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SMALL-SCALE CANE GROWER DEVELOPMENT MODELS: SOME LESSONS FROM SUB-SAHARAN AFRICA

CHURCH AD[1], GROOM GM[1], THOMSON DN[2] and DLAMINI VR[2]

[1]*South African Cane Growers' Association, PO Box 888, Mount Edgecombe, 4300, South Africa*
[2]*Inkezo Land Company,*
achurch@canegrowers.co.za *ggroom@canegrowers.co.za*
dave@inkezo.co.za *rechi@inkezo.co.za*

Abstract

Large, community-owned land assets, resulting from land reform initiatives or small-scale grower projects, are going to impact on the future viability of the South African sugar industry. Group development models relate primarily to the ownership and management structure of consolidated farming operations. Development models analysed in this paper can be of relevance to both the South African small-scale growing sector as well as to the increasing number of land reform projects throughout the sugar industry. Sustainable development models will contribute to the success of the land reform programme and the future sustainability of the sugar industry.

This paper is an analysis of the different types of development projects or models that have been established in selected sugar producing countries across sub-Saharan Africa, namely Swaziland, Zambia, Malawi and Tanzania. In these countries, land is state-owned, while funding for project establishment has largely been sourced from international organisations. In most instances management companies have been established to perform the necessary administrative and managerial roles for the projects. In certain cases, these functions are performed by committees elected from the local farming communities.

Most of the development projects discussed in this paper are associated with irrigation schemes, which are expensive to establish and which contribute significantly to the initial project establishment costs as well as ongoing operational costs. The involvement of the state and the local milling companies in terms of funding, technical assistance and procurement of farming inputs varies from country to country.

This paper aims to highlight favourable traits of successful sugarcane development models in sub-Saharan Africa. An understanding of the success and impact these models have on the social and economic conditions facing rural farming communities provides important lessons for the South African sugar industry, to avoid the pitfalls of possibly misdirected or poorly planned development or land reform projects.

Keywords: sugarcane, community owned land, viability, sustainable development models, small-scale growers, land reform, administration, management

Introduction

Land reform initiatives, whether through land redistribution or land restitution, have become an integral part of the South African sugar industry. The success of these projects, however, will depend largely on the structures set up to manage and monitor the farming operations. Similarly, the success of small-scale grower development projects, which are becoming of increasing importance to the industry, depends on the management and leadership structures that are in place. The future viability and success of the South African sugar industry and its land reform programme will depend largely on the sustainability of these land reform and development projects. It is thus important to identify economically successful and socially acceptable models that could be applied to these cane farming operations.

Other sugar industries in sub-Saharan Africa have developed support and settlement models to assist small-scale growers. This paper analyses some of the development models currently in operation in Swaziland, Zambia, Malawi and Tanzania, and comments on their relevance to both the South African small-scale growing sector and land reform projects in South Africa. In the abovementioned countries, land is generally state-owned and smallholder projects have historically been established using funding from international organisations. In most cases management companies have been established to perform the necessary administrative and managerial roles for the projects. In a few cases, committees are in place to perform these functions.

Except for Tanzania and parts of Malawi, all the developments projects discussed in this paper are associated with irrigation schemes, which are expensive to establish and which contribute significantly to the initial project establishment costs as well as ongoing operational costs. These irrigation schemes lend themselves to communal or co-operative types of farming operations, due the logistics and practical implications of irrigation application and scheduling. Economies of scale and improved access to finance are further benefits of these consolidated farming operations, which are also applicable to consolidated rainfed farming systems.

The involvement of the state and the local milling companies in terms of funding, technical assistance and procurement of farming inputs varies from country to country. In some industries the milling companies have contributed significantly to the development and procurement activities of the projects, while in others finance and support has come largely from non-governmental organisations (NGOs).

Smallholder models analysed

Zambia

Smallholder involvement in sugarcane growing in Zambia is currently limited to the Mazabuka region to the southeast of Lusaka and adjacent to the Kafue River. The smallholders at Kaleya are members of the company known as the Kaleya Smallholders Company Limited (KASCOL). This is a profit-driven organisation with a well organised administrative and technical support structure, and good corporate governance. Despite the name implying smallholder ownership and control, only 13.25% of the company’s shares are actually in the hands of the Kaleya smallholders, through the Kaleya Farmers’ Trust. The Kaleya Farmers’ Association governs the relationship between KASCOL and the smallholders. The remaining shares in KASCOL are held by private individuals, KASCOL management and a financial institution.

