



Media Release

For Immediate Release

To: All Media

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Attention: News Editors / Agricultural writers

THE AGRICULTURAL RESEARCH COUNCIL EXCELS WITH AWARD WINNING DECIDUOUS FRUIT, GRAPE VINE AND HORTICULTURAL BREEDING PROGRAMMES

Stellenbosch: ARC Infruitec-Nietvoorbij, a member of the Crop Sciences Cluster of the Agricultural Research Council (ARC), is located in the Western Cape. The mandate is to conduct research and development together with technology transfer on the breeding, cultivation, protection and post-harvest technology of deciduous fruit, grape vines, alternative crops and indigenous herbal teas.

The Campus is the custodian of grapevine, deciduous fruit and wine yeast genebanks that preserve genetic resources for breeding purposes, training and comparative descriptions. Each division focuses on different aspects of research and development in fruit and wine production. The major focus is on improved crop production and mitigation of agricultural risks. This includes food security as well as the sustainable use of natural resources.

Research is done to provide growers with improved cultivars of pome-fruit, stone-fruit, fynbos, table and raisin grapes that are easy to grow and easy to sell – whether for the fresh market, for drying or for canning. In particular, cultivars should:

- be well adapted to mild winters and hot summers,
- need minimal pesticides to control pests and diseases,
- have crop reliability (stable yield),
- have attractive fruit with good appearance, texture and flavour (for fresh market),
- keep well in cold storage (for fresh market), and
- look good and taste good after drying or canning (for processing)

Plant Breeder's Rights on our cultivars are registered in the name of the Agricultural Research Council. These cultivars are licensed and commercialised through agent(s).

Commercial development of ARC-bred varieties has already made a significant impact on the South African Deciduous Fruit Industry. This impact is clearly reflected in the number of new cultivars that

have been released to the industry during the past 20 years, as well as the foreign exchange earned through exporting these cultivars to countries abroad. During the last 12 years, more than 50 cultivars including 5 climate-smart apples, 1 pear, 15 peaches, 12 nectarines, 8 plums, 6 apricots, 6 table grapes, and the very first South African raisin grape cultivar were developed, granted PBRs and commercialised.

A few highlights include:

- The newly developed 'Afri-Range' low chilling apples. Commercial apple production has traditionally been restricted to areas in South Africa with cold winters. However, this new range of Afri apple varieties can thrive under warmer climatic conditions.
- Cheeky® pear is an attractive, early blush pear with good eating qualities, which may be the answer to maintaining a continual supply of South African export bi-colour pears. The Rosemarie pear is an attractive smooth-skinned pear with a slight blush and good eating quality, that was bred from Bon Rouge and Forelle.
- The Cederberg, Desert Sun and Sunsweet peaches are all exceptional for their drying quality, whereas the Autumn Crunch peach is great for the canning industry and local fresh market. Earliblush Peach is a very good crop with 80% or more red blush and very firm flesh. The Temptation peach is a very attractive, early maturing well coloured dessert peach. Through these, the South African canning industry saw an amazing growth of 300% in the last 10 years in the Chinese market, earning our farmers, processors, exporters and our economy a very good return indeed.
- Our Bella Nova and Donna Rosa nectarines have excellent handling and eating qualities; and store very well.
- African Delight™ plum is a dark red plum with excellent storage ability at both dual and single temperature regimes for 6 weeks. Ruby Crunch plum has ruby flesh, good cold storage and production.
- Joybells is a new South African-bred red, seedless table grape that was launched at the 2018 Fruit Logistica in Berlin, Germany. It was developed from an open-pollinated variety, bred by renowned SA breeder, who was amongst the DSI NIMPO 'Top Intellectual Property Creator Award' recipients for her passion for innovation as a tool to reduce the triple challenges of unemployment, inequality and poverty. As the name suggests, 'Joybells' was inspired by the unique bell-shaped appearance of the fruit, as well as the remarkable taste and texture. It is a high yield grape with a good tolerance to cracking, travels well and has good storage.
- Sundowner, launched in January 2020, is the first ever South African bred raisin cultivar to be commercially registered with the registrar of plants of South Africa. The name Sundowner was suggested as it depicts the reddish blush on the ripe berries, which resembles the sunset.

