

*Full Length Research Paper*

# **Challenges faced by small scale sugarcane growers: An exploration of the impact of social unrest on sugarcane farming in Kwazulu-Natal**

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The South African sugar industry is considered by the South African Sugar Association (SASA) as one of the world's leading cost competitive producers of high-quality sugar and contributes significantly to the national economy, sustainable development and creates mass employment in rural areas. However, numerous challenges are faced by small scale sugarcane growers which drastically affect their profit margins and long-term sustainability of sugarcane production in KwaZulu-Natal (KZN). Therefore, the purpose of this study was to determine various challenges faced by sugarcane farmers in KZN. Data was collected from 83 Small-Scale Sugarcane Growers (SSGs) in eight KZN districts, using an online survey questionnaire. The findings of this study indicated that SSGs face numerous challenges ranging from inequality, land issues, financial and technical problems, drought; access to market; productivity; lack of high performing varieties, transport issues, climate change, and alien invasive plants or weeds. All the SSGs that participated in this study indicated that they need financial support to expand their operations. In addition to financial support, they desperately need partnerships or shareholding, marketing skills, education/ farming skills, skilled workforce, feasibility/ business plan, access to markets, and transport and logistic. Addressing these challenges will ensure the sustainability and profitability of sugarcane industry.

**Key words:** Sugarcane, small-scale growers, unrest, looting, sustainability.

## **INTRODUCTION**

Globally, sugarcane is the largest crop by production quantity; sugar is produced in 120 countries. Global production exceeds 165 million tons a year. Approximately 80% is produced from sugarcane, which is largely grown in tropical countries (RSA, 2014). The R16 billion South African sugar industries are cost-competitive, consistently ranking in the top 15 out of 120

sugar producing countries worldwide. Stretching across Mpumalanga and KwaZulu-Natal, more than one million people (2% of the population) are dependent on the industry for employment, business, education, and training. Moreover, the industry is a catalyst for economic growth and development (SASA, 2022). The sugarcane industry is a significant contributor to the national fiscus

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and is usually concentrated in rural areas in South Africa. The industry constitutes R5.1 billion in value of sugarcane production in the country (SASA, 2022). The economic impact of the sugar industry has proven over decades to be so significant that rural areas and towns such as Tongaat in KwaZulu-Natal and Malelane in Mpumalanga were established based on the business of growing sugarcane and supplying sugar (SASA, 2022).

However, the industry faces numerous challenges from planting and growing sugarcane, accessing mills, low productivity, accessing markets and seed varieties, making payments to the farmers, amongst other challenges. These challenges are mostly felt by small-scale sugarcane farmers whose productivity was adversely affected by the social unrest and looting in July 2021. The sugar industry in KwaZulu-Natal lost R84 million and threatened thousands of rural jobs in the sugar industry (Dlamini, 2021). The South African Cane growers reported that mills in KwaZulu-Natal rejected 135 222 tons of damaged cane due to social unrest which amounted to more than R84.5 million. They revealed that more than 38 000 tons belonged to small-scale cane growers, who were most at risk of not recovering from revenue losses because they had no insurance (Dardagan, 2021).

Prior to the looting and social unrest, small-scale sugarcane farmers could not effectively compete with large-scale sugarcane farmers. The social unrest and looting that took place in July 2021 widened the socio-economic divide between small-scale and large-scale farmers, and it will take investment and relief funds to aid small-scale sugarcane growers to gain competitive and comparative advantage against large-scale farmers. Zulu et al. (2019) argued that the decline in sugarcane production by SSGs has increased dependency on government social grants and bank loans. Thus, the small-scale sugarcane farmers are faced with mounting debt and the challenge of reviving their economies.

