Honeybush tea
– a uniquely South African story

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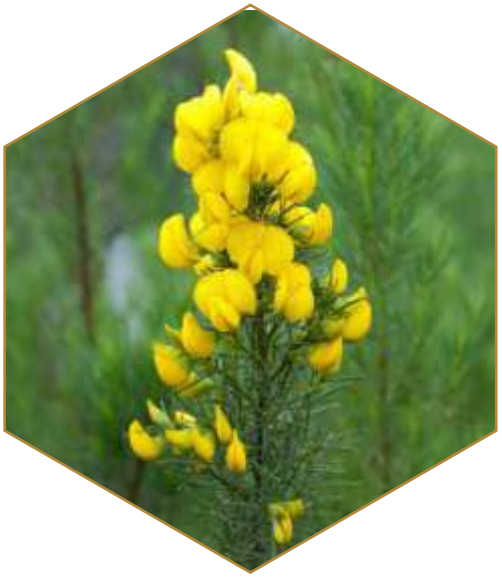
A lasting honeybush legacy

As far back as 1922, botanists Joan Hofmeyr and Percy Phillips reported on the commercial potential of farming with honeybush tea. In the *Landbouweekblad,* a weekly agricultural magazine, of 4 June 1982, Pienaar Smit pleaded that research should be done to initiate honeybush plantings. However, research into honeybush cultivation only got off the ground in 1992 once a group of dedicated researchers joined forces with farmers, processors and marketers to unlock the potential of this indigenous plant. Their shared passion for the product and a strong motivation to grow the industry helped to overcome the many challenges of producing, processing and marketing an emerging herbal tea crop. The early research attracted interest from more research partners in South Africa and abroad, thereby ensuring a strong research base to support the ongoing growth of the honeybush tea industry in South Africa.

What is in a name?

Honeybush (*Cyclopia* spp.) is an endemic South African fynbos shrub that grows naturally on the sandy coastal plains and mountain slopes of the Western and Eastern Cape. Of the 23 *Cyclopia* species identified to date, only a few species are cultivated commercially for producing honeybush tea. These species include *C. genistoides, C. longifolia* and *C. subternata* and the stems, leaves and flowers of these different species look noticeably different. *Cyclopia intermedia*, wild harvested, still contributes to more than 80% of the annual tea harvest.

People commonly refer to the shrub as honeybush, but the beverage is also known in the Afrikaans language as '*bergtee*', '*bossiestee*' and '*blommetjiestee*', translated as mountain tea, bush tea and flower tea, respectively.



The name 'honeybush' is derived from the sweet, honey-like scent of the plant when in full bloom with its yellow flowers. Photo supplied by the Agricultural Research Council (ARC).

A honeybush timeline: milestones, highlights and interesting snippets

1705 – 1705 – Earliest reference to honeybush in a European taxonomic script.

1770s – 1770s – Carl Thunberg, a Swedish botanist, recorded the use of the name '*honigtee*' during his travels in the Cape.

1808 – 1808 – First taxonomical description of the genus *Cyclopia*.

Traditionally, the tea was harvested when the bushes were in full bloom (mainly during spring in South Africa, depending on the species) when it would be easy to identify the bright yellow flowering shrubs in the wild. Research has shown that the flowers contribute to the aroma and flavour of the tea, but that they are not essential for its characteristic sweet flavour and taste.

It is easy to spot wild-growing honeybush during springtime when the shrubs are covered in bright, yellow flowers. Photo supplied by ARC.

Because of the unique link between the characteristics of the tea and the geographical locations where the shrubs grow in the wild, application for honeybush to be included in the Geographical Indication (GI) Protocol of the Economic Participation Agreement with the European Union, is in process. Once this is approved, honeybush tea will be fully protected with a GI in Europe. This GI status will confirm that the quality and characteristics of the tea, as well as its reputation, are attributed to its geographical origin. It will also protect the local industry against the misuse of product names, such as 'honeybush' and '*heuningbos*'.

Harvest time: Lorenzo Plank of the farm Nooitgedacht in the Kouga Mountains, north of Kareedouw, with a sheaf of harvested honeybush plant material. Photo by Heilie Combrink, courtesy of *Netwerk24*.

A honeybush timeline: milestones, highlights and interesting snippets

1815

1815 – Christian Latrobe was served 'tea-water', believed to be honeybush, during his travels in the Langkloof area. It was prepared from a local plant by the inhabitants.

1881

1881 – First mention of a specific honeybush species in terms of its use as a tea in a research report on *C. genistoides* (Cape tea, 'honig thee').

From crop to cup

After harvesting, several steps are involved in the process to get honeybush tea ready for the market. Firstly, the leaves and stems are cut into small pieces, moistened and then subjected to a high-temperature oxidation process. This is also known as 'fermentation' or 'curing' in the industry, and it is during this process that the tea develops its characteristic and sought-after sweet aroma and flavour, as well as its red-brown to brown colour, depending on the *Cyclopia* species. The tea leaves are then dried, sieved and packaged.

