THE NEED TO PROMOTE CO-OPERATION BETWEEN SMALL-SCALE GROWERS AND THEIR CONTRACTORS IN RURAL KWAZULU-NATAL, SOUTH AFRICA

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Abstract

A workshop was held in Amatikulu in 2009 to identify problems contributing to the "downward spiral" scenario faced by the KwaZulu-Natal Small-Scale Sugarcane growing sector of South Africa. Not only have the number of Small-Scale Growers (SSGs) declined but their average area under sugarcane and average yield per hectare have also dropped. One of the issues agreed upon at the workshop is the need to improve co-operation between the SSGs and their Contractors with particular focus on overall institutional change. Promoting an "Upward Spiral" scenario for both SSG's and Contractors includes dealing largely with institutional reform in which bargaining power imbalances are corrected. High transactional costs faced by SSG's necessitate good institutional reform where organizing parties, in an effort to reduce transaction costs and allow a fair negotiation platform, is discussed. For institutional reform to be successfully adopted, support structures are required to continually educate on the importance of various factors including economies of scale to Contractors, or the effect contractor inefficiencies (high burn-harvest-to-crush delays) have on SSG revenue, of which many are largely unaware. Institutions should be correctly structured so that within a free market system SSG sectors are able to survive given their importance in rural income contributions.

Keywords: Contractors, Growers, Sugarcane, Institutional Change.

Introduction and Background

The South African Sugar Industry, directly and indirectly, contributes approximately 2.5% to national employment (McCarthy, 2007). The province of KwaZulu-Natal (KZN) located on South Africa's eastern coast produces about 15 million tons of sugarcane annually or 80% of the national total (SASA, 2010). Its rural population of over 6,6 million is greater than that of any other province (StatsSA, 2009; StatsSA, 2008). According to SASA (2010), as at 31st March 2010 there were 32,500 registered small-scale growers of sugarcane[33] (SSGs) in KwaZulu-Natal with 43,454 hectares under sugarcane, most of which is located in communal farming regions of the former KwaZulu Homeland. Due to their small scale of operation, SSGs typically do not own farm machinery and are reliant on the services of contractors to plant, manage[34], harvest and haul their crops.

Fifty years ago the South African Sugar Industry set out to uplift rural welfare by increasing milling output from SSG production (Bembridge, 1987; Sokhela & Bembridge, 1991). SSG sugarcane production peaked at 3.48 million tons in 1997 (SASA, 2010). Despite political and industrial support

[33] An SSG is defined as delivering no more than 225 tons of Recoverable Value (RV). This equates to approximately 40ha of rain-fed cane area or 25ha of irrigated cane.
[34] This includes the maintenance of cane roots in the promotion of re-growth (ratooning).

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for these objectives, SSG production has since fallen to 1.12 million tons in 2009. Nearly 40% of SSG's who delivered sugarcane to sugar mills in 1997 had ceased to do so by 2009. The decline is thought to be due to several factors, including (a) the abolishment of the A and B-Pool Quota Price System in 1997/98, which has reduced the price SSGs receive for their cane, (b) droughts in 1992-1994 and 2010 (SSGs find it difficult to re-establish cane area due to financial constraints), and (c) the withdrawal of inputs and services coupled to a decline in margins (Bates and Sokhela, 2003) along with various other economic and social factors. In fact, the South African Canegrowers' Association's annual sugarcane grower cost survey of 2006/07 showed SSG's earned merely 38.5% of the equivalent commercial grower Earnings before Management and Tax (Armitage *et al.*, 2009). Under these circumstances, there is a need to address the generally poor performance and high cost of Contractors who provide services to SSGs, which are attributable to institutional structures that poorly align incentives for contractors to provide efficient services to SSGs (Nothard *et al.*, 2005a & 2005b). This paper reports the findings of a workshop held to identify problems between SSGs and their Contractors, and propose solutions to address these problems.

Production Trends in the Small-scale Sugarcane Farming Areas of KwaZulu-Natal

SSGs contribute significantly to alleviating rural poverty and to the economic viability of mills. For example, they deliver 15% (200,000 tons) of the Amatikulu Mill's cane supply thereby helping to sustain its profitability. With an estimated average household of six (Matungul *et al.*, 2002; Sokhela & Bembridge, 1991) as many as 195,000 people benefit directly from cane production by SSGs in KZN. However, in the last 12 years SSG production declined from 3.5 to 1.12 million tons, an income loss of approximately R57 million annually. Recoverable Value[35] (RV) moved between 11.0% and 12.1% over the same period. Production and RV figures are annotated in Figure 1.