A deadly spree of violence and looting overwhelmed the South African provinces of Gauteng and KwaZulu-Natal in July 2021, during which businesses were looted, and infrastructure set alight. Approximately 330 people were killed during the deadly spree. The KZN government subsequently declared a state of disaster to divert funds toward recovery (Duma, 2021). The vestiges of vandalism and arson still remain as some of the infrastructures such as shopping malls are still being rebuilt in KZN and Gauteng. During the looting period, poverty, and unemployment, were at a record high of 34.9% and even higher at 46.6% among the youth, and this high unemployment was said to be one of the motivating factors for the unrest that exploded and subsequently crippled the already dwindling South Africa's economy (Stats SA, 2021). South African farmers were hit hard by the unrest and looting as trucks carrying produce and sugarcane were prevented from delivering to markets and mills therefore, threatening food supply.

Farmers suffered major losses following the social unrest as they could not get their products to local markets and to shops (Van Ded Rheede, 2021).

The sugarcane industry in KwaZulu-Natal is vital to the economy, farmers, and rural and township communities; therefore, it is important to investigate and address the challenges faced by small-scale sugarcane growers, and factors inhibiting the sustainability of the industry. This study aimed to contribute, improve, and provide an understanding on the various challenges faced by small-scale sugarcane farmers in the province and inform government and private investors' policies, initiatives, grants and loans, other initiatives to achieve case-by-case solutions. Therefore, the main objective of this study was to determine the challenges faced by small-scale sugarcane growers in KZN following social unrest and to recommend solutions for long-term profitably and sustainability of small-scale sugarcane farming in the province.

## MATERIALS AND METHODS

### Data collection strategy

In this study, survey questionnaire developed to satisfy the objectives of this study was used. Data was collected in various district municipalities in KZN. The target group for this study was 83 small-scale sugarcane growers in KZN.

### Sampling strategies

A combination of two sampling techniques were used in this study i.e., purposeful sampling technique as well as cluster sampling. Purposeful sampling involves identifying and selecting individuals or groups of individuals that are knowledgeable about or experienced with a phenomenon of interest (Creswell and Plano, 2011), while cluster sampling involves dividing the entire population into clusters or groups for sampling. In this study we purposefully sampled Small-Scale Sugarcane Growers (SSGs) in various districts in KZN to gather their input regarding some of the challenges they were facing in sugarcane production. Subsequently, a random sample is taken from the clusters, all of which are used in the final sample (Wilson, 2010).

### Reliability and validity

Content Validity Index (CVI) used in this study is the Item – Content Validity [I-CVI] (Shi et al., 2017). Three academic experts were asked to review the relevance of each question on a 4-point Likert scale: 1= not relevant; 2= somewhat relevant; 3= relevant; 4= very relevant. Then for each question, the number of experts giving 3 or 4 score was counted (3.4 - relevant; 1.2 – nonrelevant). The recommended I-CVI is between 0.78 and 1.00. The experts rated the questionnaire and gave it I-CVI of 0.9.

### Exclusion criteria

Due to the nature of the study, minors below the ages of 18 were excluded from participating in the survey.

### Data analysis

The quantitative data underwent a data cleaning and validation process, whereby all duplicate records and identified errors were removed and all typing errors corrected. To produce the expected outputs, descriptive statistical procedures in form of frequencies were used to analyze the data. The frequency tables with corresponding summary charts were produced using the Statistical Package for Social Sciences (SPSS) and Microsoft Excel as data analysis tools.

### Data usage and storage

Data collected in this study was stored on the Moses Kotane Institute (MKI) data portal for safe keeping and future reference. This data was only used for the purpose of this study. Furthermore, the subjects remained anonymous, personal information such as names, surnames, contact information were also kept confidential. The data will only be kept for 5 years; thereafter it will be disposed of by deleting it from MKI Information Technology Enterprise Environment.

### Ethics and consent

Important ethical standards that were considered while conducting this research study were honesty, transparency and openness, anonymity, confidentiality, accountability, and informed consent. Research subjects participated in this study freely, without being coerced or paid to do so. Informed consent is a pivotal part of research ethics. The researcher and data collectors ensured that the rights of the participants were not infringed. Furthermore, an information letter was shared with participants and stakeholders as regards the purpose of the study, the type of information that will be gathered, how the data will be used and who will have access to it.