Fermenting the plant material: Quinzano Willeman is overlooking the process of heating up honeybush plant material in a stainless-steel drum for 70 hours at 70°C on the farm Nooitgedacht. Photo by Heilie Combrink, courtesy of *Netwerk24*.

Honeybush processing: One of the first steps in processing is to feed the plant material through a cutter. The workers from the farm Nooitgedacht here are (fltr) Esmeray van Ross, Julian Booysen, Piet Booysen and Leentjie Willeman. Photo by Heilie Combrink, courtesy of *Netwerk24*.

A honeybush timeline: milestones, highlights and interesting snippets

1925 – Reference to regional use of species for tea: probable indication of their prevalence in these areas, e.g., *C. genistoides* in Cape Peninsula and *C. subternata* in Caledon (Overberg) and George areas. The cold infusion was referred to as 'an excellent thirst quencher in hot weather, especially with a slice of lemon'.

1930s – Processed *C. intermedia*, harvested in the Kouga mountains, was sold for less than 2 c/kg by the Nortjés of Nooitgedacht farm. During World War II, tea was sold for ~ 5 c/kg due to a sporadic increase in demand.

1960s – First branded product, '*Caspa Cyclopia* Tea', appeared on the South African market through the involvement of Benjamin Ginsberg, the pioneer of rooibos marketing.

First records of a local cottage industry

Honeybush tea has a long history of regional use as a medicinal plant or herbal tea. Some of the earliest records indicate that it was used as restorative and expectorant in chronic catarrh and pulmonary tuberculosis. The earliest reference to honeybush is found in a European taxonomic script of 1705. Later, Carl Thunberg, a Swedish botanist, recorded the use of the name '*honigtee*' during his travels in the Cape in the 1770s. In 1815, Christian Latrobe was served 'tea-water', believed to be honeybush, during his travels in the Langkloof area. He also mentioned the constantly filled infusion vessel, always visible to the visitor. Later, in 1829, James Holman referred to the 'infusion of a wild herb that is used for tea', during his travels through the Langkloof.

In 1881, results of an anatomical and chemical study of *Cyclopia genistoides* ('Cape tea') were published in *The Pharmaceutical Journal and Transactions*, with reference to the traditional name, 'honig-thee'. Regular harvesting and oven curing of 'blommetjiestee' were performed near Riversdale in the Western Cape in South Africa, in the 1890s. In 1925, Marloth referred to the regional use of specific Cyclopia species for tea. This could be a possible indica on of their prevalence in these areas, e.g., C. genistoides in Cape Peninsula, and C. subternata in Caledon (Overberg) and George regions of the Western Cape. The cold infusion was referred to as 'an excellent thirst quencher in hot weather, especially with a slice of lemon'.

However, honeybush was largely unknown outside the areas where it grew naturally. The limited harvesting and tea production of the 20th century were centred in the Langkloof region in the Eastern Cape in South Africa. During the 1930s, the Nortjés harvested '*bergtee*' (*Cyclopia intermedia*) in the eastern parts of the Kouga Mountain range and traded it for less than 2 cents per kilogram. The other prominent producers of the 1940s to 1990s were the Kritzingers from Misgund and Van der Watts of Kareedouw.

A honeybush timeline: milestones, highlights and interesting snippets

1992

1992 – 23 February: The propagation project, '*Cyclopia* species: Initiation of commercial plantings and studying of its conservation', was launched by Dr Hannes de Lange (SANBI). About 200 000 seedlings of 12 different species were propagated and trial plantations were established on more than 60 farms spread over a vast area.
By 2002, several producers had already planted extensive hectares of honeybush, either with seedlings or cuttings (plantations are found in regions of the Langkloof, George, Riversdal to Albertinia and Bredasdorp to Stanford).

Dr Hannes de Lange: A reflection on the pioneering days

"I was introduced to honeybush tea in the early 1960s as field official of the South African Cooperative Citrus Scholarship, when I was placed in Patensie, a small town in the Gamtoos Valley. During my visits to George Malan, chairman of the local citrus cooperation, his wife, Kintie, always had a kettle of honeybush tea brewing on their coal stove. From here onwards, I became a life-long drinker of this tea," De Lange remembers. The tea was previously known as 'three-day tea', as the spent leaves could repeatedly be used by adding water after decanting the tea. The infusion was kept warm on the side of an AGA stove, for example, as off odours and flavours formed when leaves were left in the kettle for a few days at room temperature.

"In these early days, there was no commercial cultivation of honeybush. People living in different fynbos areas, harvested the plant from wild populations for their own use. Sometimes, the tea was sold at farm stalls. In 1965, the Malan family showed me C. intermedia growing in the nearby Hanekam Mountain. I made my own small home-made batch by sweating finely cut, wetted plant material in a black plastic bag – and to this day, that was the best tea I have ever tasted."

Honeybush pioneer Dr Hannes de Lange in 5th place from left at a honeybush information day, held on 20 October 1993 in Joubertina, Langkloof. Fltr: Bruce McKenzie, Johan Beyers, Trevor Blamire, Wessel du Plessis, Hannes de Lange, Frans du Toit, Scheltema Nortjé. Insert: Sam van der Merwe. Photo supplied by Hannes de Lange.

