4
A- Level (%)	1.5	1.0	1.2
College/University (%)	2.0	5.9	4.0
Total	100	100	100

Table 5. Main occupation of the respondents.

Main occupation: (Mean value for sample)	Tobacco farmers n = 210	Non tobacco farmers n = 230	All cases (Averages) n = 440
Farming (%)	82.2	70.6	76.4
Formal sector employment (%)	2.2	8.8	5.5
Retail business (%)	14.1	18.9	16.5
Informal sector employment (%)	1.5	1.7	1.65
Total	100	100	100

nnot manage the whole process which is labour intensive because age is catching up with me and I was recently diagnosed of chronic TB (Tuberculosis), a ill-health condi-tion. Ideally, I started with one acre of land when I had one wife, but over time I had to establish a similar acre-age for each of my other three wives. I maintain equal ac-reages for all my wives to avoid wrangling among them. When I get payments at the end of the season, I al-ways buy clothes and shoes for my wives, and also sch-ool uniforms and books for my children. I don't pay cash to my wives because they are not 'workers' but they only assist" (Personal Communication, 2007).

In terms of education, majority of the tobacco farmers (72.8%) did not go beyond primary level. A few (2.0%) had reached college/university level as compared to 5.9% of the non tobacco farmers (Table 4).

Business enterprise diversity

Table 5 shows that the main occupation of the respondents was farming (76.4%), followed by retail business (16.5%), formal sector employment (5.5%) and the informal sector employment (1.65%). It is also evident that most (82.8%) of the tobacco growing households depended on farming compared with the non tobacco growing households (70.6 %).

Proportion (18.9%) of non tobacco growing households who depended on retail businesses was relatively higher than the tobacco growing households (14.1%). In addition, 8.8% of the non tobacco growing households largely depended on the formal sector employment compared with the tobacco growing households (2.2%).

Housing among the tobacco and non tobacco growing households

Figure 3 shows that majority of the respondents, who were tobacco farmers, lived in iron sheet roofed houses with mud walls. However, majority of the non tobacco farmers lived in permanent houses as compared to the tobacco growing households. Mud walled, grass thatched houses were largely owned by tobacco growing households as compared t other non tobacco growing households. Plates 1 and 2 show the type of houses owned by the two categories of households.

Ownership of other capital assets

Table 6 shows the average of other capital assets owned by the two groups of farming households. The study revealed that not every household of the tobacco and non tobacco farmers had a motor cycle, a bicycle, television, a car, an ox plough and a shop or a kiosk. However, on average, each tobacco farming household had at least a radio as compared to the non tobacco farmers, where some households had no radio as shown by the average value of 0.9.

It is also overt that majority of the non tobacco growing households had bicycles compared to the tobacco farmers as shown by the averages of 0.74 for non tobacco farmers and 0.65 for the tobacco farmers. The mean value of 0.8 for tobacco growing households and a relatively lower mean value of 0.64 for the non tobacco growing households, show that ox-ploughs were largely owned by tobacco farmers as compared to the non tobacco farmers.