## RESULTS AND DISCUSSION

### Consent to participate in the study

Out of ninety-one (91) respondents or SSGs, only 8 (9%) did not consent to participate in the study. Eighty-three respondents (91%) gave their full consent to participate in the study as depicted in Figure 1. SSGs that did not consent to participate in the study were eliminated from the study. Lack of participation by SSGs was mainly due political and social unrest.

### Age group and gender of the SSGs

Majority of the SSGs were between the ages of 45-54 years (22), followed by 35-44 years (19). Eighteen (18) of the respondents were between the ages of 55-65. Only 6 SSGs fell under the youth category of 25-34 years (Figure 2). The findings of this study indicated that there is a lack of youth participation in sugarcane farming as indicated in Figure 2. This will have a long-term impact on food security and cane production if there is no promotion of youth participation in this sector. Additionally, 22% of the respondents were above 65 years. Liu et al. (2021)

argues that the aging of the agricultural labour force has a significant negative impact on the comprehensive technical efficiency and pure technical efficiency of farmers. In terms of the gender of the SSGs, 72% were males, whereas only 28% were female (Figure 3). Consistent with the findings of this study, Rocca (2016) reported that women's participation as registered out-growers in Zambia is lower than men's because of the existing gender gap in the control of land. Moreover, there are gender inequality gaps in KZN when it comes to access to land, resources, and extension services, with males having more access than females.

### Challenges experienced by small-scale growers in their farm

SSGs face numerous challenges ranging from land issues; extension services; drought; access to market; productivity; lack of high performing varieties; to transport issues as reflected in Figure 4. Consistent with the findings of this study Ortman and King (2007) reported that extension officers in KZN only visit small holder farmers once a year and their educational levels are quite low. Similarly, Zhao and Li (2015) reported that weather and climate related events (i.e., growth environment of atmospheric CO<sub>2</sub>), temperature, precipitation, drought, and other extreme weather conditions) influence sugarcane production worldwide, especially in many developing countries. The effects of drought due to climate change on sugarcane growth and development depend on plant growth stage, the degree of water deficit stress, and duration of the stress i.e., drought in early and mid-growth stages reduces cane yield leading to low sucrose yield (Zhao and Li, 2015). Additionally, Msuya et al. (2017) argue that small holder farmers have no access to markets because field extension services are ill-equipped, lack knowledge about local markets and do not provide the required training and assistance to farmers. Growers indicated that climate change (28) and alien invasive plants or weeds (27) were somewhat challenging. According to Conlong and Campbell (2010), improving weed management practices amongst SSGs in the South African sugar industry needs attention, because weeds are assumed to be another cause of yield decline.

### Assistance required by small-scale growers to expand operations

Businesses need capital to expand their operations, thus increasing market share. It is therefore not surprising that most of the SSGs need financial support (83) to expand their operations. In addition to financial support, they desperately need partnerships or collaboration (66); marketing skills (60); education/ farming skills (57); skilled

