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ARTICLES

# Potential of Corporate Social Responsibility for Poverty Alleviation among Contract Sugarcane Farmers in the Nzoia Sugarbelt, Western Kenya

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**Abstract** Although contract sugarcane farming is the most dominant and popular land use among farmers in Nzoia Sugarbelt, results from a 2007 study suggests that the intended goal of increasing farmers' incomes seems to have failed. With a mean monthly income of Kenya Shillings 723 (US $ 10) from an average cane acreage of 0.38 hectares, it would be difficult for a household of eight family members to meet their basic needs and lead a decent life. Analysis of farmer statements showed that up to 86% of the changes in net income were significantly determined by six cost variables as a group (i.e., acreage, tillage costs, seedcane costs, transport costs, yield, and farmer's education level). Area under sugarcane had the greatest influence on net income whereby an increase in one hectare under cane would result in an increase of Kenya Shillings 110,427 in net income (per crop cycle of 21 months), holding other variables constant. This translates into Kenya shillings 5,258 per month (or 175 per day per household, or for a family of eight people—KES 22 or US $ 0.3) per member, which is far below the international standard of absolute poverty. Key net income depressors were tillage, seedcane, and transportation costs, all of which were determined by the company with no input from farmers. To bridge income gaps between the company and farmers in favor of sustainable community livelihoods, this paper argues strongly for the need to institutionalize Corporate Social Responsibility within the daily operations of the company particularly to address net-income depressors. Ten key building blocks for such a policy for Nzoia Sugar Company are suggested, based on farmers' responses and ethical considerations.

**Keywords** Commercial farming · Sugarcane · Ethics · Sustainable livelihoods · Kenya

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## Introduction

### Background

Currently, sugarcane can be considered the single most important cash crop extensively grown within the Lake Victoria basin of Kenya, impacting directly the livelihoods of the second and third largest people groups in the country. Although its introduction was generally expected to alleviate poverty by expanding farmer income possibilities, statistics and observations indicate that poverty in this region remains endemic. For instance, Nyanza and western provinces of Kenya have among the highest levels of income poverty and the lowest human development indices in the country (Republic of Kenya 1999 and SID 2004). As such, commercial sugarcane farming appears to have had little positive impact on household livelihoods, despite the ecological suitability of this region for sugarcane farming (Jaetzold and Schmidt 1983). Further, with poverty still a serious problem in the country more than 40 years since independence, other approaches and strategies like corporate social responsibility (CSR) could be used to help the country address this problem. Mainstreaming CSR in monopolistic statutory and private firms' operations has potential to add value in the pursuit of equity and poverty elimination, a goal that is also captured within the social pillar of Kenya's Vision 2030 (Government of Kenya 2007). This paper discusses this possibility based on findings from sugarcane farmers contracted to supply the Nzoia sugar company in western Kenya.

### Conceptualising Corporate Social Responsibility

To date a clear and standard definition of corporate social responsibility is still elusive (Arthaud-Day 2005). Manakkalathil and Rudolf (1995) defined CSR as the duty of organizations to conduct their businesses in ways that respect the rights of individuals and promote human welfare. This definition lacks in descriptive accuracy as rights and welfare are largely relative terms, which would make implementation of policy difficult. Carroll (1979) spelled out four types of corporate responsibilities: economic, legal, ethical, and discretionary, which are also expectations society has of organizations at a given time. Economic and legal responsibilities specify obligations of organizations to serve economic interests within the prevailing legal boundaries. Ethical and discretionary responsibilities contain more vague messages for organizations, and are usually limited to their own judgments. Many voluntary activities by organizations, such as philanthropic contributions, fall under the category of discretionary responsibilities. A classic definition of CSR would thus be "a firm's consideration of, and response to, issues beyond the narrow economic, technical, and legal requirements of the firm to accomplish social benefits alongside the traditional economic gains, which the firm seeks." Coupled with the vagueness of the conceptualization of CSR is the use of a range of other terms as equivalents or synonyms to CSR, such as the following:

#### *Corporate Social Performance (CSP)*

As Wartick and Cochran (1985) observed, CSP had not started taking on a more precise meaning until early 1990s. Carroll's (1979) three-dimensional CSP model consisted of CSR, social issues, and philosophies of social responsiveness, yet did not define the concept either. It was Wood (1991) who built on the existing literature and clearly conceptualized CSP as "a business organization's configuration of principles of social

responsibility, processes of social responsiveness, and policies, programs, and observable outcomes as they relate to the firm's societal relationships." The motivating principles of social responsibility included institutional principles (legitimacy), organizational principles (public responsibility), and individual principles (managerial discretion). The processes of corporate social responsiveness were largely behavioral and consisted of environmental assessment, stakeholder analysis, and issues of management. The observable outcomes of corporate behavior comprised social impacts, social programs, and social policies.

*Corporate Citizenship (CC)*

Birch (2003) regarded corporate citizenship (CC) as an innovation to or an extension of the CSR concept, in that under CC a business sees itself as part of the public culture, and involves not only employees and management but also stakeholders in the organization. This notion of company and other stakeholders mutually flourishing has also been articulated by Werhane and Freeman (1999). The greater or common good principle is thus critical when CSR is viewed from a corporate citizenship perspective. McIntosh et al. (1998) asserted that CC "involves a mutually reinforcing relationship between individuals and communities." It is a continuum that moves from minimal citizenship at one end, where corporations only comply with laws, through the discretionary stage where corporations engage in philanthropy (charitable giving), to the strategic citizenship stage in which corporations form a healthy relationship with its communities by "doing the right thing" and displaying humanity." The Global Compact concept (Global Compact 2005), which has been helpful for understanding the universality of some CSR issues, is in part based on this approach.

*Corporate Social Responsiveness*

Carroll (1979) argued that corporate social responsiveness is not "an alternate" to CSR, but acknowledged that social responsiveness is the action phase of management responding to social pressure. This definition would be limited by philosophical and ethical vagueness given the difficulties associated with quantifying social pressure and when to act accordingly.

*Corporate Philanthropy*

L'Etang (1994) tried to disentangle the confusion surrounding corporate philanthropy (CP) and CSR. According to L'Etang, corporate philanthropy reflects corporate generosity and beneficence through voluntary corporate actions. Recipients of CP activities usually cannot demand such actions, including being consulted on their felt needs. Corporate philanthropy has, however, been equated to corporate social responsibility by business firms as later outlined in this paper. Similar observations have been made by Smith (2003).

*Business Ethics*

According to Beschorner (2006) CSR is an application of ethical norms by firms. This may imply the degree of "fit" between society's expectations of the business community and the ethics of business. The link between CSR and business ethics was also noted by Broadhurst (2000), who indicated that awareness of complex corporate compliance in the dimensions of business ethics motivated corporations to implement their own socially responsible initiatives.

For purposes of this paper, corporate social responsibility should be understood to mean firms' obligation to generate profits, while at the same time safeguarding environmental quality and contributing meaningfully to the well-being of surrounding communities. Put differently, the CSR concept means "business" (private sector) contributing to poverty reduction and sustainable development. Deliberate and sustained investment in people's well-being and environmental quality along side profiteering objectives by business institutions underscores the environmental ethics inherent in CSR. Kivuitu and Yambayamba (2005) observed that although the concept of CSR is gaining momentum within policy debates in Kenya and Zambia, it is not applied widely and is often associated with philanthropy. While CSR is supposed to be deliberate and mainstreamed in company operations, philanthropy is *ad hoc*, short term, and often a public relations exercise undertaken by the company or firm in question. Further, its salient motive is to reflect a firm's generosity and beneficence through voluntary corporate actions (L'Etang 1994). There is also no provision for participatory decision-making with would be beneficiaries in philanthropy. Ultimately, benefits from philanthropy are stochastic and may not benefit the wider stakeholder community effectively.

