

POSTER SUMMARY

FORTY YEARS OF SERVICE: SUGARCANE QUARANTINE FACILITY AT MOUNT EDGECOMBE

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Abstract

The South African Sugarcane Research Institute (SASRI) exchanges sugarcane germplasm across the globe to increase the parent gene pool for breeding new varieties within the local sugar industry. The Quarantine facility, which is based at SASRI, has been in operation for 40 years and enables both the safe import and export of sugarcane. Over 670 sugarcane genotypes from 15 different countries have been imported and screened through this facility. The most frequent imports are from Mauritius, the United States of America, Zimbabwe, Australia and Barbados, while SASRI has facilitated over 320 exports of more than 1700 genotypes. The countries to which they are most frequently exported include Zimbabwe, Zambia, Eswatini, Mozambique and Australia. As the technologies have advanced, SASRI pathologists have been enforcing stringent quarantine procedures and have been constantly improving these measures, as well as the disease diagnostic methods. The most frequently detected disease in imported material is the *Sugarcane yellow leaf virus* (SCYLV). As a result, the Quarantine facility has adjusted its import procedures. All imported material, whether received as setts or tissue culture plants, goes through the NovaCane® small secondary meristem procedure, as well as cryotherapy. This process is known to clean genotypes of most viral pathogens. Tissue culture plants are acclimated for four to six months before molecular disease diagnostics are carried out. This adjustment has reduced the time that material spends in the Quarantine glasshouse, namely, from 24 to 15 months, which enables a faster turnaround time for the release of imported genotypes.

Keywords: sugarcane, import, export, disease diagnostics, SCYLV, tissue culture