Following his postgraduate studies at the University of Pretoria, De Lange worked as a citrus researcher in Nelspruit. During this time, he purchased honeybush tea from time to time from a general dealer, but always wondered why the rooibos tea industry was going from strength to strength, but no honeybush tea industry existed.

A honeybush timeline: milestones, highlights and interesting snippets

1993

1993 – Jacomina Bloem and Dr Stappies Staphorst (ARC Plant Protection Research Institute) and Dr Hannes de Lange (SANBI) collected root nodules of many different *Cyclopia* spp. throughout the distribution range of the genus in the Western and Eastern Cape Provinces. The former two researchers developed an effective *Rhizobium* inoculant for seedlings and rooted cuttings to aid development of nitrogen fixing root nodules.

1993

1993 – First promotion of honeybush tea at the 'Flora 93' exhibition, Cape Town, by Dr Hannes de Lange. Promotion activities for increased consumer awareness and interest from producers through exhibitions, radio talks, etc. by Prof Lizette Joubert (ARC), Dr Hannes de Lange (SANBI), Marlise Joubert (ARC) and other role players followed in subsequent years.

In 1986, he accepted a position at the South African National Botanical Institute (SANBI) at the Kirstenbosch National Botanical Garden, Cape Town, to establish a tissue culture unit for the multiplication of endangered fynbos plants. *"After completion of the assignment early 1992, I knew that the time has arrived for my yearning wish to initiate a honeybush tea industry,*' De Lange recalls. And on 19 February 1992, De Lange presented the planned propagation project titled '*Cyclopia* species: Initiation of commercial plantings and studying of its conservation' at SANBI, Kirstenbosch National Botanical Garden. The project was launched on 23 February 1992.

Groundwork and humble beginnings

De Lange was told by Martin Bootsman, a veterinarian in Kareedouw, that there were a few farmers in the Langkloof and Kouga mountains who harvested honeybush from the mountains and produced tea on a small scale. *"I had the privilege to meet and work with these farmers, people like Johan Beyers, Scheltema Nortjé and his son, Quinton, and Wessel du Plessis."*

In 1993, De Lange approached Dr Stappies Staphorst at the Agricultural Research Council (ARC) Research Institute for Plant Protection in Pretoria,

Johan Beyers experimented with the fermentation of honeybush plant material in a brick oven on Eenzaamheid Farm, Noll, Upper Langkloof area, in the early 1990s. Beyers was the first to export honeybush to Japan (1993) and Germany (1995). Photo supplied by Hannes de Lange.

regarding the development of an effective *Rhizobium* inoculant for seedlings and rooted cuttings to aid development of nitrogen-fixing root nodules. Jacomina Bloem was assigned to the project, and De Lange took her to numerous wild honeybush populations to take root samples. The most effective *Rhizobium* was collected in a *C. intermedia* population on the farm of Piet Vermaak in the Garcia Pass area, near Riversdale. It was later produced commercially.

"I was the only researcher in this project during this early phase, and therefore involved in all aspects of cultivation and processing," De Lange remembers. Until this stage, fermentation for commercial production only occurred through spontaneous heat generation in so-called 'curing heaps'. However, ovens have been used on a small scale in households.

A honeybush timeline: milestones, highlights and interesting snippets

1993

1993 – First export of honeybush to Japan by Johan Beyers (Eenzaamheid Farm, Noll, Upper Langkloof area) (500 kg), followed by Scheltema and Quinton Nortjé (Nooitgedacht Farm, Lower Kouga region) (8 tonnes).

1993

1993 – First honeybush information day by Dr Hannes de Lange in Joubertina, Langkloof, to stimulate interest in honeybush production amongst farmers in the Kouga–Langkloof area.

1994 - 1996

1994–1996 – Investigation of controlled processing and establishment of guidelines for processing were undertaken by Prof Lizette Joubert (ARC Infruitec-Nietvoorbij) and her MSc student, Jaco du Toit (SU).

Dr Hannes de Lange and his assistant, Edward Jacobs, preparing honeybush seed boxes at the honeybush nursery of SANBI at Kirstenbosch National Botanical Garden, Cape Town.
Photo supplied by Hannes de Lange.

The honeybush nursery against the slopes of Table Mountain in the Kirstenbosch National Botanical Garden, where seedlings were grown for about 60 trial plantations in the Western and Eastern Cape.
Photo supplied by Hannes de Lange.

De Lange also recalls how the much-loved South African essay writer, Audrey Blignault, wrote about '*heuningtee*' in her collection of essays, recalling how, back in the 1920s, the plant material was moistened and cured in an outside oven belonging to her parents who lived in Zoar, near Ladismith.

Together with the farmers of the Langkloof and Kouga Mountains, De Lange was involved in the process of moving away from the traditional curing heaps which often resulted in incomplete fermentation and extensive mould growth. They opted for external heating of the cut plant material to increase fermentation temperatures for improved product quality. In 1993, Johan Beyers started fermenting *C. subternata* on a small commercial scale in ovens as an alternative to the traditional fermentation heaps used in the Langkloof at that stage. This has steered the later application of the rotary stainless steel drum, a concept developed by Prof Lizette Joubert, principal researcher at ARC Infruitec-Nietvoorbij, Stellenbosch.

