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Contract Sugarcane Farming and its Effect on Household Income among Smallholder Farmers in Busia County, Kenya

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ABSTRACT

The main opportunity in contract farming is the promise of high income to the farmer. However, this paper provides practical evidence that this is not the case among smallholder sugarcane farmers in Busia County. This is a research paper based on a study carried out by the authors on the effect of contract farming on livelihoods among smallholder farmers in Busia County, Kenya. The study was carried out on 292 smallholder sugarcane farmers through the use of a questionnaire and in-depth interviews. The majority (213, 73%) of the households indicated that contract sugarcane farming did not improve their household income. We conclude that although contract sugarcane farming had varied effects on households in general, in relation to income, contract farming negatively affected the household income.

INTRODUCTION

Despite contract, farming has proved successful in many African countries by enhancing existing income levels; this is not always true in all situations (Warning and Hoo, 2000). According to Food and Agriculture Organization (FAO) (2012), a frequent criticism of contract farming arrangements is the uneven nature of the business relationship between farmers and their buyers. Buying firms, who are invariably more powerful than farmers, may use their bargaining power to their short-term financial advantage at the expense of farmers. Incidences of poverty are greatest in rural areas and typically among small-scale farmers in developing countries. In Kenya, the sugar sector remains dominated by small-scale farmers, who produce about 92% of the sugar mill in the country (KNSB, 2010). While it was hoped that sugarcane farming would raise farmers' income and somehow help reduce poverty, in Western Kenya where sugar cane farming is concentrated, this region is still among the poorest regions in Kenya. For instance, out of about 4.3 million people in Western Province, about 1.8 million are considered poor (Kenya National Bureau of Statistic, 2010).

Contract farming has become common for many African countries to enhance commercial farming. This is ideally to cushion the smallholder agriculture characterized by many challenges including low productivity, low level of technology, low capital investment, natural resource degradation and inadequate basic services. Contract farming is not a new phenomenon in Kenya as most of the cash crops in the country including tea, coffee, rice, pineapples, seed maize, cash nuts, and macadamia have been produced under this form of arrangements. Sugarcane farming through the main sugar companies in Kenya has also been through contract farming.

Of the key industrial crops grown in Kenya, contract sugarcane farming has put more land into agriculture than the rest in Busia County. While it was hoped that sugarcane farming would raise farmers' incomes and somehow help reduce poverty, Western and Nyanza provinces are still among the poorest regions in Kenya. For instance, out of a population of about 4.3 million people in the western province, about 1.8 million are considered poor. On the other hand, with a population of about 5.4 million, Nyanza province has an estimated rural poor population of 2.4 million people (Kenya National Bureau of Statistics, 2010). Stockbridge (2007) noted that a shift from food crop production to high valued crops like sugarcane can make it harder for women to fulfill their traditional responsibilities because cash crop production often reduces the amount of land available to women for producing food crops.

Despite contract farming offering the greatest opportunity for commercializing small-scale agriculture, experiences from various small-scale farmers in Kenya have indicated deteriorating effects on their livelihoods. In Busia County where contract sugarcane farming is a major economic undertaking for most small-scale farmers, many of them regret their decision to engage in the enterprise (Sorre, 2003). Practical observation has shown that most of the farmers have uprooted the cane crop they grew under contract terms (Kwenyu, 2013); while others have even totally changed to other crops; and the rest now grow the cane privately, outside the contract terms. The main concern of this paper is to provide some practical evidence on the extent to which sugarcane contract farming has affected levels of income among smallholder farmers. This study is vital especially when most of the cane farmers have invested most of their household resources on the crop, yet little returns seem to be accruing. Thus, the focus of the study was to examine the nexus between contract sugarcane farming and livelihood opportunities of the affected household.

EXPERIMENTAL

The main opportunity from contract farming is the promise of higher income. This is made possible when contracting firms provide inputs such as seedlings, fertilizer, and loans to farmers. In addition, farmers are assured of a reliable market for their product and stable pricing structures. However, Masakure and Henson (2005) have a different opinion and they highlight that stability and technical knowledge are the important reason for joining contract farming.

Little (1994:221) reviewed some case studies and concluded that income from contract farming increased for a moderate (30- 40 %) to a high (50-60 %) proportion of participants. However, this income was not enough to live on and farmers had to rely on other farm and non-farm income. In addition, he surmised that contract farming often exacerbates income inequality by favoring middle to large-scale growers. In several cases, households lost land that was appropriated for government-run contract schemes.

Similarly, Singh (2002) identified a series of problems associated with contract vegetable production in the Punjabi State in India. Singh concluded that the contract farming done by multi-national corporations with relatively large farmers and its arrangement is biased against the contract farmers. The issues identified are imbalanced power between farmers and companies, violation of the terms of the agreements, social differentiation and lack of environmental sustainability. Nonetheless, his surveys revealed that most farmers saw income rise and were satisfied with the contract arrangements.