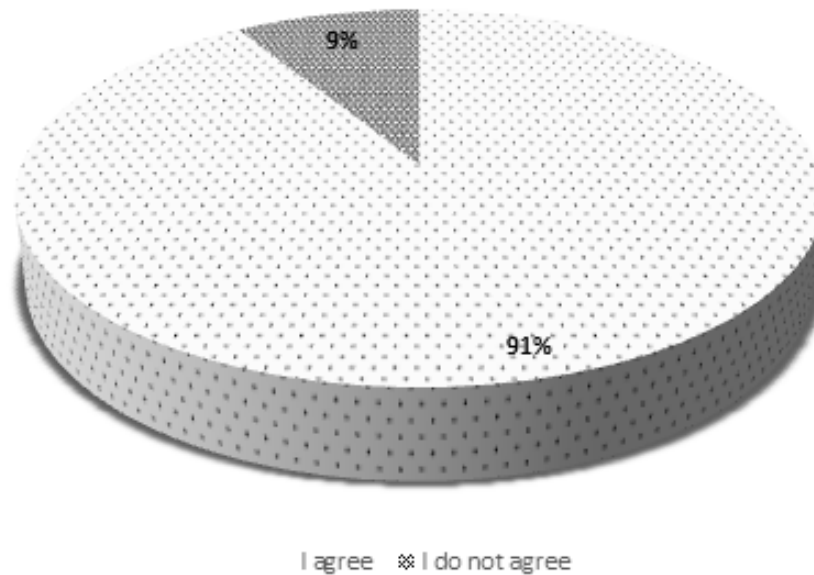


Figure 1. SSGs consent to participate in the study.

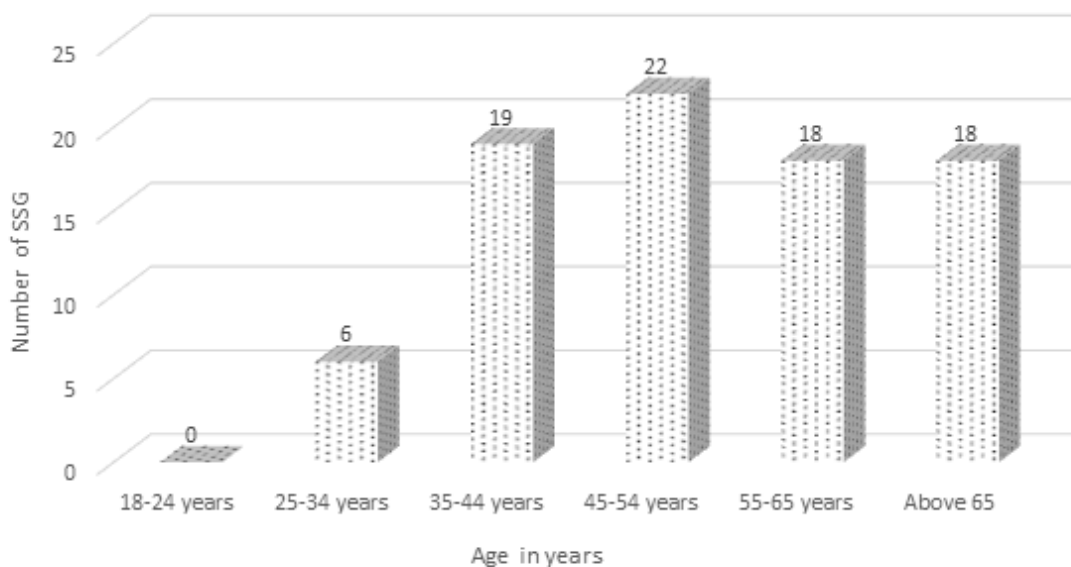


Figure 2. Age group of the Small-Scale Growers.

workforce (56); feasibility/ business plan (55); access to markets (53) and logistic (Figure 5). Bezuidenhout et al. (2012) emphasized the importance the collaboration in sugarcane farming. They identified that lack of collaboration between Large-Scale Sugarcane farmers (LSGs) and SSGs is a key problem in the sugar industry. Behera et al. (2015) highlighted the importance of marketing agricultural products in India, they argued that Accuracy, Availability, Applicability and Analysis are the four “A’s” of marketing information; a farmer may decide

how much to produce, when and where to sell and a trader may expand trade. Furthermore, in a study conducted by Thabethe (2013) showed that SSGs in Mpumalanga lack crucial technical and educational skills which affects the productivity and profitability of the farm.

