

SHORT NON-REFEREED PAPER

STRATEGY OF FELIXTON LARGE-SCALE GROWERS TO PROMOTE SMALL-SCALE GROWER ACCESS TO NEW VARIETIES

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Introduction

The SSGs in the Felixton area produce sugarcane on small plots of communal land. When these growers replant their fields a source of good quality seedcane is required. The use of sub-standard commercial cane as seedcane is not recommended nor compliant with pest, disease and variety control regulations. In the past, seedcane nurseries were developed with local funding, but the number of nurseries was not sufficient to meet the total demand for seedcane amongst SSGs supplying the Felixton mill.

In the 2002/03 season, three one-hectare plots were established through funding by three large-scale growers. In addition, the Felixton Canegrowers' Association (FCA) and the Tongaat Hulett (THS) Felixton mill identified the need to support SSG projects through the provision of good quality seedcane. This led to the formation of the Felixton Outreach Committee (FOC) – a body consisting of both grower and miller committee members, with its own constitution.

With the formation of the FOC, large-scale growers who supply cane to the Felixton mill agreed to contribute by means of a levy imposed on themselves to fund the development of good quality seedcane for SSGs. By agreement this funding was then matched by THS, the milling company. To date, close to half a million rand has been raised through these two funding channels. The scheme was also used to channel South African Sugar Association (SASA) development funds to establish over 65 ha and provide over 3 000 tons of good quality seedcane of new varieties for use by SSGs at affordable rates. Because NCo376 was the dominant variety at that time, and smut was proving to be difficult to control, only smut resistant varieties, and in particular N27, were propagated.

Method and Procedure

Funding

Every year the Felixton Canegrowers' Association (FCA) agrees a levy for SSG seedcane nurseries at an annual general meeting. Tongaat Hulett Sugar approve a similar amount as a donation towards this cause. Growers' contributions are determined by the estimated tonnage to be crushed in that season. With these funds, the Felixton Outreach Committee will ensure that the provision of good quality seedcane for SSGs is maintained.

Selection of seedcane nurseries

The initial selection of seedcane nurseries is carried out by THS extension officers. The SASRI extension specialist and the bio-security officer carry out the final inspections, which include the selection and approval of suitable growers (co-operators). These co-operators should have at least one or two hectares of fallow land, on good soils with good growing potential. In addition, there should be no creeping grass problems, and the nurseries must be easily accessible. Contractors are appointed to undertake the necessary ploughing and planting operation. Land preparation commences in early spring each year. Seedcane nurseries are then planted in the summer months and all planting must be completed by December. Banking

details of the contractor are submitted to the FOC administrators for direct payment of services.

Seedcane source

The seedcane to be planted is sourced through the Felixton Seedcane Scheme ensuring that only high quality, disease-free seed is propagated. Only certified seedcane is planted in these nurseries. The FOC then monitors all seedcane nursery plots over the next four years.

Grower responsibility

The grower signs a seedcane agreement prior to planting. This agreement must be confirmed by the FOC Committee. By signing, the grower agrees to the following:

- a. At his/her own cost, the grower will be responsible for all hand weeding and clearing of a two metre fire break around the seedcane nursery plot.
- b. Growers will sell seedcane to other SSGs at the current mill price. The buyer is responsible for cutting, loading and haulage of the seedcane.
- c. To provide all weed control and fertilisers and clearing of firebreaks for the 1st, 2nd and 3rd ratoon crops.
- d. The plant, 1st, 2nd and 3rd ratoon crops may be sold for seedcane purposes, subject to approval by the Felixton LPD&VC Committee. If any of this seed is sent to the mill for any reason – including deliberate or accidental fire or theft, the FOC will then immediately be entitled to recover costs from the proceeds of the current or the subsequent crops. This recovery is made either in cash or by means of a cession from the proceeds of the cane.
- e. It is the responsibility of the grower to protect the cane from fires, cattle grazing and theft.

Financial control and administration

The FOC is an autonomous body with its own constitution, which independently controls all funding and administration of seedcane transactions. The FOC has an accounting officer who controls and administers the finances of the FOC and reports to the FOC committee on an annual basis at an annual general meeting. The finances are signed off by the accounting officer and approved and ratified by the Chairman. The FOC keeps financial records in accordance with accepted accounting practices.

From 2010 to 2019, the FOC received a total of R479 310.48 from THS and FCA. The FCA contributed a total of R237 905.48 and THS R241 405 to the development of small-scale growers. Table 1 shows the breakdown of financial contributions received from both the FCA and THS.

Table 1: Breakdown of financial contributions by the Felixton Canegrowers' Association (FCA) and Tongaat Hulett Sugar (THS) from 2010 to 2018.