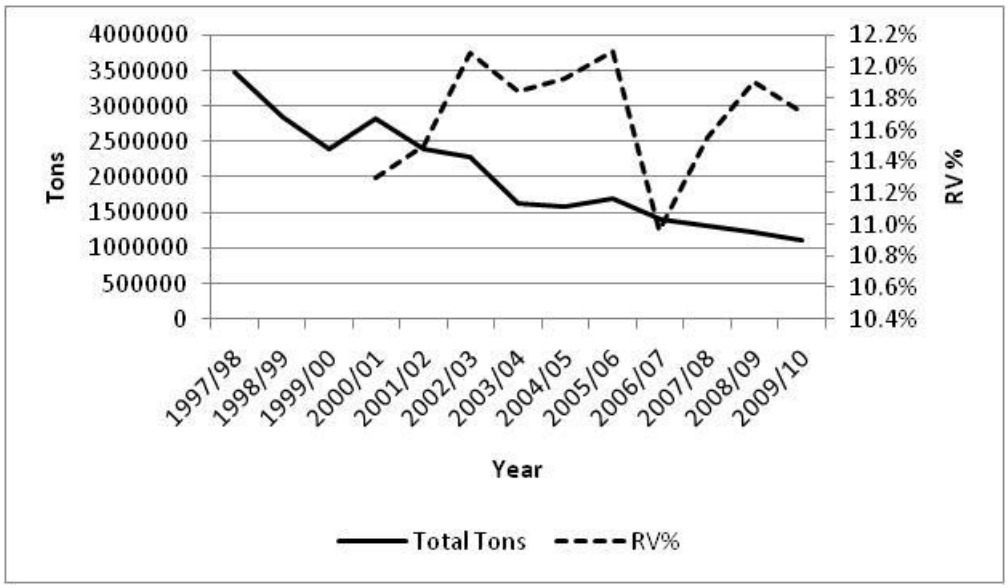

Figure 1: SSG Sugarcane Production in KwaZulu-Natal, 1997/8 – 2009/10 (SASA, 2010)

The reduction in yield and relatively stable cane quality make it prudent to examine both numbers of registered SSG's and the change in area under cane (AUC) as shown in Figure 2. The same period

[35] This is a quality measure of sucrose (sugar) less non-sucrose and fibre content.

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reflects a 51.8% decrease in area with grower numbers dropping by 18,465 (36.2%)[36]. The number of hectares also reduced by 24.4% per grower (1.79 ha to 1.35 ha) with production falling from 38.4 to 25.5 tons per hectare. Not only have the number of SSG's decreased but they now farm on smaller areas and produce lower tonnages per hectare. Interestingly Lyne and Nieuwoudt (1990) had earlier recorded production at 28.8 tons per hectare.