Seed from various *Cyclopia* species was collected. Initial studies on different *Cyclopia* species and nursery aspects were performed at Kirstenbosch National Botanical Garden. Approximately 200 000 seedlings were established in small-scale plantations in more than 60 locations throughout the fynbos area from Gqeberha (formerly Port Elizabeth) in the Eastern Cape, to Kunje in the Koue Bokkeveld, a region of the Western Cape. De Lange reminds us that, at the time, "*there was no manual and most of the plantings were a complete failure*". It was only in the following years, that a formula for honeybush cultivation was established.

A honeybush timeline: milestones, highlights and interesting snippets

1995 – First export of honeybush (4 tonnes) to Germany by Johan Beyers.

1995 – Tobacco cutters were introduced as an alternative to fodder cutters for improved control of cut size and improved appearance of the processed tea.

1995 – First honeybush plantings were made in the communities, Haarlem and Genadendal. Communities in Friemersheim and Ericaville became involved at a later stage.

Introduction to ARC researchers

In 1994, De Lange met with Dr Piet van Rooyen, former director of ARC Infruitec-Nietvoorbij, Stellenbosch, and said that this project would require the input of more agricultural researchers. Prof Lizette Joubert was asked to attend a presentation on honeybush tea by De Lange at Stellenbosch University. *"I met her after the presentation,"* he remembers. *"Little could I have known that she would play a leading role in the processing of honeybush tea and the important role player she would be in this project."*

As honeybush tea was only known in limited areas at this stage, De Lange decided to package and distribute the tea for marketing and funding purposes. Together with his technical assistant, Edward Jacobs, they purchased honeybush tea from Johan Beyers, which they packaged and marketed in 'Kirstenbosch'-packaging. Various outlets were obtained through his numerous research trips. In addition, exhibition stalls were organised at numerous farmers' days and other gatherings in the Western and Eastern Cape, where packaged tea was sold, and information was handed out to interested farmers. The first meeting of producers was held on 29 October 1993 at Joubertina, which was organised by De Lange and agricultural extension officer of the Langkloof, Sam van der Merwe.

"*After the initial failed plantings, there were also success stories. In 1996, the first commercial harvest of a C. subternata plantation took place on Waboomskraal near George, and the tea was processed by Johan Beyers. The seedlings for this plantation were cultivated during the previous year in Kirstenbosch National Botanical Garden. Another success story is that of the commercialisation of C. genistoides on the farm Toekomst, near Bredasdorp. The seeds of a particularly beautiful C. genistoides bush in the Kirstenbosch National Botanical Garden were grown, and the seedlings were supplied to Van Zyl Joubert of this farm*", De Lange recalls.

In 1997, De Lange initiated a conservation action for a highly endangered species, *C. longifolia*. For the previous 130 years, this species was thought to be extinct. However, in 1994, it was re-discovered in the Eastern Cape by an amateur botanist, Noel Gray. Approximately 400 seedlings were grown in Kirstenbosch National Botanical Garden, whereafter it was re-introduced in the wild near Thornhill in the Eastern Cape.

In 1999, De Lange retired from SANBI at Kirstenbosch National Botanical Garden and continued as contract researcher at the ARC for several years. *"At this stage, there were many people entering the honeybush industry and the organisational ability of the ARC has granted a great driving force to the development of the industry,"* he says.

A honeybush timeline: milestones, highlights and interesting snippets

1995 - 1997

1995-1997 – Local marketing of 'Kirstenbosch-selected' honeybush tea was initiated by Dr Hannes de Lange to promote the use of honeybush and to obtain funds for research. More than 5.5 tonnes were marketed (first in loose format, but later also in teabag format). By early 1997, private entrepreneurs started marketing honeybush under the brands 'Trophy', 'Berg' and 'Landhuis Farm'.

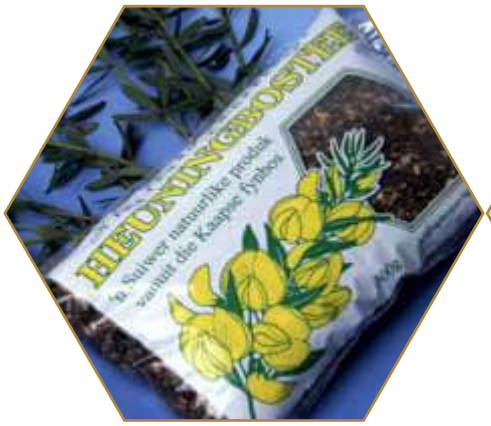
1996 to current – Prof Lizette Joubert (ARC Infruitec-Nietvoorbij) initiated projects on phenolic composition and health-promoting properties. Projects were mostly carried out in collaboration with partners, including the Medical Research Council of South Africa, the University of the Free State and Stellenbosch University, as well as international scientists.

1995 - current

De Lange was named honorary member of the South African Honeybush Tea Association (SAHTA) in 2002. More recently, in 2019, he received an Academic Medal (Gold) from the *SA Akademie vir Wetenskap en Kuns* for *inter alia* his contribution in plant conservation and research, and for his initiation of the honeybush tea industry.