KASCOL owns 2 200 hectares of cane land, of which 1 100 hectares are leased for a nominal amount to 160 smallholders, with plot sizes between 6.2 and 7.5 hectares. These holdings are consolidated into blocks of around 32 hectares (i.e. five smallholders), which facilitates the irrigation, harvesting and replanting operations (personal communication[1]).

Smallholders are responsible for the agronomic aspects of their individual holdings. Failure to manage these effectively results in the termination of the lease agreement with KASCOL. The fact that only two have left the scheme since its inception in 1983 is an indication of the commitment by the growers to remain part of the scheme. Smallholders are required to purchase fertiliser and chemicals (normally on credit from KASCOL) and to hire labour for field maintenance work. The remainder of the production costs are covered by KASCOL, who recovers these costs by withholding 57% of the gross proceeds from the sale of Kaleya smallholders' cane to the Nakambala mill, to finance the cost of harvesting, transport to the mill, bulk irrigation infrastructure and water, replanting and health and education facilities on the estate (personal communication[2]).

KASCOL operates the remaining 50% of the estate. It is a profit-orientated business and management have a shareholding in the company. This creates the right motives and incentives for the management team to operate the farm optimally. Kaleya smallholders are provided with high quality, in-house technical assistance and advice, and benefit from bulk discounts on farming inputs, as well as the negotiating powers of KASCOL.

The authors observed that smallholder cane yields have to-date been higher than those of the remainder of the estate, and compare favourably with the miller-cum-planter estates. This would suggest that this model has been a success from a cane production perspective.

A negative aspect of the model lies with the direct involvement of smallholders in the management of KASCOL. Although they have representation on the board of KASCOL, their input is limited, as is their understanding of how KASCOL carries out its business. This can be attributed largely to a low level of education and a lack of business skills among the smallholders.

Swaziland

The Swaziland sugar industry is characterised by three main categories of growers, Miller-cum-Planter (McP – mill owned estates), large growers (private outgrowers) and medium/ small-scale growers. There are three main types of land ownership – freehold title, Swaziland Nation Land (SNL) and Crown Land. The majority of the cane grown by smallholders is on SNL. The medium-scale growers are those growers who farm on freehold land, but are still considered to be small-scale growers.

The smallholder operations generally consist of farmers' associations (FAs) (or similar legal entities) and private individuals. Two of the more recent smallholder developments are the Lower Usuthu Smallholder Project (LUSIP) and the Komati Downstream Development Project (KDDP). The LUSIP area alone is 11 000 hectares – effectively doubling the area under cane for smallholders within the Swaziland sugar industry (personal communication[3]).

The total number of smallholders involved in cane production in Swaziland is difficult to determine accurately, as a large proportion of smallholders belong to FAs or co-operatives.

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[1]Mr. S Njobvu, Estate Manager, KASCOL, Zambia.
[2]Mr. H Veenstra, Illovo Sugar Ltd, Trustee Kaleya Cane Growers' Trust, Zambia.
[3]Mr. P Ginindza, Executive Director, Swaziland Canegrowers' Association, Swaziland.

These organisations generally deliver cane under a single quota number, and there may be up to 150 small-scale growers per group.

There are effectively two FA models in Swaziland:

- Group of farmers delivering under one quota number with management of plots on a group basis. A manager may be employed, or management may be undertaken by an internal committee or sub-contracted out.
- Group of farmers each delivering under their own quota number and managing their plots on an individual basis.

During the 2006-2007 season, FAs averaged approximately 80 hectares in size, while individual small scale farmers averaged seven hectares. The Swaziland sugar industry currently has approximately 100 FAs, and approximately 342 individual small-scale growers (unpublished data[4]).

Table 1. Sugarcane production of individual small-scale growers (SSGs) and farmers' associations (FAs) in the 2006-2007 season in Swaziland.

Entity	Area (ha)	No. of growers	Total tonnage (tons)	Average yield (t/ha)	Average per entity (tons)	Average area per entity (ha)
Individual SSGs						
Mhlume	1 543	292	134 971	88	462	5
Simunye	71	6	8 060	113	1 343	12
Ubombo	819	44	78 435	96	1 783	19
Total	2 433	342	221 466	91	648	7
Individual FAs						
Mhlume	3 546	28	336 345	95	12 012	127
Simunye	2 305	30	212 991	92	7 100	77
Ubombo	2 103	42	193 045	92	4 596	50
Total	7 954	100	742 381	93	7 424	80

Source: Swaziland Sugar Association – Technical Services

Membership of FAs, which are generally on Swaziland Nation Land, is administered by the local community. Those who have been allocated land by the local Chief and want to participate in a development project, do so by committing their land to the project. Although there is no specific shareholding, each member receives an equal dividend.