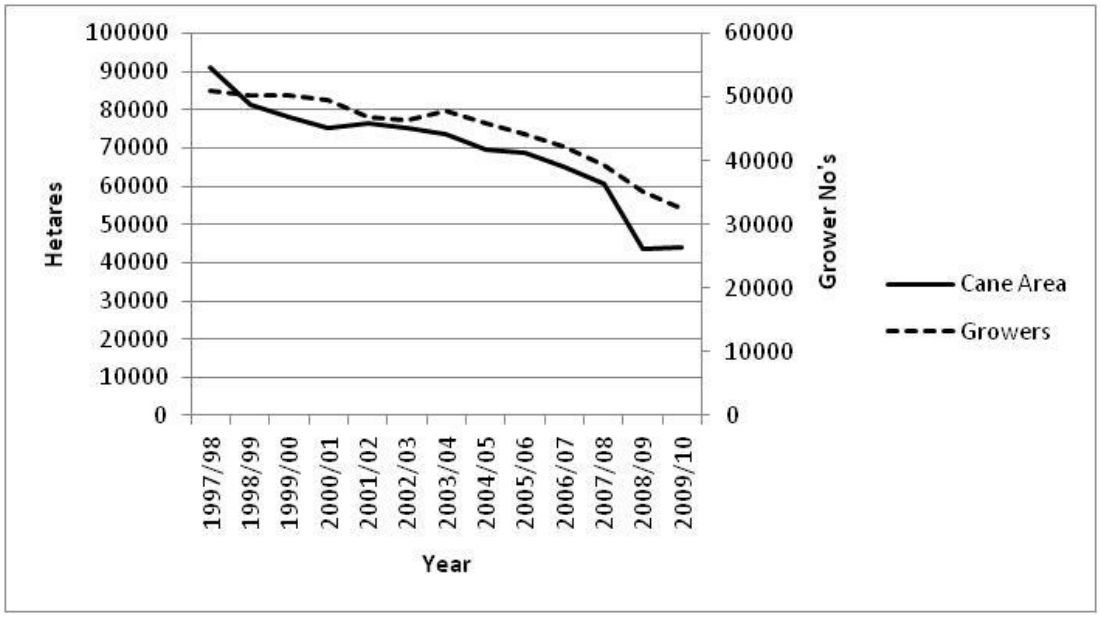

Figure 2: SSG's Area Under Cane in KwaZulu-Natal, 1997/8 – 2009/10 (SASA, 2010)

Amatikulu Region Case Study

The Amatikulu sugar mill region has the largest number of SSGs of all sugar mill areas in KwaZulu-Natal (over 25% of registered SSGs as at April 2010) (SASA, 2010). In 2009 the Tugela Regional Office[37] of the South African Canegrowers' Association (CANEGROWERS) held various workshops identifying the biggest challenges faced by both SSGs and Contractors in the Amatikulu[38] Region. Participants included both SSG and Contractor representatives, CANEGROWERS staff, and Tongaat-Hulett Sugar Extension Services (provided by the local milling company). Poor delivery of Contractors caused SSG's to lose interest in growing cane as documented by Sokhela and Bembridge (1991) nearly 20 years ago but further detail of problematic areas were highlighted by workshop participants and are summarized as follows. It is expected that by finding solutions to the fundamental causes of the problems (indicated by a *C*), symptoms of the problems (indicated by an *S*) will also be addressed.

Industry Structures: Identifying the poor sets of rules and arrangements that govern the relationship between SSGs and contractors in the Sugar Industry. Many issues relate to the bargaining power of role players and lack of organisation within the industry. For example:

[36] A further 8,231 SSG codes were identified for cancellation in 2010 due to three years of non-deliveries (SASA, 2010).
[37] This office oversees CANEGROWERS Regional Services to various grower groups within the Tugela Region of KZN. The Amatikulu Mill falls within this region.
[38] Cane supply area for the Amatikulu Sugar Mill located on the banks of the Amatikulu River in KZN.

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- Poor co-operation between SSG's and Contractors at sub-committee[39] level *(C)*.
- No well organised Contractor structure to negotiate with *(C)*.
- SSG's have poor bargaining power *(C)*.
- Individual SSG's are charged beyond agreed upon rates *(S)*.

Communication: Dealing with the issues around communication problems, misunderstandings and the flow of information between Contractors and SSG's. Although this is mostly the result of a poor institutional environment, these were deemed important enough to deal with individually. For example:

- General lack of understanding between SSG's & Contractors of the other's problems *(S)*.
- Sugarcane is left in the field after being cut when...
  a) the Contractor breaks down *(S)*.
  b) Contractors "down" equipment in a disagreement *(S)*.
  c) Contractors don't re-allocate cane to other Contractors *(S)*.
  d) the SSG is unable to organise an alternative *(S)*.
  e) the Contractor's tractor is no longer able to operate as it is not road worthy (illegal).
- Incorrect timing of sugarcane burning is occurring due to...
  a) poor timing of the Contractor (i.e. late) *(S)*.
  b) SSG's burning without permission from the Contractor or sub- committee *(S)*.
  c) the SSG's wanting to cut later due to timing of cash flow*(S)*.
  d) the SSG's want to cut too early and therefore go to other "tractor owners" *(S)*.

Training/Education: Mainly relating to management practices with a strong emphasis on financial management. For example:

- Poor overall management of the contracting businesses (with particular reference to financial management) *(S)*.
- Contractors don't see a need for keeping records *(S)*.
- Contractors are left out of training/development programs *(C)*.
- Lack of grower succession planning (no interest from the youth) *(S)*.

Infrastructural: Dealing with the lack of infrastructure and ineffective loading zone arrangements and roads. For example:

- Haulage distances by Contractors (no zones/lack of access to zones) *(C)*.
- Infield Infrastructure (Contractors can't access the cane fields for haulage operations) *(C)*.