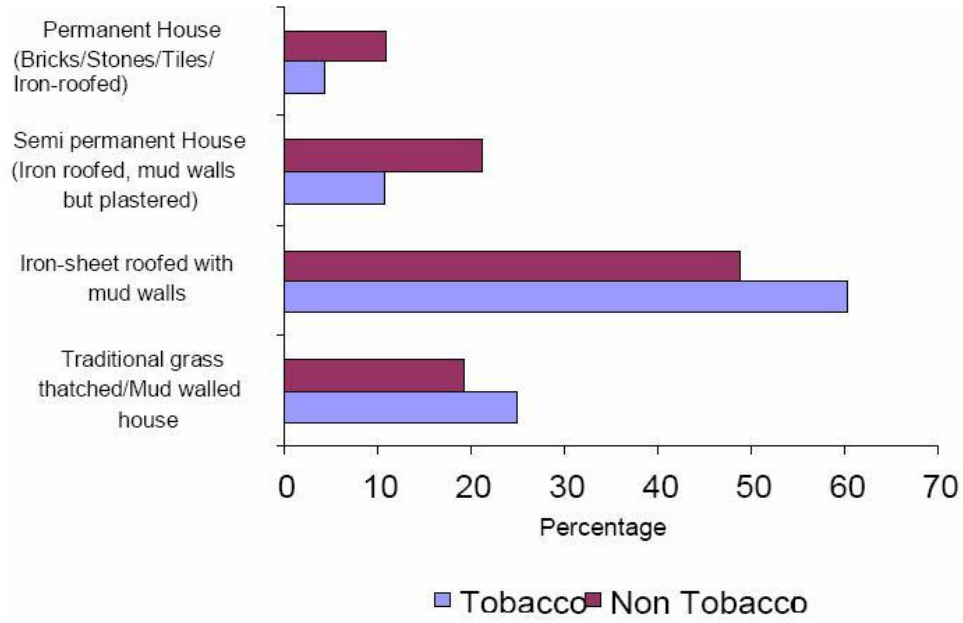

Figure 3. Type of housing among tobacco and non tobacco growing households.

Table 6. Ownership of physical capital assets by tobacco and non tobacco growing households.

Physical man made assets (Mean for the samples)	Tobacco growing households n = 210	Non tobacco growing households n = 230	All cases (Averages) N = 440
Motorcycle (no.)	0.02	0.01	0.02
Bicycle (no.)	0.65	0.74	0.7
Television (no.)	0.1	0.1	0.1
Radios (no.)	1.0	0.9	0.95
Car (no.)	0	0.02	0.01
Kiosks/ shops (no.)	0.2	0.21	0.21
Ox plough (no.)	0.8	0.64	0.74

Livestock ownership

Generally, the two groups of households owned both indigenous and cross breed cattle (Table 7). The average ownership of indigenous cattle was 0.75 while for the cross breed was 0.03. Tobacco growing households had an average value of 0.8 indigenous cattle, which was slightly higher than that of their counterparts (0.7).

On average, poultry is the major livestock owned by the two groups of farmers. Tobacco growing households had an average number of 13.2 poultry birds while the other group had 13.9. Sheep and goats owned were 3.0 for tobacco growing households compared to 4.1 for non tobacco growing households. It also emerged that a tobacco farming household had an average of 1.7 oxen while a non tobacco farming household had 1.4.

Access to financial resources

Table 8 shows that an average of 24.3% of all the 440 respondents had access to financial resources with a higher portion of 28.6% among non tobacco compared to 20.0% of tobacco farmers. Among the existing sources of finance, small scale businesses constituted the greatest % (27.25%). An average of 10.9 % of the non tobacco farmers and 3.3% of the tobacco farmers depended on regular salaries. Local Merry-go-rounds also played a key role among 5.0% of the farmers in which 4.3% were tobacco farmers while 5.7% were non tobacco farmers (Table 8).

Most (9.6%) of the non tobacco growing households depended on remittances compared to the relatively low proportion (3.8%) of the tobacco growing households. An average of 0.45% of the households obtained finances from micro financial institutions, where majority (5.0%) were non tobacco farmers while 0.4% were tobacco farmers. Whereas none of the non tobacco growing house-holds depend-ed on loans from banks, 5% of the tobacco farmers supplemented their farming investment with bank loan.

Table 7. Ownership of livestock by tobacco and non tobacco growing households.

Ownership of livestock (Mean value for sample)	Tobacco growing Households n = 210	Non tobacco growing households n = 230	All cases (Averages) n = 440
Sheep and goats (Average no.)	3.0	4.1	3.6
Poultry (Average no.)	13.2	13.9	13.6
Oxen (Average no.)	1.7	1.4	1.6
Indigenous (Average no.)	0.8	0.7	0.75
Cross breed (Average no.)	0.04	0.02	0.03
Dairy (Average no.)	1.1	0.9	1.0
Other cattle (Average no.)	2.8	3.2	3.0

Table 8. Financial assets by tobacco and non tobacco growing households.