Problems that have been experienced by growers belonging to FAs include the following:

- Limited or no capacity on behalf of the smallholders/FAs themselves or the employed management, to run the farming operations.
- No handing-over process from one year to the next for new committee members.
- Chairman 'fires' existing manager and replaces him/her with his own selection.
- Difficulty in working together; some work hard, others do nothing.

[4]AD Church, GG Groom, C Gillit unpublished report (2007). Smallholder farmers involvement in contract growing of sugar cane in Zambia, Swaziland and Malawi and the need for capacity building support to farmers' organisations representing cane growers in these countries.

- Some executive members are paid and some not; recommendations have been made for sitting and travel allowances to be paid, as opposed to salaries.
- Growers understand contracts, but do not necessarily abide by them.
- Often no contractual arrangements are in place with a haulier, giving growers little or no recourse when the haulier does not perform.

The general decline in Swaziland smallholder yields is an indication of the weakness of some of the current models. The more recently introduced irrigation schemes are still in their infancy and time will determine their level of success. The main limitation on these schemes is the high level of financial gearing required. This high level of gearing is largely as a result of the lack of State assistance or grant funding from NGOs, which would normally reduce the initial level of borrowings required to establish the schemes.

Irrespective of management, the financial plight of many of the schemes is such that success is limited due to cash constraints.

Malawi

Malawi has two sugar producing areas, Dwangwa located north of Lilongwe on the western shore of Lake Malawi, and Nchalo to the south of Blantyre on the banks of the Shire River. Illovo Sugar Limited has a 70% interest in these mills and surrounding estates, which are mostly McP. At Dwangwa, outgrowers make up 18% of the total cane supply, equivalent to 1 402 hectares, while at Nchalo outgrowers make up 6% (755 hectares).

At Dwangwa the outgrowers largely comprise smallholder operations, either operating on an irrigation scheme basis or on an individual rainfed (dryland) basis. Two private outgrowers are contracted to deliver to the Dwangwa mill and together make up approximately 3 000 tons of cane. At Nchalo the outgrowers consist of only those smallholders falling within the irrigated Kasinthula project.

All outgrowers are contracted to the mills through standard Cane Supply Agreements (CSAs), which detail the obligations of both parties in the procurement and milling of the cane. These agreements are normally negotiated with the mill on behalf of the smallholders by the boards of management companies representing these smallholders. No individual smallholder is contracted to the mills in either of the cane growing areas. All contracts are signed between the miller and the body or management company appointed to represent the smallholders.

In addition there are contracts between management companies and the smallholders, which detail the obligations of both parties in the growing of cane as well as with the administrative and financial controls.

At Dwangwa, the miller assists smallholders by including their fertiliser and chemical purchases in estate requirements, in this way allowing smallholders to benefit from bulk discounts. Dwangwa Cane Growers Limited (DCGL), the smallholder management company, takes a 15% handling fee on all these purchases.

Kasinthula growers at Nchalo are also highly reliant on Illovo Sugar for the bulk purchasing of farm inputs. Illovo charges a 15% handling fee on all farm inputs purchased on their behalf.

DCGL take 30% of cane proceeds as a management fee. This covers the costs of administration, bank charges, accounting, irrigation and input application. At Nchalo, the Kasinthula growers are charged 25% of turnover, deducted at source by Illovo Sugar to cover the initial development loan repayment to the European Investment Bank. In addition, a flat 6% of turnover is charged as a management fee, with an additional 5% incentive payable based on yield and profit – this results in a maximum 11% management fee. The management fee is paid to Agricane, which is the management company currently in charge of daily operations.

Millers are happy with the smallholder structures as they are being supplied with high-yielding, good quality cane. Smallholders, on the other hand, are often laden with excessive debt levels and have little influence over the management of funds by the management companies. This reduces their returns and leads to general distrust of the management structure contracted to administer and operate the schemes. Excessive management fees, high transport costs and staff shareholdings in the management companies have largely led to these feelings of distrust (personal communication[5]).