Competitiveness Issues: Institutional influence on the efficiencies of Contractor operations. These may eventually result in financial constraints and poor service delivery. For example:

- Growers stop growing cane (because Contractors exit the industry without replacement) *(S)*.
- High charge rates by Contractors *(S)*.
- A low through-put for Contractors *(S)*.
- Contractors can't compete for work *(C)*.

[39] This is a grower committee that is linked to loading zone operations and forms the ground level negotiation platform between SSG's and Contractors.

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- Rates are set for Contractors as a group *(C)*.
- Growers go outside of the Contractor group *(S)*.

Financial: These include problems with and the direct results of financial constraints.

- Lack of finances for repairs (cash flow) where the operation stops or can't start *(S)*.
- Poor access to spares & repair facilities (no competition/not adequate).
- A reducing number of Contractors (no succession planning) *(S)*.
- Inability to replace machinery (depreciation & theft is not sustainable) *(S)*.
- A lack of available labour (for cutting).
- SSG cane is of low quality (expensive to cut) *(S)*.
- Rising input costs.
- When the fuel price increases rates remain unchanged *(S)*.

Even with a good crop to harvest, losses in revenue for SSGs are being incurred due to post-harvest inefficiencies, some of which are listed above. Randela (2003) indicates that little post-harvest research is done and a focus on agronomics needs support from research on institutional arrangements, processing and market information. This argument highlights current support structures to SSG operations where Contractors exist in poorly organized structures with little or no extension support. Sokhela and Bembridge (1991) believed that a "lack of local leadership and strong cane growers associations" were contributing to poor cane yields but workshop interactions found poor organizational structures to negatively influence operations well beyond the agronomic level.

A "Downward Spiral" Resulting from Poor Co-operation

"…organisational literature has always posited that relational factors, such as trust, cooperation, commitment and absence of opportunistic behaviour play a key role in economic exchange, particularly when one or another party is subjected to the risk of opportunistic behaviour and incomplete monitoring, or when moral hazard problems arise" (Masuku et al., 2007: 111).

Murray (2008) says contractor benefits (e.g. economies of scale) flowing to growers would depend on relationship elasticities. These reflect poorly for SSG's that have to deal with Contractors that are far fewer in number and therefore have more bargaining power. With this "un-even" balance of power gains shift to the stronger party but this has caused as much harm to SSG Contractors themselves. Although opportunism allows those better positioned to benefit, reciprocal outcomes are not fully understood by the Contractors as to be explained while the lack of competition between Contractors further suggest a principal agent problem.

Currently the small-scale sector sits in a "Downward Spiral" of diminishing growers, reducing tonnage, higher charge rates and less Contractors; although it is seen that before exiting Contractors divide remaining tonnage amongst themselves leading to widely reduced economies of scale. This is likely due to some level of asset specificity with trailers and even tractors where deep rural areas present few alternative use opportunities. A simple representation in Figure 1 partially explains why growers are not the only ones facing diminishing returns but also why Contractor profits continue to come under pressure.

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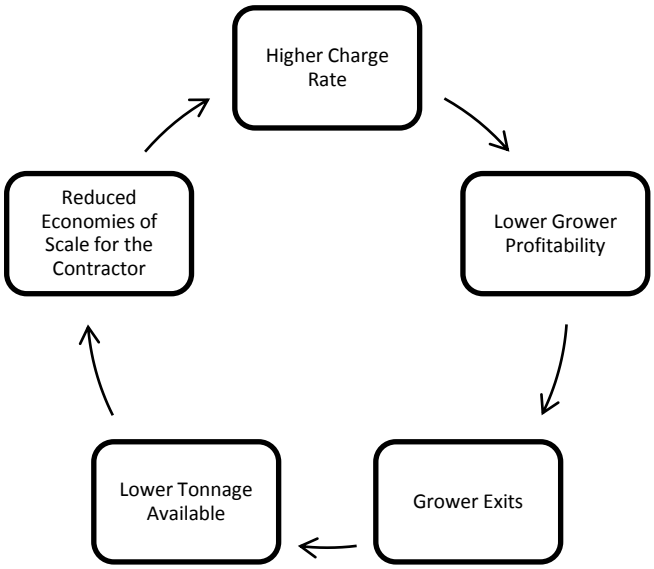

Figure 3: The "Downward Spiral"

Responding to diminishing profits, Contractors have significantly increased charge rates contributing to a "Downward Spiral" that further erodes margins through diseconomies of scale. In response some Contractors have planted additional cane areas to improve machinery utilization. In direct[40] haulage areas SSG Contractor rates exceed commercial rates by between 5% and 83% for cane transported from 8 to 20 km respectively. Longer direct haulage distances were having a significant impact on SSG profitability for areas not serviced by commercial hauliers. Alternatively, a more profitable SSG sector would increase cane supply where higher through-put is expected to improve Contractor profitability.