Wine Yeasts:

The team in wine microbiology focuses on selection, breeding, evaluation and characterisation of new wine yeasts. Overall, the yeast project developed numerous novel yeast strains according to the changing demands of the wine industry. The ARC has a relationship with Anchor Yeast for the commercialisation of yeasts.

Proteas:

Looking at the impact of ARC fynbos breeding on the SA indigenous flower industry, three genera of Proteaceae forms the foundation of the South African floriculture industry: *Protea*, *Leucospermum* and *Leucadendron*. These genera are popular around the world, not only amongst florists who are excited about these niche cut flower products from South Africa, but also amongst producers and nurserymen who produce commercial cut flowers and potted plants. The cultivation of Proteaceae was initiated in the 1950's and the first exports from these plantations occurred during the 1960's.

The ARC initiated their Fynbos floriculture program in 1970 at Riviersonderend, with the focus to support a new commercial industry that expanded from picking flowers in the wild, to commercial planting and marketing of fynbos flowers. The breeding project of the ARC focuses on the exploration of interspecific hybridization to a level where new hybrids are genetically isolated from the original species. After 50 years, ARC cultivars still form an important part of this floriculture industry, but as the industry grew, the opportunity for entrepreneurs was established: private breeding companies, nurseries, and research initiatives.

Currently the ARC has 23 cultivars protected with Plant Breeder's Rights (PBR) available to the fynbos floricultural industry, even older cultivars on which PBR already expired are contributing to the most popular cultivars being exported: *Protea* (e.g. 'Sharonet' and 'Madiba'), *Leucodendron* (e.g. 'Rosette' and 'Jubilee Crown') and *Leucospermum* (e.g. 'Succession', 'Tango', 'Jelena' and 'High Gold') from export data on largest volumes exported over the past 4 years 2014/15 to 2017/18.

Honeybush:

ARC Infruitec-Nietvoorbij also does research on the *Cyclopia* species, known as honeybush - an endemic genus growing in the fynbos region of South Africa. Honeybush tea is a well-known sweet tasting herbal tea and has many documented health properties. In the past 20 years, a small industry was developed, mainly driven by ARC researchers, which annually exports around 200 tons of processed tea to more than 25 countries.

In 1999, the ARC initiated a breeding programme for this undomesticated crop. Today, the honeybush breeding programme forms the backbone of the honeybush research at the ARC, and lead to the successful bidding for external funding of more than R20 million in the past 5 years.

Income generated from the sales of the honeybush seed covers the direct running costs of the breeding programme. Through external funding, novel and valuable research on genetic and breeding aspects contributes to the knowledge and science of this unique South African plant genus. SMME's in communities are deploying the ARC honeybush genetic material through seed-orchards, nurseries and plantations to the honeybush industry. This initiative funded by DSI helps to ensure that the ARC

improved genetic bred material reaches commercial farmers, while jobs are created and new skills transferred to communities.

Even though the honeybush industry is still small, the ARC breeding programme made a huge impact on the industry and led to significant changes in the industry and conservation of honeybush species. Three ARC researchers have received recognition for their contributions by becoming the only honorary members of the South African Honeybush Tea association (SAHTA).

Through various research and development programmes, the Agricultural Research Council has been instrumental in improving South Africa's agricultural productivity & global competitiveness while increasing our food supply, reducing hunger and improving food and nutrition security.



Joybells Table Grape



Madiba Protea

Ends

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Notes to the Editors

About the Agricultural Research Council

The Agricultural Research Council is a premier science institution that conducts research with partners, develops human capital and fosters innovation in support of the agricultural sector. The ARC provides diagnostic, laboratory, analytical, agricultural engineering services, post-harvest technology development, agrochemical evaluation, consultation and advisory services, food processing technology services as well as various surveys and training interventions. For more information visit the ARC website at: www.arc.agric.za.