On the other hand, well planned and executed CSR is supposed to entail aspects of participatory decision-making between firms, shareholders, and stakeholders. This enables wider and continuous benefits to the target community. This approach is based on the premise that farmers and the business companies have moral (ethical) obligations to each other, hence the need to pursue symbiotic relationships. In general, adoption of CSR in Kenya remains largely low in most business systems including the sugar industry perhaps because CSR is not backed by any legal framework. Most of these firms seem to use philanthropy and CSR interchangeably, though their activities are best described as philanthropic. In this category are firms like Barclays Bank (www.barclaysbank.org), Bamburi Cement (www.lafargeecosystems.com), Magadi Soda (www.magadisoda.org), Kenya Electricity Generating Company (Ken Gen 2007) and Mumias Sugar Company (Natural Sweetness 2007) among others. For all these firms, mechanisms must be put in place to ensure that their "philanthropic" practises are entrenched in a vibrant CSR policy. As a way forward for business in East Africa, the Ufadhili Trust has developed 12 guiding principles of corporate social responsibility contained in its CSR Kit, (www.Ufadhilitrust.org/ufadhili_publications), thus:

1. Focus on stakeholders and NOT shareholders.
2. Focus on the three spheres of sustainability: economic, social, and environmental.
3. Operating beyond legal compliance as an accountability approach.
4. Focus on long term and NOT short term impacts.
5. A holistic approach that includes both internal and external issues.
6. Responsibility proportional to firms influence in society.
7. Global and NOT just local responsibility.
8. Supply chain approach to responsibility as opposed to compartmentalized approach.
9. Embeddedness: i.e., continuity of CSR, continuous learning, and change management.
10. Measurement: i.e., having in place systems to assess impacts and monitor change.
11. Reporting: i.e., companies to disclose their environmental and social performance.
12. Verification: willingness for firms to prove good things they purport to be doing.

Too often business ethics among manufacturing and processing firms has tended to focus on environmental concerns like pollution with little attention on the social sphere of

sustainability. Some cases in point include the perception of China as a leading polluter (World Bank 2007). In Kenya, the public has often complained about the Pan Paper Industry's contribution to air pollution in Webuye western Kenya. As recent as 2008, some slaughter houses located in the proximity of Nairobi have been ordered shut by the national environment management authority (NEMA) for not adhering to the expected environmental and public health standards. Flower firms in the Kenyan Rift valley have in the past also been associated with unethical business practises

Similarly, research in farming systems and community well-being has tended to focus on individual farmers and hardly key shareholders such as the corporations engaged in monopolistic large scale agri-businesses. This explains the rather little information available on the role of corporate social responsibility (CSR) in sustainable environmental management and community development. In view of the aforesaid, this paper discusses the status of CSR of Nzoia Sugar Company with emphasis on factors that undermine farmer incomes, and thus contribute to poverty and food insecurity. In this paper, practises that deliberately undermine farmers' incomes in such contract farming arrangements are viewed as unethical, and hence needing corrective measures. It is hoped that lessons learned will help in the design of a workable community and environment friendly CSR policy for the company.

## Methodology

### Field Survey

This research was done in Webuye area of the Nzoia sugar company out growers' scheme. Social survey approaches as described by Mugenda and Mugenda (1999), Neeman (1994), and Fink (2003) were used in data collection and analysis. Researcher-administered questionnaires, focal group discussions, and transect surveys were used to collect primary data from sugarcane farmers in the research area. Each of the two Focal Group Discussions comprised 30 farmers randomly selected from village lists obtained through the assistance of the local administration and agricultural officers. Secondary data was obtained from relevant documented literature.

### Data Analysis

Both qualitative and quantitative methods were used for data analysis. Descriptive statistics was used to compare the key variables in terms of means, ranges, modes, and frequency distribution. ANOVA was used to determine the combined effects on cost variables on net income. Correlation analysis was used to determine the strength of relationships that existed among the cost influencing variables. Step-wise backward regression was used to select the variables that had the greatest influence on net-income. The selected variables were used to model net-income so as to form the basis for decision-making. SPSS software was used for the above analyzes, and appropriate graphics used for data presentation.