The ability for industry to promote SSG's and Contractors "walking in partnership" could lead to the success or failure of this Sector. Masuku *et al.* (2007) state that improved trust between parties would result in improved commitment. Small-scale Growers would need to ensure Contractors have adequate tonnage to improve business profitability and Contractors need to help improve the incentive for SSGs to continue farming in earning a high enough return from their investment in fertiliser, chemicals, time and other inputs. Such a partnership would be evidence of an "Upward Spiral" scenario that would not only encompass improved charge rates but also improved performance by both SSG's and Contractors such as:

- Shorter burn-harvest-to-crush delays (BHTCD's).
- Better organised cutting plans to ensure all cane is delivered during the season.
- Ensuring rateable deliveries of cane throughout the season to improve mill performance and thus shorten the season length. *This has financial implications for all growers in the cane supply area.*
- To ensure breakdowns are dealt with swiftly so as to avoid aging cane that reduces grower income as well as machinery utilisation.

[40] Cane is hauled directly from the field to mill rather than double handling to loading zones where after commercial hauliers are responsible for delivery.

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- To ensure SSG's commit their tonnages to the respective agreements with Contractors and no "out-of-turn" burning occurs. *This has a direct effect on Contractor economies of scale.*

Workshop participants agreed there was need for higher intervention and interaction between organised Contractor bodies and SSG structures. A proposal included Contractors (arranged in groups) committing to self imposed service level agreements (e.g. have maximum BHTCD's with penalties) where growers would in turn commit tonnages through acceptance of these agreements. This would enable identification of the most competent Contractors in the area. There would be no minimum standards or fixed penalties giving Contractor groups the freedom to decide on their own service level agreements. The threat of competitor entry would be the driver of these agreements.

The approach requires well organized grower groups having a high enough level of tonnage to attract better Contractors. This may suggest the formation of Co-operatives but there remains a certain level of mistrust amongst growers in co-operatives and Ortmann and King (2007) further highlight issues, such as free-rider and influence cost problems, due to property rights constraints. Further, Lyne and Collins (2008) contend that the legislation governing Co-operatives in South Africa is not conducive to addressing these problems. Growers inherently want some level of control, particularly those that are more committed to their cane operations.

Some other concerns include tender limitations, due to the sparse location and long distances between SSG fields, and high transactional costs faced by SSG's (Ortmann & King, 2007; Sartorius & Kirsten, 2002). These need to be addressed through institutional change and support where many case studies show SSG's to be viable, profitable and even as efficient as commercial farmers (Kirsten & Van Zyl, 1998) given their transaction costs can be lowered.

Conclusion

Contractors in the small-scale sugarcane growing sector have performed inefficiently within an ineffective institutional environment adding to the downward pressure on SSG production. The severity of the problem is highlighted by reducing areas and production by SSG's in the South African industry. Moving both SSG's and Contractors into an "Upward Spiral" scenario includes dealing largely with institutional reform. Correcting bargaining power imbalances is a key focus area for improving efficiencies and profitability levels. An approach may be to organise parties so as to reduce transaction costs and allow for fair negotiations. The current drive to form co-operatives in dealing with scale economies and poor bargaining power faces the challenge of mistrust between members.

For successful reform, support structures would be required to continually communicate the importance of factors such as economies of scale to Contractors, or the effect a high BHTCD has on SSG revenue ("Downward Spiral" presentations have proven to be a useful tool). For now the availability of throughput for Contractors and long haulage distances will keep pressure on Contractor margins while high charge rates will continue to add to grower losses unless drastic changes are made. Incorporating commercial haulage contractors into the SSG industry may be a necessary approach but fierce resistance by current Contractors can be expected. Initially there may be limited success until external competitors are able to enter the market.

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In the long-run aims to ensure sustainable production and post-harvest services should never be fully dependent on extension service support and interventions. Institutions should be correctly structured so that within a free market system SSG sectors are able to survive where they remain home to some of the most vulnerable populaces in society. The main obstacle to this approach would continue to be the high transactional costs faced by SSGs. Both the buy-in by SSs and political stability in these areas are both points of important consideration that may eventually also contribute to the overall success or failure of any type of institutional reform.

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