**Effects of social unrest on farm operations**

Figure 6 shows that most of the SSGs (64%) were

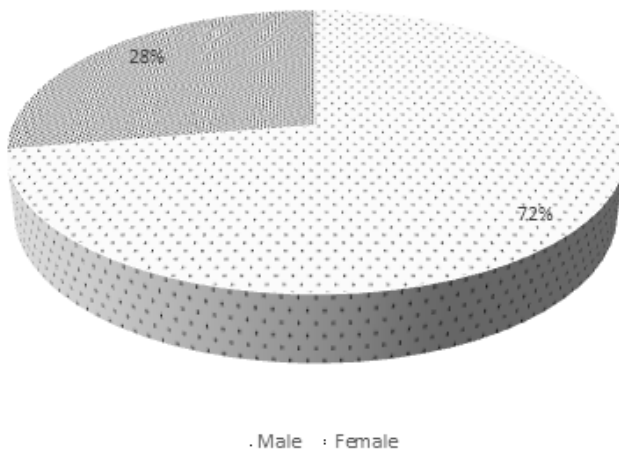


Figure 3. Gender of the Small-Scale Growers.

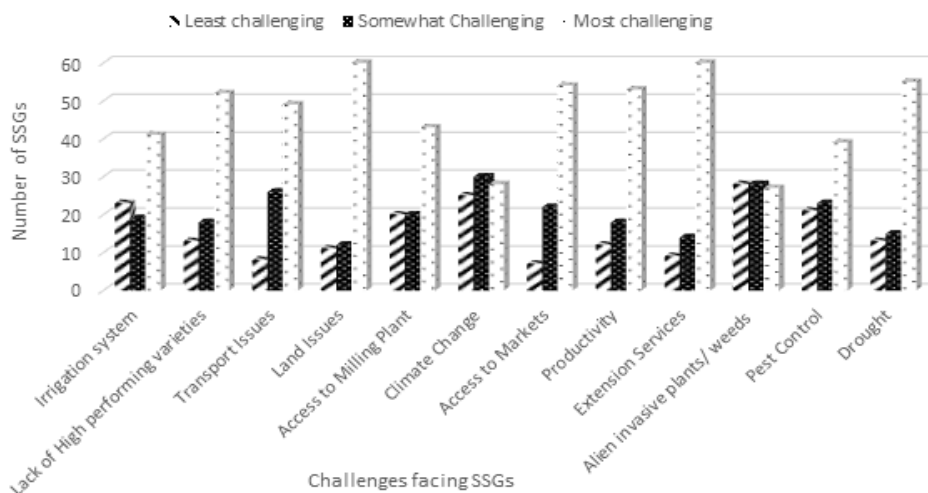


Figure 4. Challenges by Small-Scale Growers in their farm.

