



SASRI

Assisting SADC through Research

ONE OF THE MAIN AIMS OF THE SADC TECHNICAL COMMITTEE ON SUGAR (TCS) IS TO ENHANCE COOPERATION IN AREAS OF COMMON INTEREST AMONGST SADC SUGAR PRODUCING COUNTRIES TO DEVELOP EFFICIENT AND COMPETITIVE SUGAR INDUSTRIES IN THE REGION. SINCE THE FOUNDATION OF ANY SUCCESSFUL SUGARCANE INDUSTRY RESTS ON SUPERIOR AGRICULTURAL PERFORMANCE OF SUGARCANE VARIETIES, SASRI'S ABILITY TO BREED AND DEVELOP HIGH-PERFORMING VARIETIES IS HIGHLY VALUED. SASRI IS ALSO SOUGHT AFTER FOR ASSISTANCE WITH SEVERAL OTHER ASPECTS OF SUGARCANE PRODUCTION, EITHER ON A CONSULTANCY BASIS OR THROUGH SERVICE AGREEMENTS.

Sugarcane Varieties

Over the years SASRI's sugarcane breeding programme has been 'fine-tuned' to cater for the variety requirements of the rainfed and irrigated areas of the South African sugar industry in particular. Each year one or two new sugarcane varieties (N varieties) are produced specifically for the South African industry. Each commercial variety is developed over a period of 11 to 15 years during which time extensive testing, screening and evaluation is conducted.

However, north of our borders in SADC countries, there are more than 16 mill supply areas (in Swaziland, Mozambique, Zimbabwe, Zambia, Malawi, Tanzania) that currently mainly utilise varieties bred by SASRI that were primarily intended for the more temperate conditions of the South African industry. Nevertheless, these N varieties generally perform better than non-African varieties obtained from other, often more tropical countries. It is for this reason that the N varieties from the SASRI breeding programme form the basis of production in other mainland SADC industries.

In the past year, SASRI revised its variety agreements to standardise delivery of services to all SADC partners. Variety Licence and Technical Service Agreements exist with many sugarcane

producing SADC countries, including Swaziland, Mozambique, Malawi, Zambia and Tanzania. Additionally new agreements were set up with two further SADC countries during the course of 2012: Angola and the Democratic Republic of Congo. The licences provide for access to all commercially available varieties, both newly released and some of the older more established commercial varieties. The value of South African varieties is demonstrated by their significant contribution to sugar production in these countries, and varies from 50% to 100% depending on the country. In return these industries are charged a levy on their production from SA varieties. This levy contributes directly to the income earned by SASRI to partially offset the contributions made by South African Millers and Growers. As part of this arrangement SASRI also provides these industries with any relevant information and advice on their varieties as well as regular publications and access to the library facilities. Additional specialist information, consultation and advice on sugarcane production are provided on a consultancy basis and include assistance with disease and pest identification, soil and leaf sample analyses and fertiliser recommendations. Industry representatives are also eligible to attend all training and educational courses offered by SASRI.

SASRI has different agreements with Zimbabwe, Reunion and Mauritius as these countries have their own breeding and research stations. SASRI exports 100 crosses to Zimbabwe Sugar Association (ZSA) on an annual basis and ZSA follow their own variety selection programme.

The Mauritius Sugar Industry Research Institute (MSIRI) and the Sugar and Cane Research Institute of Reunion Island have Variety Exchange Agreements with SASRI that allows these institutions to exchange varieties for research and breeding purposes to increase the genetic diversity of the existing breeding germplasm.

Fertiliser Advisory Service

SASRI's Fertiliser Advisory Service (FAS) is of critical importance to the South African sugarcane industry in that it provides a soil, leaf, fertiliser and irrigation water testing service, as well as fertiliser, lime and gypsum recommendations specifically for the sugar industry. To this end, FAS provides a service to approximately 2000 customers in our industry on a user-pays basis. FAS is also widely used by sugarcane producers in other southern African countries such as Tanzania, Swaziland, Mozambique, Zambia and Malawi.

FAS offers several critical services including:

- Site-specific fertiliser, lime and gypsum recommendations, based on soil analyses, for the production of whole-cycle or ratoon sugarcane.
- Leaf analyses, together with interpretative guidelines, for assessing the nutritional status of growing cane.
- Assessment of soil salinity problems through the analysis of soils and irrigation waters.
- Determination of nutrient concentrations in fertilisers.

FAS is committed to becoming the preferred analytical service provider for all cane growers on the African continent; it will continue to provide its customers with a state-of-the-art service that gives economically and environmentally responsible recommendations to growers.

Biosecurity

SASA recognises effective biosecurity as one of the most important foundations necessary to ensure the long-term prosperity of the South African sugar industry. Historically, there have been instances where sugarcane varieties have succumbed to a certain pest or disease, resulting in millions of rands in lost income. Further costs have been incurred in replacing them with more resistant varieties. Sugarcane production is an extensive monoculture and this type of environment is highly conducive to the establishment and spread of pests and diseases. As a result, we are likely to continually face new challenges that need to be managed proactively, before these threats establish themselves and cause major yield losses.

Tackling problems at mill or even a regional level is simply not enough. Co-operation across our borders is also vitally important to keep new threats at bay and to contain them at their source. Furthermore, many SADC sugar industries are based heavily on SASRI varieties, and this places our industry at risk if a problem develops with any one of them. Recent efforts, particularly

by SASRI, have been directed at securing our borders and building relationships with our SADC partners in order to create a regional awareness of biosecurity risks.

Aimed mainly at preventing an incursion by the sugarcane stem-borer, *Chilo sacchariphagus* into South Africa from northern Mozambique, meetings with border officials in both KZN and Mpumalanga have been held and identification posters have been distributed at border posts. Further communication and awareness initiatives around this particular problem have been held with Swaziland, Zimbabwe, and Mozambique and in some instances these countries have established their own monitoring pro-

grammes. Cross-border collaborative research into the biology and control of Chilo is also underway as well as work looking at the potential susceptibility of current varieties to Chilo.

Training in sugarcane agriculture

SASRI has been involved in training for the past 50 years. Since the first Senior Certificate Course in 1963, well over 3000 people have attended the five-week Senior course while close to 2400 (since 1975) have attended the three-week Junior course.

The courses are highly regarded in the industry at large and

most companies operating in the southern African region require their section managers to attend the Senior course as part of their Agricultural Trainee Programme.

These certificate courses have been instrumental in developing the capacity of the South African sugar industry while also serving as an important training resource for the southern African region. Since 1998, about 700 students from SADC countries have completed the Junior and Senior courses. The demand for training has increased steadily over time. ✓

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Summary of our Range of Supplies

- Screening Material
- Polybaffle Entrainment Arrestor
- Laboratory Equipment
- Silver Weibull Centrifugals
- Calcor Batch & Continuous Vacuum Pan Boiling Systems
- Mascual, Magma/Massecuite Pumps
- Procurement of other Spares & Equipment
- Screens for Sugar & Juice
- Cane Mud Filters
- Filter Presses
- Vacuum Pans
- Clarifiers
- Refinery Auto Filters

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