A study by Sopheak (2014) on the effect of rice contract farming on smallholder farmers' income in Kampong Speu Province, Cambodia, showed that it is not group or individual, the oral or written contract per se which structure the outcome, but rather how it is practiced in a given context. Farmers had exited from the contract on the one hand regarding two main factors including the payment which is not according to the predetermined schedule and the using of quality control against farmers. On the other hand, the rice contract farmers had exited from the contract, perhaps, because of no significant difference between engaging and not engaging in the contract. The study combined both quantitative and qualitative data sources and included a comprehensive literature review with concerned individuals through one-on-one session, focus group discussions and household surveys. Multi-stage sampling was used to select respondents, in the first stage. In the second stage, random sampling was used to select one village for the study. In the final stage, a consensus survey of all sample of 148 households in Trapeang Kok village was decided for the interview. Six key informants who are representative of NGO and the private company were contacted for an interview and four groups were gathered for discussion.

Bright (2013) has a different opinion, in his study on the contribution of outgrower schemes to farmers' livelihood- A case of oil palm farmers in Kwaebibirem District of Ghana. The cross-sectional research design was used. From the study he found out that Ghana oil palm development company limited (GOPDC) supplied enough inputs to aid growers, the relationship GOPDC and out-growers is strained and has significant implications for the sustainability of the contract scheme. This is because only 19% of outgrower farmers sell fresh fruits bunch (FFB) to GOPDC stating delayed period of payment and nonpayment of cash by GOPDC, transportation challenges, and land tenure arrangement as contributing factors. The study confirmed that the schemes play a very vital role in the economic development of the rural communities where the schemes are implemented by assisting communities with school, employment and spin-off employment, health delivery and infrastructure development like provision and maintenance of feeder roads to ensure easy access for the farmers and their farm produce. Data were collected using the survey based questionnaire and key informants. The study employed both the qualitative and quantitative research methods. The questionnaire-based survey, backed by personal interviews, which were semi-structured. This was administered through a face to face interview. A total of 214 respondents were involved in the study. The respondents were selected from four communities in Kwaebibirem district of Eastern region of Ghana. They were both outgrower and non-outgrow.

According to (FAO) (2012), the incidence of poverty is greatest in rural areas and typically among small-scale farmers in developing countries. They argue that contract farming arrangements are the uneven nature of the business relationship between farmers and their buyers. Buying firms, who are invariably more powerful than farmers, may use their bargaining power to their short-term financial advantage at the expense of farmers. In such circumstance, farmers incur suppressing deduction that affects the income they receive from contract farming. Similarly of the same view (Arunkumar, 2002; Da Silva 2005) cited in Sopheak (2014) argue that for small-scale contract farmers, the major challenge they face is irregular payments and the low contract price. Da Silva (2005) showed that the complex price determination mechanisms are mostly not to be understood by the smallholder farmers and this lead to the reduction of farmer's benefits from contract farming. The price determination then becomes susceptible to manipulation and fraud.

Literature reviews on contract farming and effect on farmers' income have clearly shown that farmers enter into contract farming with the expectation of increasing their income and thus raising their living standards. However, their expectation does not last long since income they get is far below their expectation. Waswa et al., (2012) argue that input costs affect the net income of the sugarcane farmers. This is because the more input costs are put in the farming activity correctly, the more the income is attained by the farmers. They add that it is widely acknowledged that high costs of inputs are directly controlled by the processing company to significantly depress farmers' income. Conventionally farmers only receive cheques with depressing income figures and have no idea on the reason that informed recorded yield and the high cost of company-controlled inputs, which are ultimately used to determine farmers' net income.

RESULTS AND DISCUSSIONS

The respondents were first asked to state whether contract farming offers credit for farming inputs. Majority 278(95.2%) of the respondents indicated that contract farming offers credit for farming inputs, while 14(4.8%) indicated that they never. Moreover, if yes, the respondents were asked to list some of the inputs that were offered on credit. All the respondents said that the sugar company does land tilling with tractors for the contracted farmers, 174(62.6%) said they were offered fertilizer, while 140(37.4%) were provided with seed cane. The finding coincides with that of (Warning and Hoo, 2000) who found that contract farming has increased its attractiveness in Africa because it offers a solution to farmers who lack adequate basic service for farming.

Respondents were also asked to indicate challenges that come with credit facilities given by the sugar company. This is summarized in Table 1 below.

Table 1. Challenges that Come With Credit Facilities

Category	Frequency	Percent
High-interest rate charged on the output	156	56.1
Delay in supplies	82	29.5
Poor quality seed cane	32	11.5
Expensive fertilizer	8	2.9
Total	**278**	**100.0**

Findings in Table 1 indicate that majority 156(63.3%) of the respondents opined that contract farming offers credit facilities at high-interest rates. This interest is charged on the output after the sugarcane is harvested, which eats into their profit. Eighty-two (29.5%) of the respondents indicated the delay in supplies. That although the credit facilities are provided, they are not supplied on time. This would compromise the performance of their crops. For instance, when fertilizer is supplied a month later, it means stunted growth for the sugarcane crop. Another 32(11.5%) indicated poor quality seed cane as a challenge. This is where some of the seed cane is of poor quality that leads to poor germination and growth.