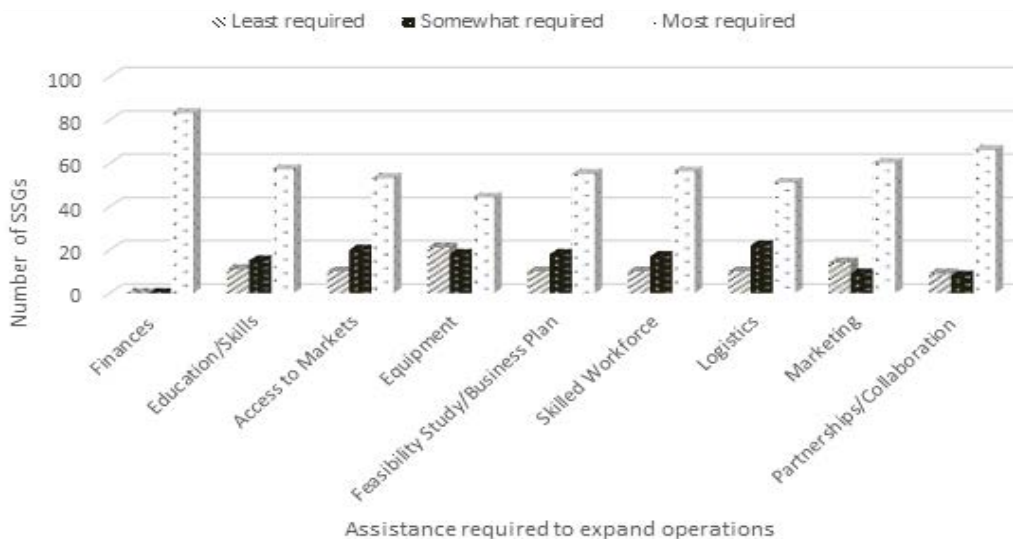


Figure 5. Assistance required by small-scale growers to expand operations.

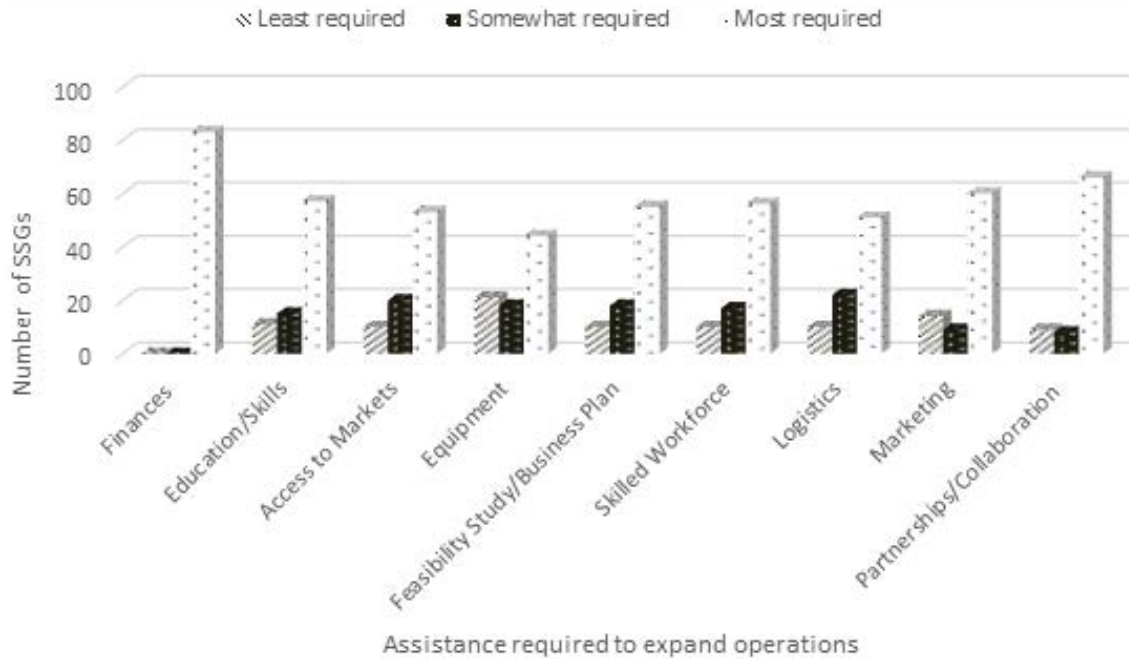


Figure 6. Assistance required by small-scale growers to expand operations.