Tanzania

The Kilombero sugar producing region of Tanzania is characterised by a large miller-cum-planter estate and approximately 6 000 smallholders. The smallholders account for nearly 50% of mill throughput, producing on average 600 000 tons per annum. Smallholders in Tanzania are similar to small-scale growers in South Africa and generally farm small tribal allotments between 1-2 hectares under rainfed conditions. Cane areas are not well mapped and there is uncertainty about the total area under cane; farmers will often give staple crops precedence over cane.

The smallholders are represented by two FAs: Kilombero Cane Growers' Association and Ruembe Cane Growers' Association.

A trust farm, known as Kilombero Community Trust Farm (KCTF), was established in 2003 to support the smallholders on land leased from Illovo. The KCTF produces approximately 65 000 tons cane of its own per annum. The farm was developed with grant funding from Swiss donors and a loan from Illovo Sugar. The KCTF retains 5% of income to cover management and administration costs. Remaining farm profits are used to support the two Cane Growers' Associations through the provision of the following services:

- Infrastructure maintenance – such as roads and drainage.
- Institutional development and strengthening.
- Capacity building and training.
- Community uplift projects – such as clinics, etc.

The KCTF does not involve itself in the provision of extension services. The consolidation of small land units into larger blocks (20-30 hectares) is being encouraged to improve scale economies and production. This model is still in its infancy and its success cannot be effectively assessed as yet.

[5]Mr. Bouke Bijl, Managing Director of Agricane Malawi.

Illovo Sugar loans out money for crop establishment and maintenance through to canopy stage. The loan is repaid over three years at 5% per year simple interest on the original loan amount. What is unique is that several incentives have been put in place whereby interest charges can be reduced by:

- Full participation in farmer-related activities such as extension and grower meetings and duties.
- No unplanned fires.
- Smallholder not having other debt commitments.
- Smallholder must achieve yields of over 70 tons cane/ha/annum.

Should a smallholder meet these incentives, their loan would be interest free; a further bonus payment is made if the grower maintains yields over 70 tons cane/ha for the duration of the loan.

The net impact of this intervention is that, where smallholders previously accounted for only 20% of mill throughput and were averaging yields of 20-30 tons cane/ha, they now account for 50% of mill throughput with yields averaging 50 tons cane/ha. Top smallholders are producing in excess of 100 tons cane/ha.

The following advantages of the KCTF have been identified:

- After recovering establishment costs, it is a self-funding development facilitator.
- It attracts donor funding.
- It strengthens the position of smallholders.
- It assists with raising loans.
- It has created confidence amongst banks to begin financing smallholders, as the KCTF is seen as an overarching body.

There are, however, some challenges facing KCTF, which are as follows:

- Legal and tax implications of how a trust is effectively run.
- Keeping administration costs to a minimum.
- Clearly defining and refining objectives and principles.
- Moving from making an impact at an Association level to grower level.

Financial assessments

Financial returns of schemes and individual small-scale farmers are generally a good indication of the success of a particular model. Access to reliable and representative data for all four countries was not always possible, although, through general observations, some indication of highest and lowest returns could be made.

The KASCOL growers in Zambia have the biggest net returns from their farming operations, after all production costs, loan payments, land rent, and management charges. The following factors, which possibly contribute to this, are:

- Initial development costs of the irrigation schemes appear to have been well controlled and kept at an affordable level. The involvement of the miller in this development would no doubt have ensured the sharing of expertise and knowledge, as well as the implementation of the most suitable irrigation system and farm layout for that area.
- Debt levels arising from the initial development were at affordable levels. Although actual details of these development costs and loans were not made available, the fact that only 57% of the cane proceeds are retained by KASCOL (which was the development agent) is an indication of the affordable levels of this debt. Plans to establish similar KASCOL-type models in Zambia are further proof of the success of this development model.
- High yields, good cane quality, good average sugar price, and good cane prices (paid to growers) in relation to other southern African sugar producing areas.
- Good corporate governance of KASCOL and a high degree of control/supervision/ management by KASCOL of the smallholder operations has ensured continued good production of high quality cane from these growers.

Despite a lack of legal frameworks, the Malawi smallholder continues to thrive as a cane producer. Yield trends are a good indicator of the state of any sugarcane scheme, and these have shown little sign of decline over the years. The cane payment formula applied by the millers is fair and transparent, affording the smallholder every opportunity to succeed as a cane farmer.

