

NovaCane®

- so much more than pain-free seedcane!

What is NovaCane®?

A SASRI-developed technology (aptly named NovaCane®) is being used to produce disease-free and true-to-type sugarcane plants for propagating newly gazetted N varieties for field bulking. NovaCane® makes use of tissue culture techniques in a laboratory.

Tissue culture is a process whereby a whole plant can be produced from a small amount of leaf, stem or root from a parent plant on nutrient medium in a laboratory. The established protocol involves excision of small (0.5-2 mm) shoot tips and provides for the rapid multiplication of virus-free shoots. The shoot multiplication, followed by rooting can take 7-9 months. The plants are then transferred to seedling trays for 3-4 months of hardening-off. Various quality control techniques are used during the entire process e.g. DNA fingerprinting to confirm variety identity.

SASRI has shared the technology with several commercial tissue culture laboratories. We supply certified starting material, perform fingerprinting and conduct regular audit-visits. Growers wanting to plant **NovaCane® plantlets** of released N varieties usually contact their Extension Specialist for the details of the nearest commercial lab.

Advantages of NovaCane® technology

- It enables large-scale production of NovaCane® plants for the release of new N varieties to the industry.
- Faster production of certified seedcane.
- It is used in the SASRI Quarantine facility to meet increasing import, and export requests and allows for safe movement of germplasm.
- It enables storage and conservation of N and imported varieties.
- Key for the multiplication of genetically modified (GM) varieties in the future.



Linda Mkhize
(NovaCane® Supervisor)



The NovaCane® lab at SASRI which propagates newly released N varieties and provides variety starting material and support to several commercial tissue culture laboratories. The facility has produced close to 1.5 million plantlets since it was established in 2016.



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