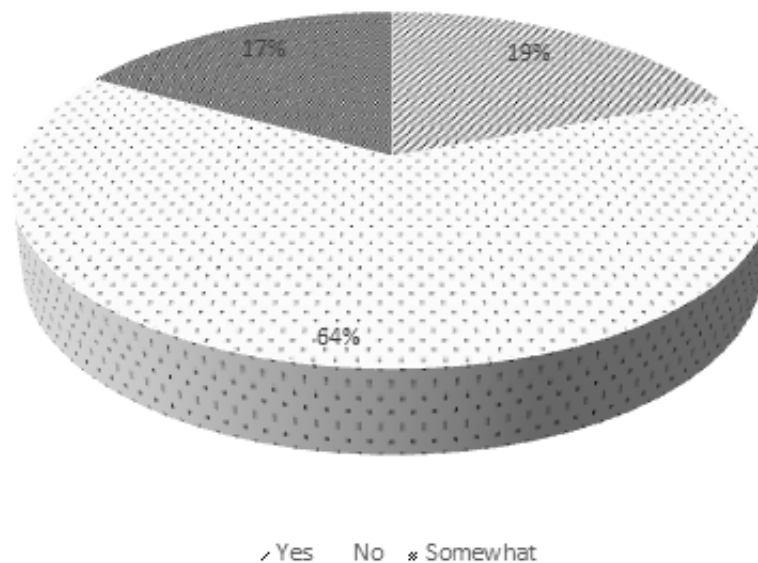


Figure 7. Effects of the social unrest on farm operations.

adversely affected by the unrest and looting. Only 19% were not affected, whereas 17% were somewhat affected. Looting of farm chemicals and input were the biggest issues faced by SSGs during the unrest (Figure 7). Sixty-nine (69) SSGs indicated that during the unrest, they were unable to transport their burnt sugarcane to the mills and some of their sugarcane plantations were burnt by protestors/ looters prematurely. This had an adverse

effect on their tonnage and sucrose content. Vandalization of farm equipment was also reported by 63 SSGs. Other issues reported by SSGs ranged from loss of revenue (53) to delay in harvesting (49) due to mill closure (47) and transport issues. All sugar mills in KZN closed after cane trucks were hijacked, mills threatened, and cane farms set alight (Heinberg, 2021). Approximately 430 000 tons of cane was burnt by the protestors (Heinberg,

2021). This equated to 258 million of grower revenue that will never be realised (Heinberg, 2021). SSGs further stated that it will take them over 5 years to recover, and some (34) were considering not to continue with sugarcane production due to the challenges such as cost of production, access to market and credit, logistical issues, climate variability, lack of appropriate agricultural infrastructure, and skilled labour force etc. According to Conlong and Campbell (2010) the rising input costs for sugarcane growing in KZN, particularly in the planting areas of Ntumeni and Showe, are resulting in less profit for SSGs. The consequences of rising input costs influence the performance and progression of the sugar industry. SSGs therefore, need to find ways to reduce the effects of increasing input costs.

## Conclusion

SSGs play a crucial role in dealing with unemployment and poverty issues that are currently facing South Africa. With that said, if SSGs are not prioritised and assisted, it could affect the sustainability and profitability of this industry. The main objective of the study was to investigate the challenges faced by SSGs in KZN. The findings of this study provide a considerable insight into the challenges faced by SSGs and the disastrous impact of the unrest and looting on sugarcane production. Lack of market access was mentioned by SSGs as one of the main problems constraining production. Farmers indicated that, even if they were successful producers and there was no formal market, they would still run at a loss because their products would perish in their storerooms. During the focus group meeting at the study sites, more than 80% of the farmers complained about the lack of market access and the lack of market information. Although more than half of the producers in the study sites produced quality products, the problem is that they are struggling with sugarcane production due to the lack of resources. Most of these farmers indicated that they might have to bring their sugarcane production to a halt, due to the following reasons: (a) Lack of financial support; (b) Access to land; (d) Exorbitant water, electricity, and transport costs; (e) Lack of access to market information; (f) Lack of formal education by most farmers; (g) Limited access to new varieties. However, besides the factors that were highlighted here issues such as extreme climatic events, climate change, climate variability, drought, lack of collaboration, and lack of collateral become an additional burden to most of these farmers for them to operate effectively and efficiently. The Department of Agriculture and commercial growers should intensify out-grower technical services for SSGs to realize higher production per hectare. Such services would ensure optimal allocation and application of inputs, labour, and chemicals (herbicides and pesticides), respectively, at the right time to ensure efficacy. There is also a need to introduce buying consortiums for SSGs to

reduce the costs of inputs.

## CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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