Year	THS	FCA
2018	R 35 000.00	R 24 374.88
2017	R 11 405.00	R 19 812.52
2016	R 35 000.00	R 18 405.10
2015	R 35 000.00	R 52 575.25
2014	R 50 000.00	R 54 555.80
2013	R 50 000.00	R 12 200.00
2012	R -	R 23 981.93

2011	R -	-
2010	R 25 000.00	R 32 000.00
Total	R 241 405.00	R 237 905.48

Planting costs

The planting cost is set for each season by the FOC with the help of the SACGA regional economist. All contractors are paid at the same rate with no negotiations being permitted outside the committee.

Membership

Composition of the Felixton Outreach Committee is as follows:

- 2 – 6 Grower members
- 2 – 6 Miller members
- 2 – 6 ex-officio members (SACGA Regional Manager and Grower Support Officer, SASRI extension specialists (2) and the bio-security officer
- Co-opted members KwaZulu-Natal Department of Agriculture and Rural Development (KAZN DARD)
- Chairman (1 year term, alternating between miller and grower)

Results and Discussion

Seedcane produced

Overall, 96 plots totalling 121.3 ha have been planted since the inception of the FOC. At a yield of 50 tons/ha, the seedcane nursery plots have produced a total 6 065 tons of good quality seedcane since the inception of the FOC. Since the seedcane is used up to the 3rd ratoon crop, the total tonnage over the four crops has yielded 24 260 tons of good quality seed cane, directly benefiting the rural community in the Zululand North area.

Replacement for NCo376

It should be noted that when Nco376 was widely grown in the area, the other varieties at that time were N55/805, NCo310 and N8, which were all highly susceptible to smut. To substitute these varieties, the industry needed a highly productive smut-resistant variety as a replacement. It was at this stage that N27 was introduced into the industry. Because of its resistance to smut and mosaic, its high stalk population and ability to canopy quickly, this variety increased rapidly in popularity. Some large-scale grower farms have over the years planted over 50% of their area under cane to N27. Small-scale growers were encouraged to plant N27 and this variety eventually replaced NCo376, as shown in Figure 1.

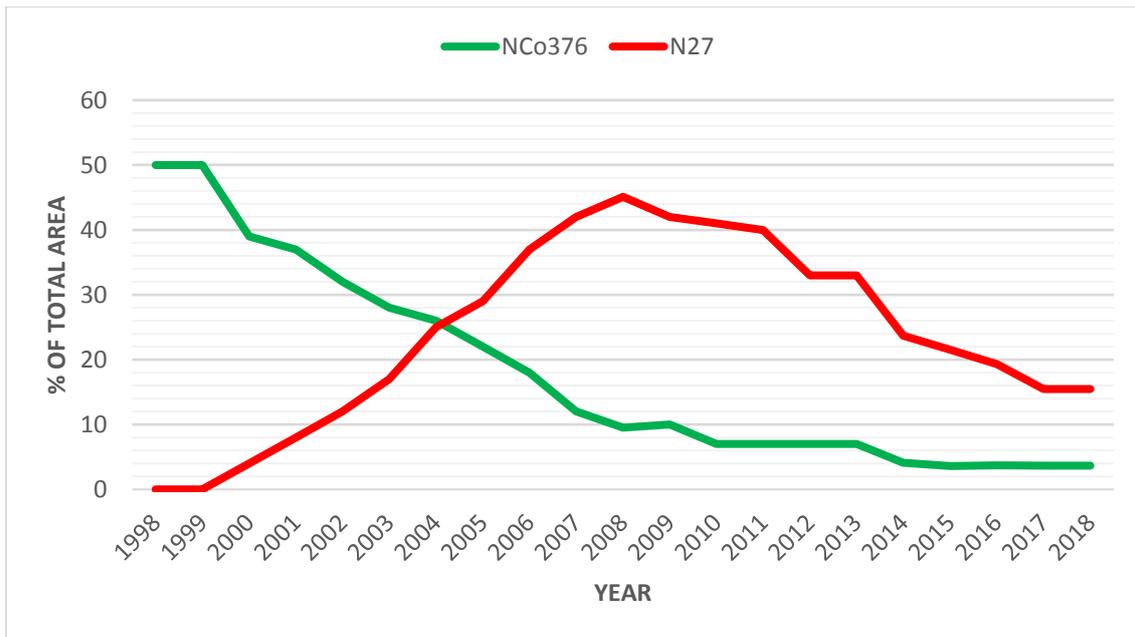


Figure 1: Variety NCo376 and N27 adoption rate from 1998 to 2018 in the Felixton Mill Supply area.