"No instructions regarding honeybush tea were given to me. What I have done originated from my Gamtoos-experience, my love for this beverage, my ideal that an industry must be established, and the challenge involved." - Dr Hannes de Lange, honeybush pioneer.

Dr Hannes de Lange (left) and Dr Cecilia Bester (right) both played formative roles in the establishment of breeding and cultivation of honeybush. Photo supplied by ARC.



'Kirstenbosch Honeybush tea' package – a marketing initiative by Dr Hannes de Lange in the early 1990s to raise consumer awareness and to obtain funding for research. Photo supplied by ARC.

Johan Beyers with honeybush plants germinated by Dr Hannes de Lange for trials on farms of interested farmers. Beyers produced honeybush tea for the 'Kirstenbosch Honeybush tea' package. Photo by Hannes de Lange.

Prof Lizette Joubert (left), pioneer of honeybush processing research, at the sun-drying racks of fermented honeybush tea, during a visit to the farm Nooitgedacht, Langkloof, in the 1990s. Honeybush farmer and processor, Quinton Nortjé, is on the right. Photo by Hannes de Lange.

A honeybush timeline: milestones, highlights and interesting snippets

1997

1997 – First honeybush farmers' day at Grootvadersbos Conservancy, Heidelberg, to promote honeybush production in the Overberg area. Presentations on cultivation and processing of honeybush were given to prospective farmers and processors by Dr Hannes de Lange and Prof Lizette Joubert, respectively.

1997 – The Sustainable Rural Livelihoods Programme of ARC Infruitec-Nietvoorbij became involved in the honeybush production, including nursery practices, plantation management, pest and disease control, and soil preparation, with a specific focus on the rural communities of Genadendal, Haarlem and Friemersheim. The programme also provided training of small-scale farmers in nursery and cultivation practices.

1997

Commercialisation of *Cyclopia genistoides* – a story that originated at the foot of Table Mountain

In memory of Anthony Hitchcock who passed away, aged 60, on 7 July 2020.

Anthony Hitchcock was a passionate botanist, horticulturist and plant restoration specialist, a highly acclaimed fynbos expert who led various plant restoration projects in the Western Cape. Environmental writer John Yeld describes him as a 'fynbos legend' in a *Daily Maverick* tribute.

In January 1991, overseeing the nursery and threatened species programme at SANBI, Anthony Hitchcock collected seed from a *C. genistoides* population against the slopes of Kalkbaai mountain at the top of the Spes Bona forest, near Cape Town.

Later in 1992, Dr Hannes de Lange noticed a specifically beautiful and dense *C. genistoides* bush in full bloom next to a bench in the Kirstenbosch National Botanical Garden, and he collected some of the seed. Shortly thereafter, however, De Lange discovered its West Coast eco-type of 1.5 to 2 metres in height in the Darling area and the Kirstenbosch plant was forgotten. The West Coast eco-type *C. genistoides*, together with numerous other *Cyclopia* species, were then established in many small-scale trial plantings on farms in the Western and Eastern Cape. However, the West Coast eco-type *C. genistoides* failed the test completely for potential cultivation due to its very thick stems, loss of leaves during unfavourable climate conditions and a very low leave-to-stem ratio.

The late Anthony Hitchcock, who was a highly acclaimed fynbos expert, contributed to the cultivation and commercialisation of *C. genistoides*. Photo by John Yeld.

A honeybush timeline: milestones, highlights and interesting snippets

1997 – Rooibos tea marketing companies, including Cape Natural Tea Products, Khoisan Teas and Coetzee & Coetzee Distributors, became involved in the marketing of honeybush tea.

1997 – First value-adding products available on the market, i.e., liquid honeybush extract for use in beverages, toiletries containing honeybush and a honeybush liqueur.

At this stage, it was realised that the Kirstenbosch-type *C. genistoides* has an ideal growth habit with a high leaf-to-stem ratio, and seedlings were grown and distributed to farmers. In August 1994, shortly after Van Zyl Joubert and his family moved to the farm, Toekomst, near Bredasdorp, various *Cyclopia* seedlings, including that of the Kirstenbosch-type *C. genistoides*, were delivered to them. A success story followed, with the effective commercialisation of this unique *C. genistoides*.

In 2008, it was decided that the origin of this Kirstenbosch plant should be determined. With the assistance of botanist Ernst van Jaarsveld, Hitchcock's collections of 1991 were found in the acquisition list of Kirstenbosch National Botanical Garden, No. 0007/91. In December 2008, Dr Hannes de Lange visited this population and confirmed it as family of the Kirstenbosch-type *C. genistoides*.

The renowned *C. genistoides* bush at the foot of Table Mountain in Kirstenbosch National Botanical Garden. Photo supplied by Hannes de Lange.

A honeybush timeline: milestones, highlights and interesting snippets

1998

1998 – Green honeybush was produced for the first time on an experimental basis by Prof Lizette Joubert.