Sources of finance and access to the sources	Tobacco growing households n =210	Non tobacco growing households n = 230	All cases (Averages) n = 440
Access to financial resources (%)	20.0	28.6	24.3
Personal salary (%)	3.3	10.9	7.1
Small scale businesses (%)	27.1	27.4	27.25
Remittances (%)	3.8	9.6	6.7
Local merry-go-rounds (%)	4.3	5.7	5.0
Micro finances (%)	5.0	0.4	0.45
Banks (%)	5.0	0	0.25

Table 9. Household incomes and expenditures.

Household incomes and expenditure (Mean value for sample)	Tobacco growing households n = 210	Non tobacco growing Households n = 230	Average n = 440
Annual income (Ksh)	100,040	113,579	106,809
Annual expenditure (Ksh)	84,151	93,887	89,019
Annual expenses on: Food Items (Ksh)	44,479	54,807	49, 643
Medical/ health care (Ksh)	8,073	5,656	6,865
Education (Ksh)	17,211	19,581	18,396
Clothing (Ksh)	7,488	6,943	7,216
Household utensils (Ksh)	3,380	3,620	3,500
Farm tools(Ksh)	3,462	3,221	3,341
Others(Ksh)	59	59	59

1 USD = Ksh. 68.5 in 2007

Incomes and expenditure differences

Table 9 shows that annual average income of a non tobacco farmer is Ksh 13,539 higher than that of a tobacco farmer. Most expenses were incurred on food items for the two categories of households as compared to other items. On average, a tobacco growing household spends relatively high amount of income (Ksh 8,073) on medical/ health care services compared to a non tobacco growing households (Ksh 5, 656).

Focusing on food items, a non tobacco growing household spends relatively higher income (Ksh 54,808) compared to their counterparts (Ksh 44,479). In addition, the former households spend an average of Ksh 19,581 on education while the latter spends Ksh 17,211.

Land tenure systems

In terms of land ownership, each household averagely had 7.05 acres of land but non tobacco growing households owned slightly more than tobacco growing households (Table 10). A relatively high proportion (93.7%) of the tobacco farmers and 93.0% of the non tobacco farmers either inherited or purchased their land with 6.15% leasing from others.

Nevertheless, most of the land owned by tobacco grow-

Table 10. Land tenure systems among the tobacco and non tobacco growing households.

Household land tenure issues	Tobacco-growing households n = 210	Non tobacco growing households n=230	Average n = 440
Average Land size owned (acre)	6.7	7.4	7.05
Average Area farmed (acre)	4.2	3.8	4.0
Land tenure: Leasehold from an individual (%)	6.3	6.0	6.15
Freehold/ Inherited/ Purchased (%)	93.7	93.0	93.4
Communal ownership (%)	0	1.0	0.5
Land enterprise diversity: Land available for woodlots, bush, fallow and Napier grass (%)	8.3	9.4	8.9
Land allocated to food crops only (e.g. maize, beans, and vegetables (%)	41.2	49.8	45.5
Land allocated to food crops and other uses (%)	50.5	40.8	45.7

ing households is cultivated as shown by the mean of 4.2 acres against 3.8 acres of non tobacco growing households. This is further evidenced by the differences in land enterprise diversity where 9.4% of the non tobacco farmers either left their land fallow or set some aside for woodlots and napier grass as compared to 8.3% of the tobacco farmers.

The two categories of farmers tend to diversify their land uses since 45.7 % of them allocated land to food crops and one other use. Majority (49.8%) of the non tobacco growing households allocated their land to food crops only, while a relatively low proportion (41.2%) of the tobacco farmers did the same. However, the tobacco farmers who devoted their land to food crops only, rented land for tobacco farming.

DISCUSSIONS

Livelihood can be understood as a group of assets, activities, forms of access and use that determine the way of living of an individual or a family (DFID, 1998; Carney, 1998; Perodi et al., 2008; Gobind, 2008). Individuals in developing nations are poor and presently the concept of livelihood is taking a centre stage as a survival strategy of rural households (Ellis, 2000; Bryceson, 2000; Ellis and Allison, 2004).