## Results and Discussion

### Sugarcane Farming and Household Income Dynamics

Although Nzoia agro-ecosystem is suitable for many crops, fruits, and vegetables, commercial sugarcane farming is the most popular source of income. Its profitability, however,

depends on various factors such as acreage, education levels of farmers, crop and land husbandry, company factors, distance from factory, and household factors like gender-labor dynamics. While it has been shown that good crop husbandry, where farmers provide their own inputs can significantly improve net incomes (Table 1), most farmers found this option difficult because of the widespread income poverty and powerlessness when it came to engaging the company on matters that affected them.

Contract sugarcane farming is a costly business to ordinary farmers due to the deductions the company undertakes, particularly from the main crop. For instance, a deduction by the company for the main crop can cost farmers up to 71% loss in profits (Table 2). Focal group discussions revealed that when farmers deliver a ton of sugarcane to the company for sugar processing, they are paid about Kenya shillings (KES) 5,000, but when the company supplied the same amount to farmers as seedcane, it deducted up to Kenya shillings 23,000. This disparity brings into question the company controlled input regime. Modalities to subsidize farmers and or empower them to reduce their dependence on the company for inputs may change this skewed distribution of costs, and hence income. It would take an ethical approach on the part of the company to address these anomalies, hence relevance of Corporate Social Responsibility.

Analysis of farmers' income statements also indicated existence of wide disparities in gross and net incomes among farmers even where land acreage was the same (Table 3). This indicated that yields are determined by multiple factors that require very careful planning and management. With a mean monthly income of KES 723, it would be difficult for a household of eight family members to meet their basic needs and lead a decent life.

A correlation analysis of the cost variables showed high and significant positive relationships between net income and yield, education level and transport costs (Table 4). Low and even negative net incomes were associated mainly with farmers with low or primary education ($r = 0.675$). This indicated that farmers' education level played a big role in agri-business decision-making processes, including the crop and land husbandry practises required to boost higher yields and hence income. This argument could also be advanced in cases where small land parcels registered higher yields than large land parcels.

The low and insignificant relationship between fertilizer costs and yields ($r = 0.254$) seems to provide credence to the widely held view that most farmers often diverted their fertilizers to other uses or application strategies did not result in efficient fertilizer uptake by the cane. The positive correlation between transport costs and yields ($r = 0.889$) could be explained by the magnitude of yields that would require more trips to transport the

**Table 1** Net incomes (KES) from 1 acre of sugarcane based on a model farmer field

| | 1st Crop | R-1 | R-2 | R-3 | R-4 | R-5 | R-6 | R-7 |
|---|---|---|---|---|---|---|---|---|
| Yield in tons | 74.53 | 52.01 | 55.00 | 64.03 | 64.08 | 64.08 | 64.20 | 64.35 |
| Gross income | 141,607 | 84,870 | 86,418 | 130,150 | 131,655 | 131,655 | 133,987 | 136,668 |
| Net income | 97,411 | 56,437 | 57,985 | 101,717 | 103,189 | 103,189 | 105,554 | 108,235 |
| Net income/ month | 4,638.6 | 2,687.4 | 2,761.2 | 4,843.7 | 4,913.8 | 4,913.8 | 5,026.4 | 5,154.0 |
| As % of gross | 68.8 | 66.5 | 67.1 | 78.2 | 78.4 | 78.4 | 78.8 | 79.2 |

Model farmer is one recognized by the company and ministry of agriculture based on his or her consistent profitability in cane farming

*Source*: model farmer with own inputs except tillage operations

Mean average crop cycle = 21 months

They act as contact farmers for others to learn from. *KES* Kenya Shillings, *R* Ratoon crop

**Table 2** Cost implications of cane production on plant and ratoon crop in Nzoia area

| Operation | Plant crop (KES/ha) | Ratoon crop (KES/ha) | % Change in costs |
|---|---|---|---|
| Tillage operations | 8,886.00 | 0.00 | 100 |
| Seedcane | 22,920.00 | 0.00 | 100 |
| Fertilizer | 13,014.00 | 13,014.00 | 0.00 |
| Total | 44,820.00 | 13,014.00 | 71.00 |