1998

1998 – First prototype rotary fermentation drum (TFD Designs, Stellenbosch) was exhibited during a honeybush farmers' day, Langkloof. Previously, Prof Lizette Joubert successfully applied the concept of rotary drum fermentation to rooibos. Honeybush processors were subsequently advised to use this technique for honeybush tea processing to achieve uniform and controlled high-temperature fermentation.

1998

1998 – 17 September: First harvest of honeybush (C. subternata) from a commercial plantation by Tius van Rooyen, Waboomskraal region, George. Prior to this date, tea was only harvested from the wild.

The advancing role of research in growing the honeybush industry

While the rooibos tea industry in South Africa dates back well over 100 years, the formal industry of its fynbos counterpart, honeybush, is relatively young.

Tius van Rooyen with the first commercial plantations to yield a honeybush harvest in 1998 on the farm Waboomskraal, near George.
Photo supplied by Hannes de Lange.

Honeybush remained a small cottage industry until it was 're-discovered' in the mid-1990s. In 1992, the foundation for a formal agricultural and agro-processing industry was laid with the launch of a propagation research project by Dr Hannes de Lange of SANBI. The project, titled '*Cyclopia* species: Initiation of commercial plantings and studying of its conservation', was funded by the ARC. The growth of the market for healthy foods contributed to the new interest in honeybush and its health-promoting properties. At the same time, more ARC-funded research projects followed, and the interest and participation of farmers, processors and marketers fuelled the further development of the industry.

In 1999, the industry was formalised with the establishment of the South African Honeybush Producers Association (SAHPA), later re-named as the South African Honeybush Tea Association (SAHTA) to include all stakeholders.

Marlise Joubert | Former ARC Chief Research Technician: Soil Science and Plant Breeding; SAHTA chairperson (2007-2012)

The honeybush journey of Marlise Joubert started in 1997 as researcher in the ARC Smallholder Farmer Section with training as one of her key responsibilities. At that stage, she was already involved in Haarlem, a region where honeybush occurred naturally in the wild. Joyene Isaacs, the ARC Centre Coordinator for Resource-limited Farmers' Programme at that stage (1996–2001), instructed Joubert and Philip Bothma to accompany Dr de Lange on his visits to various honeybush farmers in the regions of Albertinia (Solly Jacobs and Nico Malan) and Riversdale (Laurie Strydom). Bothma was also a researcher in the ARC Smallholder Farmer Section at that stage and was involved in the cultivation of alternative crops.

A honeybush timeline: milestones, highlights and interesting snippets

1998 – First registered organic honeybush tea (wild harvested) was produced by Scheltema and Quinton Nortjé under the 'Melmont' brand.

1998 – ARC Infruitec-Nietvoorbij facilitated a meeting for interested farmers, marketers and researchers in Stellenbosch. A pilot committee with Fritz Joubert as chairman was chosen to investigate the possibility of establishing a honeybush tea association.

1998 – First review article on honeybush by Jaco Du Toit (SU), Prof Lizette Joubert (ARC) and Prof Trevor Britz (SU) was published in the *Journal of Sustainable Agriculture* entitled 'Honeybush tea – a rediscovered indigenous South African herbal tea'.

Pendant de nombreuses années, Marlise Joubert a joué un rôle clé dans la promotion de l'industrie du nid d'abeilles et la coordination des activités entre l'ARC et la SAHTA. Photo fournie par l'ARC.

In 1998, after various visits, Isaacs instructed them to investigate the need for establishing an association for the honeybush industry. Under the guidance of ARC Infruitec-Nietvoorbij, several information and technical days were presented in different regions, with a total attendance figure of about 200.

Par la suite, un comité pilote, présidé par Fritz Joubert, a été formé pour étudier la possibilité de créer une association dédiée au thé Honeybush. En 1999, la SAHPA a été fondée. Marlise Joubert a joué un rôle clé dans la rédaction de la constitution de l'association et, plus tard, dans son enregistrement en tant que société de l'Article 21. À partir de mars 2000, de nombreux bulletins d'information de la SAHTA sur les activités de l'association et des informations destinées à l'industrie ont été compilés par Joubert au nom de l'ARC Infruitec-Nietvoorbij.

L'ARC a mis en œuvre des projets de soutien communautaire à Haarlem, Friemersheim, Suurbraak, Karwyderskraal et Genadendal. Des plantations ont été mises en place dans le but d'impliquer les futurs agriculteurs. L'équipe de l'ARC, dirigée par Joyene Isaacs, comprenait Marlise Joubert (science du sol), Philip Botma (culture), Hans Hugo (nématodes) et Roberta Burgess (insectes nuisibles). Le soutien communautaire comprenait la négociation d'accords avec les communautés, l'identification de terres potentielles pour la culture de nénuphars, la préparation du sol, la fourniture de matériel végétal et l'aide à la plantation de semis, ainsi que la formation à la ferme.

En 2008, Marlise Joubert et Goodwell Dingaan (Western Cape Department of Economic Development and Tourism) ont organisé un atelier de planification stratégique pour les acteurs du secteur à George. Plus tard en 2010, le gouvernement provincial du Cap-Occidental s'est engagé à accroître son soutien à l'industrie du thé honeybush, reconnaissant que le honeybush est l'un des produits indigènes uniques d'Afrique du Sud qui a le potentiel d'atteindre des marchés de niche dans le monde entier. Un nouveau plan stratégique a été élaboré par la SAHTA, sous la direction de Marlise Joubert en tant que présidente, afin d'améliorer la qualité du thé, la culture et le matériel de reproduction.