Of concern however, are the initial project establishment costs for irrigated schemes, which leave these smallholders with high levels of debt on becoming members of these schemes. High debt levels are a disincentive to perform and could eventually lead to the demise of many of these schemes.

The Swaziland smallholder operations seem to have the lowest returns, primarily as a result of the following:

- High initial development costs of the irrigation schemes and infrastructure.
- Limited mill involvement in the projects.
- Limited government involvement in these projects.
- Unfavourable lending arrangements from the financial institutions.
- High management fees charged by management companies or by the structures elected to represent the smallholder (this leads to high levels of distrust of those in power).

The KASCOL model in Zambia provides a good basis for a development model, as the financial, business and agricultural management is sound. Smallholders can gain an understanding of cane farming, with limited risk exposure. The capital cost of development is spread over the entire project and non-performers that may prejudice the better performers are dealt with via the smallholders' agreement with KASCOL. The management contracts between smallholders and management companies in Malawi, and the Kasinthula project in particular, offer similar benefits. Swaziland's arrangement of 100% gearing for new projects, with little or no business support, is the least desirable model and many of these projects have declining margins. It would appear that little or no financial planning has been undertaken by the project leaders and developers in Swaziland.

The Tanzanian smallholders have shown resurgence in production following the support created by the establishment of the KCTF. The structure of the smallholder sector is very similar to that of the small-scale grower sector in South Africa, where KCTF acts as the support base for smallholders. Smallholders in Tanzania appear to be financially viable, given the increase in numbers and production.

Smallholder development opportunities

Expanded production and economies of scale

The KASCOL model in Zambia has the least scope for further empowerment of individual smallholders. There is very little opportunity to increase the size of the land holding, as they cannot buy their neighbour out. KASCOL seem reluctant to make available any more of its estate land to the smallholders. However, KASCOL did at an early stage of the scheme increase the size of the smallholdings from four to seven hectares, thereby reducing their 'share' of the cane area from 67% to 50%.

Water is a limiting factor at Mazabuka and should more water become available, there would be opportunity to expand the KASCOL operation. In all likelihood, however, this would mean introducing more smallholders as opposed to allowing existing growers to farm more land.

Kaleya smallholders do nevertheless have an opportunity to grow their investments through the purchase of shares in KASCOL. Currently Kaleya smallholders hold 13.25% of the shares in KASCOL – this is unlikely to increase much further as the majority of shareholders would not like to relinquish control over the business entity.

A similar situation exists with the Malawian smallholder operations, particularly with the Kasinthula project at Nchalo. Given the fact that the irrigation schemes are generally designed based on a finite water supply and area under cane, there is little opportunity for smallholders to expand their current areas under cane within the existing irrigation schemes, as at Nchalo. At Dwangwa, however, cane can be grown without irrigation and here it was found that some smallholders had developed largely on their own and without the need for large-scale development projects. This mill area offers the best opportunity for smallholders to increase the magnitude of their operations.

Swaziland smallholder schemes are again restricted to irrigation projects with limited expansion possibilities, other than through becoming part of additional schemes.

In Tanzania, given the fact that very few group or irrigation schemes are in place, the smallholder is able to expand or contract his cane farming operation as he/she wishes (given land allotment constraints). As with the dryland farming operations in Malawi, therefore, these growers have the best opportunity to expand the magnitude of their operations.

Improved level of skills, knowledge and expertise (agronomic and business)

Kaleya smallholders in Zambia have convenient access to a wide range of qualified personnel who can assist and train them in various aspects of cane husbandry. In terms of business skills, the discipline and transparency displayed by KASCOL management and board members, instills the necessary business skills in the smallholders represented on the relevant committees. Despite the training activities, however, Kaleya smallholders still have limited decision-making ability as many of the farming activities are co-ordinated and managed by the technical experts and managers employed by KASCOL.

In Swaziland the grower structures themselves generally manage the schemes, which allows the members of the schemes to increase their skills and knowledge base of agronomic and business skills and practices.

The irrigated Dwangwa smallholders in Malawi have similar structures to smallholders in Swaziland. Grower leadership is exposed to day-to-day financial and administrative management of the smallholder projects. Despite this, however, in the absence of an independent management company, there is a high level of distrust by the smallholders of their leadership.

The Kasinthula model is in many respects very similar to the KASCOL model in terms of transferring of skills to smallholders.

In Tanzania the Cane Growers' Associations supported by the KCTF perform a support function to growers in terms of skills development.