*Source*: Ministry of agriculture 2007, Webuye division office

**Table 3** Summary of cost variables and income from sugarcane statements

| Variable | Minimum | Maximum | Sum | Mean | SD |
|---|---|---|---|---|---|
| Area under cane (ha) | 0.17 | 0.60 | 17.11 | 0.38 | 0.13 |
| Tillage costs (KES) | 2,083 | 7,654 | 183,328 | 4,073.96 | 1,582.43 |
| Survey costs (KES) | 56 | 276 | 6,223 | 138.29 | 61.41 |
| Seedcane costs (KES) | 20 | 15,999 | 410,736 | 9,127.47 | 3,687.09 |
| Harvesting costs (KES) | 502 | 13,287 | 209,512 | 4,655.82 | 3,193.35 |
| Distance to factory (km) | 9 | 21 | 667 | 14.82 | 2.46 |
| Transport costs (KES) | 760 | 21,013 | 363,625 | 8,080.56 | 5,003.06 |
| Fertilizer costs (KES) | 0 | 18,533 | 203,251 | 4,726.77 | 3,812.75 |
| Yield (tons) | 2 | 64 | 952 | 21.16 | 15.97 |
| Gross income (KES)[a] | 4,514 | 132,988 | 1,813,501 | 40,300.02 | 29,784.75 |
| Net income (KES)[a] | −16,245 | 98,679 | 682,744 | 15,172.09 | 22,596.93 |
| Net income/month | −774 | 4,699 | 32,512 | 723 | – |
| Years in school (years)[b] | 8 | 16 | – | 10.67 | 3.19 |

Education level was standardized based on the 844 system, thus: primary = 8, secondary = 12, Tertiary 16

[a] Based on a 21 months harvesting interval

[b] US $ = 75 Kenya Shillings (KES)

sugarcane to the factory. Analysis of variance of all the cost variables isolated six predictor variables (i.e., education level; transport costs; seedcane costs; acreage under cane; tillage costs and sugarcane yields) as having significant effect on net income.

In order to determine the relative importance of these factors, an optimum model was selected using stepwise regression, backward option. The model selection criteria used was the *R*-Square value whereby the model with the highest *R*-Square value and with all variables significant at $P = 0.05$ was the optimum one. Net income was standardized as the dependent variable. Further, since it was directly derived from gross income and the two were highly correlated ($r = 0.85$), gross income was excluded from the model to eliminate errors due to collinearity.

Regression analysis results showed that 86% of the changes in net income were significantly determined by six cost variables as a group (i.e., Sugarcane acreage, tillage costs, seedcane costs, transport costs, yield and farmer's education level (Table 5). Other factors namely survey costs, harvesting costs, distance from factory, and fertilizer costs had insignificant effect on farmers' net income. Area under sugarcane had the greatest influence on net income whereby an increase in one hectare under cane would result in an increase of Kenya Shillings (KES) 110,427 in net income (per cropping cycle of 21 months), holding other variables constant. This translates into KES 5258 per month (or

**Table 4** Pearson correlation matrix of key items in sugarcane farming in Nzoia area

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Till-cost | 1 | .84** | .51** | .12 | .21 | .12 | .36* | .21 | .21 | .18 | .11 |
| 2. Survey-cost | | 1 | .57** | .17 | .18 | .21 | .31* | .34* | .33* | .28 | .03 |
| 3. Seedcane | | | 1 | .25 | .16 | .19 | .18 | .27 | .21 | .16 | .21 |
| 4. Harvest | | | | 1 | −.07 | .93** | .22 | .87** | .88** | .71** | .54** |
| 5. Distance | | | | | 1 | .02 | −.02 | −.15 | −.11 | −.09 | .05 |
| 6. Transport | | | | | | 1 | .21 | .89** | .91** | .69** | .52** |
| 7. Fertilizer | | | | | | | 1 | .25 | .23 | .25 | .39* |
| 8. Yields | | | | | | | | 1 | .97** | .83** | .54** |
| 9. G-income | | | | | | | | | 1 | .85** | .57** |
| 10. Net-income | | | | | | | | | | 1 | .68** |
| 11. Education | | | | | | | | | | | 1 |