A honeybush timeline: milestones, highlights and interesting snippets

1999 - 1999 - Création de la South African Honeybush Producers Association (SAPHA), George. En 2002, le nom a été changé en South African Honeybush Tea Association (SAHTA) pour inclure toutes les parties prenantes.

1999 - 1999 à aujourd'hui - Lancement du programme ARC Honeybush Breeding and Selection, initié par le Dr Hannes de Lange et Philip Botma, avec pour objectif principal d'améliorer le rendement en biomasse de C. genistoides et C. subternata. En 2009, le Dr Cecilia Bester a pris la direction du programme.

The first *honeybush farming guide* for small and emerging farmers was launched by ARC Infruitec-Nietvoorbij in 2012. It was based on the technical research performed by Marlise Joubert.

Honeybush information shared with local communities during a SAHTA meeting on 8 March 2010, George. Photo supplied by ARC.

Meeting with honeybush industry members at the Coega Development Corporation in Gqeberha, 9 June 2011. Photo supplied by ARC.

Launch of the first ARC honeybush farming manual with emerging farmers at Genadendal, 26 July 2012. Photo supplied by ARC.

A honeybush timeline: milestones, highlights and interesting snippets

2000 – Regulations regarding export control of honeybush and green honeybush were compiled by the National Department of Agriculture, in consultation with SAHTA.

2000 – The first major funding from the private sector (National Brands Ltd) was obtained for production and product research at ARC Infruitec-Nietvoorbij. This enabled research into 1) the nutrient uptake of C. genistoides and C. subternata by Marlise Joubert, 2) harvesting practices for C. intermedia, C. subternata and C. sessili ora by Philip Botma, and 3) further studies on the antioxidant properties, as well as the antimutagenicity of honeybush by Prof Lizette Joubert, in collaboration withProf Wentzel Gelderblom of the Medical Research Council.

2000 – Vegetative propagation of *C. genistoides* as a viable commercial practice was established by Nico Malan from Reins Farm near Albertinia, Western Cape.

ARC Research Celebration Day, ARC Infruitec-Nietvoorbij, Stellenbosch, 23 February 2016. Key role players in the development of the honeybush industry were present, namely (fltr) Mammone Tang (DSI), Marlise Joubert (ARC), Dr Litha Magingxa (ARC), Eugene Smith (SAHTA), Joyene Isaacs (Western Cape Department of Agriculture), Sydney le Fleur (Ericaville Farming Trust), Dr Nthabiseng Motete (ARC), Dr Cecilia Bester (ARC), Dr Aunk Chabalala (DSI), Prof Lizette Joubert (ARC), Ntsikelelo Mkhithika (DSI), Prof Bongani Ndimba (ARC). In front: Dawn Sibiya (DSI). Photo supplied by ARC.

Over the past years, Marlise Joubert has not only made an important contribution as soil scientist in answering questions on soil preparation and fertilisation for honeybush cultivation, but together with Dr Hannes de Lange, Prof Lizette Joubert and other role players, she played a significant role in the early promotion of honeybush and cultivation thereof through technical days, field visits, etc.

For many years, she also served as link between ARC and SAHTA, i.e., researchers and the industry. Of her key contributions included her role in establishing nurseries and plantations in community support projects, formal and on-farm training of community members and other industry role players, GI application of honeybush, sourcing of research funding and various honeybush cultivation research projects. She retired from the ARC Infruitec-Nietvoorbij at the end of 2017.

Marlise Joubert at one of her many honeybush marketing initiatives: promoting honeybush tea at the national arts festival, Klein Karoo Kunstefees (KKNK), Oudtshoorn, in 2011. Photo supplied by ARC.

A honeybush timeline: milestones, highlights and interesting snippets

2001

2001 – The process to produce instant honeybush tea was patented with Schalk de Beer, Nick McCabe and Prof Lizette Joubert as inventors (SA Patent No. 2001/9559).

2001 – The first harvest of honeybush *(C. subternata)*, cultivated in a community by Aser Gelderbloem, an emerging farmer of Friemersheim, Groot Brakrivier area. Production and harvesting took place under the guidance of the Sustainable Rural Livelihoods Programme of ARC Infruitec-Nietvoorbij.

2001

Research on Honeybush cultivation

Checking up on flowering of *C. longifolia* seed-orchard: Dr Cecilia Bester, current head of the ARC Honeybush Breeding and Horticulture Programme and project leader of the DSI/ARC Honeybush Project. Photo supplied by ARC.

Today, the bulk of *Cyclopia* plant material sourced for honeybush tea production is harvested from the slopes of the Cape Fold Belt, a 1 300-km long fold-and-thrust mountain belt along the western and southern coastlines of South Africa. About 85% of this wild-harvested crop consists of *C. intermedia* (also known as '*bergtee*' or mountain tea).