The current variety disposition for Felixton SSGs indicates that 60% of small-scale growing areas are planted to N27, as shown in Figure 2. The graph also indicates that, although NCo376 is still present in SSG areas, most of these fields have been abandoned. It is hoped that these fields will be ploughed out shortly and planted to other varieties.

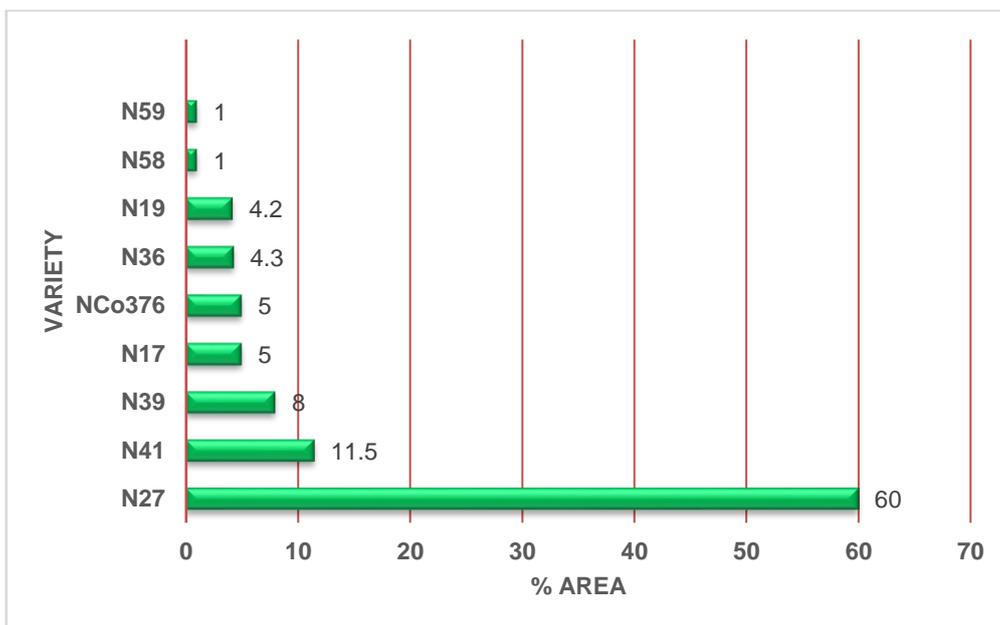


Figure 2: Current variety disposition of Felixton small-scale growers.

Smut

During the late 1990s and early 2000s, NCo376 was widely grown in the Zululand region. Because this variety is highly susceptible to smut and mosaic its future was under threat. At

that time a suitable variety to replace NCo376 was not available. Small-scale growers were reluctant to remove smut infected stools from their fields as this was perceived as a loss of cane yield. It was therefore no surprise that when N27 was introduced to the industry, large areas of NCo376 were removed and replaced with N27 (Figure 1). This shift has reduced smut levels within the SSG sector, which underlines the risk of relying on one variety (Table 2). Other newer varieties which are smut resistant have also been introduced in the SSG areas.

Table 2: Felixton small-scale grower historical smut survey data.

Year	No. fields surveyed	Mean% smut	Hx fields	% Smut range	% fields N27	% fields NCo376
2018	121	0.1	1	0 - 7.6	60	2
2017	187	Trace	1	0 - 4.5	58	7
2016	146	Trace	0	0 - 1.4	46	19
2015	200	0.1	3	0 - 7.4	59	12
2014	185	0.2	4	0 - 7.0	40	18
2013	177	0.3	15	0 - 5.2	46	20
2012	195	0.4	7	0 - 7.3	46	22
2011	168	0.1	1	0 - 4.2	45	18
2010	199	0.7	26	0 - 11.3	50	23
2009	226	0.7	18	0 - 21	33	35
2001	352	3.2	53	0 - 19.1	0	90
1999	334	0.6	13	0 - 10.3	0	67
1997	160	1.3	31	0 - 7	0	90

Conclusion

One of the challenges facing the FOC is funding. The committee is exploring all possible avenues where funds could be made available. Through the FOC, large-scale growers and THS cover the cost of establishing seedcane plots for the SSGs in the area. However, with pressure on the profitability of sugarcane production that growers currently face, the FOC needs to continue to explore other avenues of funding.

Small-scale growers have undoubtedly benefited from this initiative. In addition to facilitating the availability of good seedcane, through the efforts of the FOC the threat of smut no longer exists. Also, other new varieties such as N51, N58 and N59 have been introduced to the SSG areas with the aim of reducing the area of N27 to a maximum of 30% of the area under cane. It must also be noted that SSGs now have easy access to seedcane within the proximity of their farms, resulting in lower transport costs. Through the FOC, the future sustainability of SSGs in the area has been secured.

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