

# ARC INFRUITEC-NIETVOORBIJ

THE INSIDE STORY



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## ARC LAUNCHES THE NIETVOORBIJ CELLAR COMPLEX

*Over the past two years, ARC Infruitec-Nietvoorbij invested into the upgrade of our Nietvoorbij Cellar Complex. This includes upgraded experimental and commercial winemaking facilities, a tasting room, storage facilities and a sensory evaluation laboratory.*

At the launch, guests were given an opportunity to see, first-hand, the transformation of this Cellar Complex. They were also introduced to the new Nietvoorbij wine brand which tells a story of growth, transformation and the freedom to explore and soar in the industry.

ARC President & CEO, Dr Shadrack Moephuli said; "Our ultimate goal is to transform the ARC Nietvoorbij Cellar Complex into a state-of-the-art commercial and experimental production facility and research development center - a hub of innovation."

The refurbished Nietvoorbij Cellar Complex, which was officially opened on Tuesday, 26 November 2019, endeavours to contribute towards the training and development of previously disadvantaged and emerging wine entrepreneurs, with experimental and commercial projects in place to be a model for next generation innovation, wine making and wine cellar technologies in South Africa.



## AGRI EXPO



ARC Infruitec-Nietvoorbij, together with ARC-Animal Production, exhibited at Agri-Expo Livestock at Sandringham Farm in Stellenbosch. Around 3 000 school learners visit the expo over the 3 days!

## IOBC-WPRS



Professor Francois Halleen, represented the ARC at the meeting of the IOBC-WPRS Working Group in Vila Real (Portugal). The theme was Integrated Protection in Viticulture.

## N.WEST DOA



We hosted delegates from the the North West Dept. of Agriculture's newly established Directorate of Extension Support Services as they wished to gain a better understanding on services offered at our campus.



## POLISH VISITORS

Prof Dalene de Beer and Prof Lizette Joubert of the Plant Bioactives Group of Post-Harvest and Agro-Processing Technologies hosted a Polish collaborator (Prof. Beata Walczak, University of Silesia, Poland) and two students (Mr Marcin Musielak and Mr Szymon Koch, University of Silesia, Poland). The visit forms part of a South Africa-Poland bilateral with funding from the NRF and a Polish funding agency (NCBR). Dr Marietjie Stander and Ms Keabetswe Masike from Stellenbosch University also collaborate on the project by providing MS analyses.

The goal of the project is to develop tools for authentication of rooibos and honeybush (*Cyclopia intermedia*) herbal tea. In addition to advanced chemometric data analysis for the collaborative project, Prof. Beata Walczak also contributed to data analysis for other current projects. The group visited a rooibos and honeybush plantation at Babylonstoren to provide them with background on the plants and their cultivation practices.

Top from left to right: Mr Marcin Musielak, Mr Szymon Koch, Prof. Dalene de Beer, Prof. Lizette Joubert, Prof. Beata Walczak, Dr Marietjie Stander, Ms Keabetswe Masike. Bottom: Visited to a honeybush plantation at Babylonstoren

## ARC PDP STUDENTS

Once again, the students of ARC Infruitec-Nietvoorbij excelled at the ARC PDP Student Conference.

Four PhD students (U.F. Hutchinson, J. Koen, S. Bali & M Mewa-Ngongang) participated in the event.

They were all commended by the evaluators for their excellent presentations and the high standard of research presented.

Because of the high number of presentations in the PhD category and the close scores of the top scoring individuals, awards were divided into two categories, namely Plant Science and Animal Science. We are delighted to announce that all three awards in the Plant Science category went to ARC Infruitec-Nietvoorbij students. Ucrecia Hutchinson and Jenifer Koen were both awarded 1st place and Maxwell Mewa-Ngongang was awarded 3rd place.

Thank you and well done to the students who presented as well as their supervisors and support structures.



Hermine Stander, Nico Walters and Neil Miller

## SAAFoST 2019

*Post-graduate students of the Plant Bioactive Group presented results at the 23rd biennial international congress and exhibition of SAAFoST*

Neil Miller and Nico Walters, PhD students, and Hermine Stander, MSc student, all of the Plant Bioactives Group, supervised by Prof Lizette Joubert & Prof Dalene de Beer, presented results of their projects focusing on honeybush and apples at the recent conference of the South African Association of Food Science & Technology.

Neil won the award for the second best oral presentation by a young scientist for his presentation on the preparation of xanthone- and benzophenone-enriched fractions from *Cyclopia genistoides* as ingredients for a formulated health beverage.

Nico gave two presentations. His oral presentation dealt with the nutraceutical potential of *Cyclopia pubescens* (honeybush tea) against the background of 2D separation and NMR structure elucidation of “new” phenolic compounds. His poster presentation covered application of Natural Deep Eutectic Solvents (NADES) for effective extraction of phenolic compounds from *Cyclopia pubescens*.

Hermine’s poster presented results on the juicing potential and sensory properties of low chill requiring apple cultivars.

## SA / ITALY PARTNERSHIP

The ARC, in partnership with the Italian Embassy and the Italian Council for Agricultural Research and Economy (CREA), hosted a South African & Italian Wine Research Innovations Workshop at ARC INF/NVB in Stellenbosch. This included a wine-101 session at the Nietvoorbij Tasting Room as well as a site visit to our ARC Robertson Farm.

The aim of the workshop was to revive the collaboration between Italy and South Africa on wine research, while identifying areas for sharing lessons and best practices to pursue new areas for collaboration based on mutual interests.



The Italian Embassy also invited guests to the Italian Ambassador of Italy to South Africa's residence, in celebration of 'The week of the Italian cuisine 2019'.

To end it off, we participated in a "Sip of Science" workshop at Monte Casino in Johannesburg, which formed part of the second edition of "Vino in Piazza", a wine show dedicated to Italian wine production.

## ROOIBOS 'AROMA LANGUAGE' TRAINING

A workshop was recently held to train people in the industry to identify the major aroma attributes associated with rooibos. The workshop was attended by personnel from Rooibos Ltd, Clanwilliam, as well as a Japanese buyer of rooibos.

This workshop is a significant outcome of many years of research focusing on refining the rooibos sensory wheel and lexicon. The main aim of the lexicon is to make the rooibos language universal and to assist processors, quality control personnel, marketers and global buyers of rooibos to interpret the rooibos sensory wheel. The sensory wheel is a graphical presentation of the aroma attributes, which was developed for its visual impact. The sensory lexicon is used together with the wheel and provides the nitty gritty necessary to familiarize users with the rooibos aroma language. The lexicon consists of 17 attributes, with a description for each attribute, as well as a qualitative and/or quantitative reference standard to illustrate each attribute.

Early in the development of the rooibos lexicon a need for chemical instead of food-based reference standards was identified. Such reference standards have the advantage that they are consistent, stable over time and globally available. Over 100 chemicals were first screen as possible candidates, whereafter 30 were tested for typicality by a trained sensory panel and the most suitable ones selected as reference standards. The results of the study were published in October in Food Research International (<https://doi.org/10.1016/j.foodres.2019.108734>).

