

# ARC INFRUITEC-NIETVOORBIJ

THE INSIDE STORY



## IN THIS EDITION:

Visitors to the Campus  
Rooibos Sensory Wheel  
Honeybush in the Spotlight  
Exhibition Updates  
TIA Visit  
Bio Africa

## HAPPY 10TH BIRTHDAY, CHEEKY!

*The Agricultural Research Council celebrated 10 years of the Cheeky® pear this May.*

Cheeky®, a mid-season beautiful red blushed pear variety, is the brightest star to come out of the ARC Infruitec-Nietvoorbij pear breeding programme in Stellenbosch, South Africa.

Cheeky® is harvested around week 4 and 5 and acts as bridge between the season-opening blushed pears like 'Rosemarie', 'Flamingo' and 'Celina' and the later 'Forelle'.

By nature, Cheeky® fruit are large with an attractive blush and ripen during late January to the beginning of February. Cheeky® also has a rich pear flavour, stores well and ripens to a melting texture, but the colour is not as prone to heat bleaching as that of other blush cultivars. After storage the background green colour changes to a bright yellow, enhancing the blush colour to a very attractive, striking bright red. The fruit of the Cheeky® tree look stunning and tastes excellent, making it a star amongst pear consumers.

Did you know that the Cheeky® box even showcases the trifoliate leaves of the taabos shrub? A lovely reference to the ARC breeder, Mr Taabos Human.



## US EMBASSY



ARC Infruitec-Nietvoorbij, together with Stellenbosch University, hosted a California Department of Food and Agriculture delegation. Discussions focused on climate change and water scarcity issues relating to South African agriculture as well as ARC drought management projects.

## STUDENT TOUR



Ms Lucia Ndoda from Luhlaza High School, along with three of her friends, toured our Campus as part of her prize for winning our social media 'selfie' competition at the Western Cape Department of Agriculture's Career Day.

## UWC GUESTS



A delegation from the University of the Western Cape visited for a short tour of the ARC Infruitec-Nietvoorbij campuses, wine cellar, Bien Donn  experimental farm and Boschendal farm.

## ROOIBOS SENSORY WHEEL

*turning heads at World Tea Expo in Las Vegas, USA*



International interest in the rooibos sensory wheel received a boost at the recent World Tea Expo that was held in Las Vegas, USA. The latest version of the rooibos sensory wheel, developed in 2017 by the Herbal Tea / Sensory Research group of ARC Infruitec-Nietvoorbij and Stellenbosch University, found its way to the expo through a local rooibos marketing company to "educate" the industry and international clients in the complexities of rooibos flavour. Comments from clients varied from "So nice to have a guideline for the rooibos taste profile" to "just what the industry needs". The clients also enquired about the availability of a flavour kit consisting of chemical reference standards that could be used by industry role players to define the characteristic flavours captured in the rooibos sensory wheel. The good news is that the development of such a flavour kit has recently been completed. The work was done by a PhD in Food Science student, Ms Brigitte du Preez under the guidance of Prof Lizette Joubert of the Plant Bioactives Group, ARC, who is responsible for herbal tea research and Dr Erika Moelich and Ms Nina Muller of the Department of Food Science, Stellenbosch University. Flavour kits are used for "taster calibration" and training of quality control staff, amongst others.

## HONEYBUSH IN THE SPOTLIGHT

*Development of a honeybush grading system and recognition by industry for honeybush research by key ARC researchers*

The ARC and Stellenbosch University have recently finalised the development of a quality grading system (Qquest) for honeybush with funding by the Western Cape Department of Agriculture. Brigitte du Preez, PhD student, and Prof Lizette Joubert, presented aspects of the development and application of Qquest at the annual general meeting of the South African Honeybush Tea Association (SAHTA) that was held on 16 July 2019 in George.

On 11 July 2019, industry role players took part in an assessment of the quality score card, developed by an expert focus group. Positive feedback such as “It truly is an immense benefit to all of us in the herbal tea industry”, and “The score card has been particularly well designed incorporating all sensorial elements. It is a tool that can also be used by our clients” confirm the relevance of Qquest to industry.

The contribution of Prof Joubert and Dr Cecilia Bester to further and support the honeybush industry through their respective research on plant-to-product and plant breeding over the years was recognised by SAHTA when they were selected as honorary members of SAHTA at the recent AGM meeting. The only other honorary member is Dr Hannes de Lange, who initiated research on honeybush cultivation more than 26 years ago, when employed at the South African National Botanical Institute (Kirstenbosch).



Expert focus group from left to right: Brigitte du Preez (PhD student, Stellenbosch University), Dr Erika Moelich (Department of Food Science, Stellenbosch University), Colette Cronje (ex QA manager from industry), Prof Lizette Joubert (Plant Bioactives Group, PHAT, ARC Infruitec-Nietvoorbij) and Nina Muller (Department of Food Science, Stellenbosch University).

Qquest colour card to assess infusion “strength” and grading score card







Employees participated at the **Department of Science and Innovation (DSI) Budget Vote** and met with the Honourable Minister and Deputy Minister at the ARC exhibition stand.

Showcasing all aspects of agriculture to students at the Stellenbosch University Tygerberg **Career Fair**.



Employees participated at the **DAFF Budget Vote** and met the Honourable Minister Didiza



Our campus hosted learners from Kayamandi Secondary School as part of the **National Science Week** South Africa programme. Each division put together an interactive display focusing on breeding, cultivation, protection and post-harvest technology of deciduous fruit, grape vines, alternative crops and indigenous herbal teas.



We hosted a **Women's Day** event for staff in partnership with Tiger Wheel and Tyre where our ladies were given some pointers on self-defense and road safety as well as a demonstration on changing a tyre!

## TIA CEO VISIT



Ms Fuzlin Levy-Hassen, Interim CEO of the Technology Innovation Agency (TIA), visited ARC Infruitec-Nietvoorbij PHATs division.

Prof Joubert explained the potential of a novel accelerated “fermentation” process for the production of honeybush tea, currently under development on laboratory-scale.



Prof de Beer presented on an on-going project in collaboration with Provar and funded by Distell, as her team is investigating the juicing potential at laboratory-scale and sensory properties of juices from low chill requiring cultivars in comparison with other commercial apple cultivars. Further studies on cider and powder concentration production using these cultivars could be of benefit to South African apple producers and processors.

The Nietvoorbij Experimental Cellar is also looking into the development of products such as alcohol free sparkling wine and grape juices (unfermented beverages).



Thereafter, we discussed the application of novel agro-processing techniques, such as with the jams. Ms Feroza October touched on the use of indigenous fruit types and ingredients with a reduced sugar content, but enriched in bio-active compounds with health benefits, meaning that our products are a healthier alternative to what is currently available and can help consumers reach their daily recommended dietary allowance.

## BIO AFRICA

The ARC participated at the Inaugural Bio Africa Convention in Durban, aiming towards building the bio-economy for Africa.

ARC President & CEO, Dr Shadrack Moephuli, chaired the session on 'Transboundary Animal Diseases'. Topics include: Rift Valley Fever, African Swine Fever as well as Lumpy Skin Diseases, etc. The conference was broadcast on DSTV channel 412!

Prof Ndimba and Dr Caleb (ARC INF-NVB) were also in attendance. Pictures below of Dr Moephuli, Prof Ndimba and delegates with the DG of DSI as well as Dr Caleb doing an interview with Nala Media on the innovation of bioactive packaging film research, funded by TIA, in partnership with the CSIR.