The study revealed that the mean age of randomly sampled non tobacco farmers was 1.5 years higher than that of tobacco farmers, a likely indication of a higher life expectancy and better standards of living. This variation could be attributed to the rampant ill health among tobacco farmers. The household size among tobacco farmers was slightly high (9.1) compared to that of non tobacco farmers (8.9). Both the household sizes in the region are very high due to the culture of owning large families compared to the Kenya's national rural household size of 5.4 people (GOK, 2002e).

It is also evident in Figure 3 that tobacco farmers tend to marry many wives compared to non tobacco farmers, an indication of high demand for labour in tobacco production. However this doesn't largely promote polygamy or enhance divorce/separation of married partners in the region, a scenario that confirms the existence of polygamy as a cultural practice in the area (Watson et al., 1998).

The high labour requirement in tobacco production was also evidenced by the low (2.9%) proportion of widowed tobacco farmers compared to non tobacco farmers (12.7%) (Table 3). This is because tobacco farmers tend to remarry immediately to meet the demand for labour in tobacco farming. On the other hand, many non tobacco growing households are Christians and some remain single parents after the demise of their spouses.

In terms of education, majority of the tobacco farmers (72.8%) did not go beyond primary level compared to non tobacco farmers (66.2%). A few tobacco farmers (2.0%) reached college/university level as compared to 5.9% of the non tobacco farmers (Table 4). The differences in education levels could be attributed to the fact that a non tobacco farmer invests an average of $34.6 more on education than a tobacco farmer (Table 9).

According to Geda et al. (2005), there exists a negative relationship between the level of education of a household head and poverty status of the household

This scenario hence, suggests that the economic status of non tobacco farmers is higher than the tobacco farmers in the region. However, both the tobacco and non tobacco farmers largely depended on farming as their major source of livelihood.

To supplement incomes from the farm produce, an average of 16.5% of the two categories of farmers engaged in retail businesses while 1.65 and 5.5% sought for employment in the formal and informal sectors respectively (Table 5). However, the business enterprise diversity among non tobacco growing households is markedly higher since they have more time to do so unlike the tobacco farmers.

Although agriculture is widely seen as a major source of livelihood to many rural poor, choice of a suitable agricultural enterprise is embedded in the micro economic reason of a farming household (Hussein and Nelson,

1999; Ellis, 2000). Farmers generally engaged in tobacco production mainly because it had ready market and for more income to pay school fees.

However, the study revealed that on average, the annual household income of a non tobacco farmer was higher than that of a tobacco farmer with a difference of $197.66 (Table 9). This is a significant difference in living standards at the rural level. Moreover, a tobacco growing household spends more income ($ 117.85) on medical/ health care services than a non tobacco one ($82.58), an indication of rampant ill health related to tobacco cultivation.

This situation is analogous to what occurs in Bangladesh where the UNICEF estimated that the country loses more than 5% of its GDP due to malnutrition and poverty that is worsened by tobacco production and consumption both at the individual and national level (Debra, 2001). The high amounts of income spent on food items (cooking oil, sugar, salt and beverages) among non tobacco growing households is also an indication of a better well being.

Analyses of household assets show that the tobacco and non tobacco growing households had no considerable differences in the ownership of livestock (Table 7). Physical capital assets such as television, radios and kiosks/shops were also relatively equal among the two categories of farmers (Table 6).

The two categories of farmers however, differed in their access to financial resources. % of accessibility to financial resources was highest (28.6%) among non tobacco households followed by the tobacco farmers (20.0%). This was attributed to the fact that a non tobacco farmer earned relatively high income (Table 9), which enabled him/her to participate in various rural livelihood strategies such as Local Merry-go- rounds (Table 8).