During in-depth interviews, one of the discussants observed that "Mumias Sugar Company has generally impacted negatively on farming income due to high-interest rates imposed on their inputs" (Male Participant, 38 years). Another farmer commented that "Supply of cane variety of poor quality has resulted in low tonnage a farmer gets. This is especially evident where "Kanguru" cane variety weighs less, which reduces income a farmer gets from contract farming." These findings concur with the findings of Waswa et al., (2012) who argue that input costs affect the net income of the sugarcane farmers.

The respondents were further asked whether, at the end of the harvest, they were able to clear the input debt and remain with some cash from the cane farming. Majority 176(63.3%) of the respondents indicated that they could clear the input debt and remain with some cash from the cane farming, while 102(36.7%) indicated that they could not. This was supported by an interviewee who had the following to say that, “If farmer works extra hard: weed at an appropriate time and use correct timing, he/she likely has high yield and thus high profit that is able to pay for the farm input debts and remain with some cash from the cane farming” (Male Participant, 34 years, Extension Officer).

The study further interrogated whether contract farming was lucrative as compared to other agricultural activities such as maize, sorghum, millet, cassava, and beans farming. From the results, majority 162(55.5%) of the respondents indicated that contract farming was not lucrative compared to other agricultural activities such as maize sorghum, millet, cassava, and beans farming, while 130(44.5%) stated that it was. This is in line with the findings by Sorre (2003) who revealed that sugarcane farming had compromised food security in Busia County yet it was not profitable as earlier impressed by the initiators.

For those who said sugarcane farming is lucrative, they based their arguments on the fact that contract farming assures farmers of the ready market (98%) and was well paying (42%) if all factors remain constant. The findings coincide with those of Masakure and Henson (2005) and Guo et al.(2006) who found that the main opportunity from contract farming is the stability in terms of the ready market for the product. The other benefits that attract people include, a by-product from contract farming can be used for other farming activities and the contract can be used as a form of collateral for credit.

In addition, respondents were asked to indicate how they used money from sugarcane farming. Findings indicated that 128(43.8%) of the respondents used the money got from contract farming to pay fees, 202(69.1%) of the respondents used the money to purchase livestock, 152(95.8%) of the respondents used the money to purchase foodstuff. 120(41.1%) of the respondents used the money got from contract farming to invest in other agricultural activities, while 124(42.5%) of the respondents used the money got from contract farming to lease land from others.

Some of the conspicuous income-generating activities that the respondents engaged in included brick making (96, 31%), purchase of bodaboda motorbike 8(2.7%), repair of the bicycle (4, 1%) and repair of the motor car 6(2%). These are activities that were directed initiated based on the income from sugarcane farming. However, an overwhelming majority of 200(67.1%) respondents had no income generating activities.

In overall, respondents were asked to explain if engagement in sugarcane farming had improved their household income or not. It was found that only 79 (27%) were affirmative, while the majority 213 (73%) of the respondents were not. Meaning that contract sugarcane farming did not improve household income for the majority of the farmers in Busia County. This prompted the researcher to further ask whether the farmers were interested in expanding sugarcane production. Only 124 (42%) were affirmative, while the rest (168, 58%) were not ready to expand sugarcane farming. This was supported by an interviewee who asserted that “most farmers were not interested in expanding their sugarcane production. Instead many are uprooting the crop because of the losses incurred” (47 years old, farmer).

These descriptive statistics were followed by a Chi-square test of association to determine the association between contract farming and levels of income at the household. The Chi-Square test at $p \leq 0.05$ significance level illustrating statistically significant relationship between contract farming and household income level is summarized in Table 2 below

Table 2. Relationship between Contract Farming and Rural Household Income

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	292.000[a]	2	.000
Likelihood Ratio	112.373	2	.000
Linear-by-Linear Association	.000	1	1.000
N of Valid Cases	292		

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is .67.

Results in Table 2 indicate a significant ($p= .000$; $\alpha = 0.05$) relationship between contract farming and rural household income. Therefore the null hypothesis that “there is no statistically significant relationship contract farming and rural household income” was rejected ($p<0.05$). This implied that there was a significant relationship between sugarcane contract farming and household income in Busia County.

CONCLUSIONS

Contract sugarcane farming provided credit facilities to farmers but at a higher interest rate. As a result, most of the farmers made lower profits and thus, reduced levels of income because of the deductions to repay the credit facilities advanced. Consequently, contract sugarcane farming did not improve household income in Busia County.

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