

## 7th ISSCT BREEDING AND GERMLASM WORKSHOP

### SOUTH AFRICA

4 - 9 May 2003

"Sugarcane breeding: basic elements and practical applications."

#### ☛ General Information

#### ☛ Programme

#### ☛ Participation

### General information

#### The South African Sugar Industry

The South African sugar industry is one of the worlds leading cost competitive producers of high quality sugar. Sugarcane is grown on over 420 000 ha, of which about 320 000 ha is harvested each year, producing on average 2.5 million tons of sugar from 22 million tons of cane. Seventy-two percent of the crop is produced by about 2 000 large-scale commercial growers, 15% is produced by 51 000 small-scale growers, and the balance of 13% of the crop is grown by the milling companies. There are 16 mills in the industry, owned by three milling companies and one grower co-operative.

#### The South African Sugar Association Experiment Station

The experiment station was established in 1925 to provide suitable varieties and technology for the South African industry. At present, SASEX conducts research in Agronomy, Biotechnology, Crop Nutrition and Soils, Entomology, Pathology and Nematology, and Plant Breeding, assisted by service departments such as Biometry and Field Services. A large Extension department is responsible for transferring technology and providing advice to growers.

#### The Plant Breeding Programme

The breeding programme aims to produce new varieties suited to the 4 main agro-climatic zones in which cane is grown – viz. High potential irrigated, coastal annual harvesting, coastal hinterland 15 – 18 month harvesting and the midlands 20 – 24 month harvesting. About 1500 crosses per year are made using flowers produced in large photoperiod and glasshouse facilities. Approximately 250 000 seedlings are sown annually – 50 000 for each of five selection programmes conducted on six research stations located in appropriate regions of the industry. Selection is done in five stages, and takes 11 to 15 years to complete, depending on the length of the cutting cycle on the different research stations.