$N = 45$

*G-income* Gross income

* Correlation is significant at the 0.05 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed)

**Table 5** Final regression model results for the net income equation

| | Coefficient | SE | *t* | *P*-value |
|---|---|---|---|---|
| Constant | −21,864.05 | 5,266.25 | −4.152 | 0.0002 |
| Hectares | 110,426.90 | 22,056.92 | 5.006 | 0.0000 |
| Tillage costs | −3.67 | 1.36 | −2.707 | 0.0107 |
| Seedcane costs | −2.17 | 0.52 | −4.194 | 0.0002 |
| Transport costs | −1.62 | 0.61 | −2.639 | 0.0126 |
| Yields | 1,209.99 | 192.09 | 6.299 | 0.0000 |
| Education level | 10,738.96 | 2,180.19 | 4.926 | 0.0000 |

Net income = −21,864 + 110427Hac—3.674Tillage—2.174Seed—1.618Transport + 1210Yield + 10739Education

Dependent variable: Net income; $n = 40$; $R^2 = 0.8832$; Adjusted $R^2 = 0.8619$; $F$-statistic = 41.57; Prob $F$-statistic = 0.00000

$P < 0.05$ (Significant relationship); Mean harvesting interval = 21 months

KES 175 per day). Income per capita per day for a family size of eight people would be KES 22 (or US $ 0.3), which is far below the measure of absolute poverty. Similarly, an increase in 1 year of schooling would result in an increase of KES 10,739 in net income. On the contrary, when tillage costs increase by one Kenya Shilling, net income would reduce by about four shillings. Similarly, increasing transport cost by one Kenya Shilling would depress net income by two shillings. The farmers' obligation in boosting their profits would thus be increasing land areas under sugarcane and improving their crop and land husbandry skills. The company would, on the other hand, be expected through CSR spirit to subsidize farmers in reduced tillage, seedcane, and transportation costs. Other factors not captured in the model accounted for 14% in determining net income. These are likely to be loses from fire hazards, delayed harvesting and crushing; and loses of cane to livestock and theft at the farm level.

Sustainablity Challenges and Proposed Interventions

Results from focal group discussions revealed that farmers in the Nzoia Sugarbelt associated sugarcane farming with the following social, economic, and environmental challenges:

1. Reduced production of food crops and hence higher risks of food insecurity as more family land was put under sugarcane farming.
2. Upsurge of household conflicts occasioned by the tendency of husbands to control income from cane at the expense of their wives and children, who provide the farm labor. This would ultimately result into reduced yields when women withdrew their labor in protest.
3. Increased insecurity and occupational safety risks sugarcane acts as a hiding place for criminals and wild animals like foxes and snakes.
4. Reduced availability of thatching grass, which makes families that are still unable to afford Iron sheets particularly vulnerable to adverse weather (rain).
5. Decline in livestock farming due to reduced areas of pastureland.
6. Loss of biodiversity especially indigenous trees known for their medicinal value.
7. Increased shortages of wood fuel due to loss of trees.
8. Overall income poverty in the long run due to reduced options for livelihood diversification.

Realistic solutions to these problems would require innovative approaches and strategies through participatory decision-making involving farmers, the Sugar Company, and government. This is particularly true because data collected from farmers indicated that their profitability from sugarcane was largely undermined by company related factors (Table 6). In particular farmers reported not having clear and effective mechanisms to hold the company accountable to the contracts signed between them. Farmers were never sure of their cane tonnage as weighing was done at the company often in their absence. Spillage losses during transportation were still borne by farmers who had no control over the sugarcane once harvested by the company and in transit. Such agri-business malpractises would pass as unethical, hence the relevance of adopting CSR. To address these problems, farmers provided the following entry points, which could also form the building blocks or framework for a corporate social responsibility policy for the company:

1. There is need for the company to honor its contract with regard to harvesting time (18 months). Delays in harvesting lead to reduced incomes to farmers due to natural degeneration of the crop. Such a cost must be incurred by the company itself.
2. There is need to practice staggered planting to allow for sequential harvesting. This option is however only possible for farmers who have a lot of land.
3. Farmers with less than three acres should be encouraged to diversify to other crops since expert opinion indicated that profitability could not be guaranteed on such acreage.
4. Input costs should be reduced as a special subsidy to farmers, in particular, the cost of seed cane, tillage, and transportation.
5. Farmers should grow early maturing varieties and their capacities in good crop and land husbandry should be supported through pro-active company extension services.
6. There is need to decentralize cane-weighing bridges to within farmers' proximity to safeguard farmers' yields from transport losses or other forms of theft.

**Table 6** Key factors that undermine farmers' income from sugarcane farming

| Factor | Responsibility | | |
|---|---|---|---|
| | C | F | G |
| 1. Design harvesting period of 18–24 months though already too long is often exceeded to up to 3 years (36 months) at the farmers expense | + | | |
| 2. "Helicopter" harvesting where no plan is followed and preference is given to rural elites at the expense of ordinary farmers | + | | |
| 3. Delays in transporting harvested cane and subsequent tonnage loss due to natural cane deterioration | + | | |
| 4. Ad hoc and irresponsive extension service and field supervision | + | | |
| 5. Inputs supplied by company are costly. This reduces profit margins to farmers | + | | + |
| 6. Poverty within households leads to distress leases of cane farms at unprofitable incomes. Also farmers divert their inputs (fertilizer) which translates into low yields and hence income in the long run | | + | |
| 7. Fire hazards. Company has the tendency of not harvesting burned cane to salvage some losses especially for voiceless small scale farmers | + | | |
| 8. Lack of accountability and transparency on cane tonnage | + | + | + |
| 9. Income from by-products like molasses and other value-addition activities like co-generation is not shared with farmers | + | + | + |
| Relative importance of Institutional responsibility (%) | 92 | 42 | 33 |
| Distributed institutional responsibility by ratio | 2.8 | 1.3 | 1 |

*F* farmer, *C* company, *G* government

7. Regardless of the causes of fire hazard, the company should as a social responsibility practice harvest burnt cane immediately to prevent 100% losses to farmers.
8. There is need to strengthen farmers' associations to enhance their bargaining power.
9. The company should establish and implement some loan schemes for its contract farmers to particularly help them meet fees requirements for their children in time. Such soft loans can always be recovered after the sugarcane would have been harvested.
10. At the end of each financial year, farmers like other company employees should be entitled to some bonuses or arrears, as they are the ultimate "employers" of all the company workers. At the present extra income from sugarcane by-products like molasses is not shared with farmers.
11. Ultimately, government and company should negotiate towards raising sugarcane prices at the farm level. Current prices per tonne are Kenya Shillings 2,500 and 2,300 for Nzoia and Mumias sugar companies respectively (Kenya Sugar Board 2008).

## CSR Elements for a Socially Responsible Sugar Industry

Nzoia Sugar Company does not seem to have invested much in CSR as a business policy. Company documents allude to CSR but little can be observed on actual implementation. Activities undertaken by the company within its sugar growing areas such as construction of feeder roads are not driven by CSR thinking. Although farmers end up benefiting from them, such roads are purely meant to enhance company profitability by easing sugarcane transportation to its factory. Further, food security is completely not mentioned anywhere