Assessment of development models

Category	Zambia KASCOL	Swaziland FA (single grower code)	Swaziland FA (individual grower codes)	Malawi Dwangwa (projects)	Malawi Kasinthula	Tanzania Kilombero
Land ownership	Leasehold	Swazi Nation Land (PTO)	Swazi Nation Land (PTO)	Leasehold	Leasehold	Traditional land
Irrigated/dryland	Irrigated	Irrigated	Irrigated	Mostly irrigated	Irrigated	Dryland
Cane husbandry	Individual	Group	Individual	Individual	Individual	Individual
Supervisory role	KASCOL	FA	Individual	Management company	Management company	Individual
Development finance	Private	Private	Private	Private/State (grant)	Private/State (grant)	Private
Procurement	KASCOL/ miller assistance	Direct from supplier	Direct from supplier	Mgt company/ miller assistance	Mgt company/ miller assistance	Trust Farm assistance
Cane delivery	Group	Group	Individuals	Group	Group	Individuals
Cane payment	Via KASCOL	Via Farmers' Association	Direct to individuals	Via management company	Via management company	Direct to individuals
Smallholder involvement in management structure	None	Yes	Yes	Limited	Limited	Yes
Smallholder shareholding in management company	Limited	N/A	N/A	No	No	N/A
Smallholder representation	Farmers' Association	Farmers' Association	Farmers' Association	Trust	Trust	Cane Grower's Association
Training	KASCOL	Sugar industry	Sugar industry	Management company	Management company	Trust Farm assistance
Maintenance of infrastructure	KASCOL	Farmers' Association	Farmers' Association	Trust	Trust	Smallholders

Relevance of these development models to the South African sugar industry

Small-scale grower projects (tribal tenure)

History has shown that management structures are essential for the success of small-scale grower projects. These should preferably be independent of the landowners. This effectively divorces the management issue from the 'politics' of grower representation. This also introduces good financial management, corporate governance, skills and accountability.

Both the KASCOL and Kasinthula models could be applied to small-scale grower operations in South Africa, but would need to be associated with secure rights to the land. This security, aligned with a good management structure, would attract the necessary support from financiers and other industry stakeholders.

The benefits of consolidated farming include economies of scale, uniform management styles, improved logistics, purchasing power and improved accountability and control measures.

Land reform projects (freehold)

If the aim of land reform is to establish a number of individual, successful farmers on freehold land, then both the KASCOL and Kasinthula models could again be applicable. History has also shown that the absence of accountable management structures is one of the main causes of the demise of many land reform projects.

Land reform beneficiaries need mentorship, guidance and training, and both these models would put in place a structure to adequately address these needs. The KASCOL model would imply that a portion of the land would be farmed commercially as a large block, while the remainder would be divided up into smaller units and allocated to the land reform beneficiaries (who wish to farm). Limitations of this model would include the ability, specifically in the case of land restitution, to discipline or replace non-performing smallholders.

The Kasinthula or independent management company route may, however, be the best option for land reform projects. Limited liability of behalf of the management company is a possible concern. The management company nevertheless plays an important amalgamating role and ensures the continued benefits associated with group farming.

Applying either of these two models would also imply that cane proceeds are pooled by the management structure and redistributed to smallholders according to their tonnages delivered. This negates any concerns relating to cane quality fluctuations and the relative payment system, but equally encourages poor practices that can lead to lower cane quality.

Conclusion

It is important to place in context where the smallholders find themselves within the various sugar industries. The group dynamics within any community can be very complex and difficult to interpret and understand, and hence it is against this scenario that smallholder models need to be assessed. It is not possible to divorce the financial position of smallholders and the model within which they operate – the two are interlinked. Hence, in Swaziland, the best model can be implemented but, with the financial constraints they are faced with, the risk of failure is high. This is not necessarily a function of the model, but rather simple economics.

The KASCOL model is one that meets many of the needs of the smallholders. The Kasinthula management model in Malawi is a sound concept, but with no option for the smallholders to buy into the company, and there will always be a certain amount of tension between the company and the smallholder.

An accountable, transparent and professional management structure is the common thread that runs through most successful models analysed in the sub-Saharan sugar industries. Although no one model analysed can be applied in its entirety, valuable lessons can be learnt from their various aspects. The success of small-scale grower development and land reform projects in the South African sugar industry will largely depend on how these aspects are applied.