

Biotechnologist

Sandy Snyman works as a Biotechnologist at SASRI. As a biotechnologist, she aims to improve sugarcane by conducting research in the areas of *in vitro* culture and genetic engineering. *In vitro* culture can also be referred to as tissue culture and there are many applications of this technology: micropropagation of sugarcane, screening for pest and disease resistance and disease elimination. Genetic engineering involves the incorporation of novel genes in sugarcane which confer characteristics such as insect and herbicide resistance and altered sugar production. Both aspects of the job involve a research and development phase which is laboratory-based before any application can be implemented in the field.

To work as a Biotechnologist, you would need to complete an MSc or PhD in the biological sciences (agricultural biotechnology, molecular biology or cell biology). Sandy enjoys applying scientific-based research to answer practical problems, involvement in post-graduate student training, studying a broad range of sugarcane related research topics and being able to participate in inter-disciplinary research (e.g. interaction with pathologists, physiologists, entomologists and agronomists). A few challenges of her job include ensuring that:

- research has an applied outcome for sugarcane growers,
- research results are communicated effectively, and
- new technologies are harnessed in a manner that will benefit sugarcane growers.