**Table 7** Building blocks of an inception CSR policy for Nzoia sugar company

| Envisaged community-driven CSR practises | Classification | |
|---|---|---|
| | Socio-economic | Ecological |
| 1. Support local health centers, especially where government visibility is minimal | + | + |
| 2. Support educational institutions like village polytechnics and secondary schools with basic equipment and infrastructure | + | − |
| 3. Build bridges and maintain community feeder road networks | + | − |
| 4. Establish education bursary funds and loans scheme to ease fees payments of farmers' children | + | − |
| 5. Extend its electrification program to the farming community | + | + |
| 6. Company extension service to be pro-active in advising farmers on appropriate crop diversification and land management | + | + |
| 7. Company to waive survey and transport costs as a form of subsidy to farmers | + | − |
| 8. Company to decentralize sugarcane weighing bridges to within farm blocks to safeguard farmer yields from being corrupted | + | |
| 9. Deliberate efforts to strengthen farmers' associations and enhance symbiotic relationships between company and farmers | + | + |
| 10. Company to support community water projects | + | + |

in company documents whether from CSR perspective or otherwise. This explains in some way why company extension services do not include aspects like crop diversification particularly to help farmers with small and uneconomic parcels of land to diversify their livelihoods.

Results from focal group discussions and individual interviews showed that although farmers are generally ignorant of CSR as a business concept, they still know that the sugar company has some moral (ethical) obligations to them and their environment. The list of their expectations (Table 7) generally reflects what other companies that have embraced CSR in Kenya and elsewhere are doing (www.ufadhilitrust.org). Embracing some of these activities coupled with regular consultation with farmers would help transform the *ad hoc* philanthropic company activities to corporate social responsibility.

As expected most CSR wishes from the community were welfare-based (socio-economic), with little attention given to the ecological dimension. This is indicative of the need to invest in human development for guaranteed long term survival and profitability of the company. According to CSR thinking, business firms and surrounding communities who provide labor and other services should have a symbiotic relationship, which should not be undermined. For instance sugarcane growers empowered to meet their basic needs are likely to devote more energy into better cane management, which would translate into improved yields and hence sustained profitability. On the contrary, farmers who perceive the company as their enemy are likely to affect its operations negatively in various ways in the long-term, such as sabotage, arsonist attack, industrial actions, and bad publicity.

## Conclusions and Recommendations

There existed wide disparities in gross and net incomes among farmers even where land acreage was the same, indicating that sugarcane yields are determined by multiple factors

that require very careful planning and management. With a mean monthly income of KES 723 from an average cane acreage of 0.38 hectares, it would be difficult for a household of eight family members to meet their basic needs and lead a decent life. Contract sugarcane farming, however, remains very popular because it is socially and psychologically rewarding to be a sugarcane farmer.

Up to 86% of the changes in net income were significantly determined by six cost variables as a group (i.e., land area under sugarcane, tillage costs, seedcane costs, transport costs, yield, and farmer's education level). The main factors that enhance farmers' income are acreage under sugarcane, actual yield per unit land area, and education level of farmers. Expert opinion on acreage suggested that sugarcane would be more profitable if farmers had at least three acres of land. In addition, negative income was mainly associated with farmers with primary level education. By implication the higher the education level, the more likely are farmers to adopt sugarcane farming from an entrepreneurial perspective, including proper land and crop husbandry practises, which could boost yields and hence income. Therefore, from a CSR perspective, the company and government through their extension services should encourage farmers with less land to diversify into other crops or alternative income generating activities, rather than be trapped in poverty due to being psychologically obsessed with sugarcane. Further, to maximize profits, farmers should be empowered with regard to the control of farm inputs as demonstrated by some "model" farmers.

Key net income depressors were tillage, seedcane, and transportation costs, all of which were determined by the company with no input from farmers. By virtue of the profits often registered by the company, and in the spirit of CSR the sugar company should consider subsidizing farmers on such costs. In addition, the company should be more transparent and accountable to farmers when it comes to determining and documenting sugarcane yields. This would call for the need to decentralize weighing bridges and to transfer spillage loses during transportation to the company. In addition, extra income from by-products like molasses, baggase, and co-generation possibilities should be shared with farmers, who at the moment are excluded. Sugarcane farmers on the other hand should be encouraged to strengthen their collective bargaining ability through formation or re-invigoration of strong farmer associations such as the Nzoia Outgrowers Company (NOCO), which is widely perceived to have abdicated from its inception responsibilities.

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