In contrast, whereas none of the non tobacco farmers depended on loans from banks, 5% of the tobacco farmers supplemented their incomes with bank loans and loans from micro financial institutions, which in most cases held them in vicious circle of poverty as little was being produced to repay the loans. This is in line with the proposition of WHO (2004), that tobacco production results in vicious circle of poverty and hence, need for tobacco production control measures.

More differences among the two groups of households was noted where 10.9% of the non tobacco farmers against 3.3% of the tobacco farmers had personal salaries. A considerable proportion (9.6%) of the non tobacco farmers and a few (3.8%) tobacco farmers also depended on remittances from other household members employed in the formal sector in Kenya and foreign countries. The differences could be attributed to the fact that non tobacco farmers largely invested in education of their children which was widely seen as a means to formal employment and salaried jobs.

Among the existing sources of finance, small scale businesses constituted the greatest average percentage (27.25%) followed by personal salaries (7.1%), remittances (6.7%) and local merry-go-rounds (5%) (Table 8).

Figure 4a. Iron sheet roofed houses with mud walls of a tobacco growing household.

Figure 4b. Iron sheet roofed houses with mud walls of a tobacco growing household.

This conforms to the observation by Brons (2005) that many farming households in developing coun-tries obtain an important share of their income from other economic activities besides farming.

An insight into the land ownership showed that on average, each farmer owns 7.05 acres of land but a non-tobacco-growing household owned slightly more than their counterparts (Table 10). This could be ascribed to the slight differences in the number of wives owned by the two categories of farmers (Figure 3) where in most instances, a polygamist could divide his piece of land among his many wives, a practice that reduced the land size that would otherwise be owned by one wife.

The study further revealed that a relatively high proportion (93.4%) of the two categories of farmers either inhe-

rited or purchased their land while 6.15% leased from others. The land leasing was generally meant to perpetuate diversification of agricultural activities. However, some tobacco farmers preferred growing tobacco on rented land to their own pieces of land mainly because tobacco farming enhanced soil infertility and had run out of fertile grounds that were acceptable to tobacco companies' standard.

Nevertheless, most of the land owned by tobacco-growing households was cultivated as shown by the mean of 4.2 acres against 3.8 acres of the non-tobacco farmers. This difference was because most (82.2%) of the tobacco farmers against 70.6% of the non tobacco farmers depended on faming as their main occupation (Table 5) and the fact that non tobacco growing households tend to diversify their income sources (Table 8).

This was further evidenced by the differences in land enterprise diversity where 9.4% of the non tobacco growing households either left their land fallow or set some aside for woodlots and napier grass as opposed to the 8.3% of the tobacco farmers (Table 10). According to Ellis (2000), the poor are distinguished by their reliance on crop income sources and their relative lack of access or low returns to other income sources. This implies that non tobacco-growing household members' well-being is better than tobacco farmers' wellbeing in the area.

Significant differences between the two categories of farmers also occurred with respect to the type of housing (Figure 4). In particular, tobacco farmers were largely associated with low quality housing while non tobacco farmers were largely linked with permanent and semi permanent houses (Figures 4a and 4b). This is a clear label on tobacco as "a crop with no cash" (Asila, 2004) which can be used to put up even a simple permanent house.

Conclusions and Recommendation

It can be deduced that farmers keep and maintain high household sizes to ensure availability of labour. Though this is a common cultural practice in the area, the consistency in the statistical evidence was a clear indication that tobacco farming promotes polygamy in the region.

Moreover, there is marked difference in the income le-vels and expenses incurred by the tobacco and non-toba-cco growing households. A tobacco-growing household spends more income on medical/healthcare services than a non tobacco household, an indication of rampant ill health among tobacco farming households.

In a nutshell, although farmers in the region engage in tobacco farming to improve their standards of living, tobacco farming seems to have added little or no difference in their livelihoods. Generally, non tobacco growing households are well off in terms of household assets and livelyhood strategies.

This study absolutely disapproves the propaganda by tobacco companies and its agricultural lobby organizations that tobacco is profitable and contributes to sustainnable development! It is therefore important to provide alternative crops and livelihood strategies to farmers in the region.

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