Guidelines for sustainable wild-harvesting have been developed by Gillian McGregor from Rhodes University, based on interval harvesting of less than 50% of plants in a honeybush-bearing site, every two to five years. However, increased commercial production is required to supply in the growing demand, to ensure market growth, as well as to aid the conservation of species.

In 1999, the ARC Honeybush Breeding and Horticulture Programme, initiated by Dr Hannes de Lange and Philip Botma, was launched. The major aim was to improve the bio-mass yield of *C. genistoides* ('*kustee*' or coastal tea) and *C. subternata* ('*vleitee*' or marsh tea). In 2009, Dr Cecilia Bester took over leadership of this research programme.

Dr Cecilia Bester | Head of the ARC Honeybush Breeding and Horticulture Programme

The ARC Honeybush Breeding and Horticulture Programme aims to breed and select plants with improved intrinsic quality and horticultural traits, such as increased biomass yield. Regular analyses of the sensory, physical and chemical characteristics, as well as the phenolic composition, of the tea brewed from plants and its progenies (offspring), form part of the evaluation to ensure that the quality is not compromised. On-going cultivation and plant improvement research on *C. genistoides* and *C. subternata*, amongst other species, addresses the need for stable and sustainable sources of high-quality plant material.

One of the programme's success stories includes the 2013-harvest of the first honeybush seeds from seed orchards that were planted in 2011. Selected plants to ensure higher yields and tea of good quality were used for the seed orchards. The harvested seeds were sold to commercial honeybush farmers.

Since 2013, a total of approximately 60 kg seed (± 70 000 seeds/kg) was harvested from the *C. subternata* seed-orchard of which more than 55 kg seed was sold to commercial farmers and about 3 kg donated to community farmers. *Cyclopia longifolia* produced more than 18 kg of which 14 kg (± 140 000 seeds/kg) was sold.

A honeybush timeline: milestones, highlights and interesting snippets

2002 – The official inauguration of the sophisticated tea processing factory of Cape Honeybush Tea Company, Mossel Bay. Pierre Taljaard of Kanetberg Farm outside Riversdale was the driving force behind the new facility.

2002 – The process to produce green honeybush tea using vacuum drying was patented by inventors Schalk de Beer and Prof Lizette Joubert (SA Patent No. 2002/2802).

Louis Smit (left) and Dr Trevor Koopman, both from ARC Infruitec-Nietvoorbij, collecting plant samples to study honeybush diseases. Photo supplied by ARC.

Dr Bester has compiled and presented numerous short courses to role players, including one-day courses for nursery managers on the important steps involved in the propagation of honeybush seedlings and cuttings. A constant supply of seedlings and cuttings available to be planted is essential for the growth and sustainability of the honeybush industry, and is regarded as a critical part of the value chain. In 2019, her contribution to further and support the honeybush industry through her research on plant breeding, cultivation and community development was recognised when she was accepted as honorary member of SAHTA.

With her specialist knowledge of plant breeding, Dr Cecilia Bester facilitated the establishment of several honeybush nurseries. Jan and Frederick Louw of Sonskyn Heuningbos (Pty) Ltd with Marlise Joubert inspecting honeybush seedlings at their nursery in Haarlem, Western Cape.
Photo supplied by ARC.

By 2017, approximately 150 ha of cultivated honeybush land in the Western and Eastern Cape existed, with most of it consisting of *C. subternata* and *C. genistoides,* while *C. longifolia* also emerged as a highly productive cultivated crop and a vigorous grower. On the other hand, *C. intermedia* turned out to be a slow grower, with relatively poor potential for commercial cultivation. Frequent harvesting of this species prohibits build-up of sufficient energy reserves in the rootstock, resulting in dieback.

Based on her analyses of several genotypes, originally selected for cultivation and breeding trials within the ARC honeybush genetic improvement programme, Dr Gugu Mabizela, identified summer as the optimum season to harvest *Cyclopia subternata* plantations. She obtained her PhD in 2021.
Photo supplied by ARC.

A honeybush timeline: milestones, highlights and interesting snippets

2006

2006 – The ARC took the initiative by trademarking the names 'Cape Herbal Tea', 'Cape Tea', 'Cape Honeybush Tea' and 'Cape Fynbos Tea'.

2006 – Preliminary guidelines for the cultivation and harvesting of honeybush tea were released by ARC Infruitec-Nietvoorbij.

2006

Research on honeybush tea processing

In the Garcia Pass near Riversdale, there are remnants of ovens dating back to the 1890s that were probably used to prepare traditional honeybush tea, i.e., the fermented product. The warming drawers of coal stoves were also used to ferment the plant material for domestic use. In 1993, farmer Johan Beyers started with the fermentation of *C. subternata* on a 'commercial scale' in ovens as an alternative to the traditional fermentation ('curing') heaps used in the Langkloof at that time. However, processing of traditional honeybush tea through primitive, fermentation heaps or in ovens and sun-drying delivered products of poor microbial and sensory quality.

Prof Lizette Joubert – a pioneer in honeybush processing and product research

Since 1994, Prof Lizette Joubert from ARC Infruitec-Nietvoorbij, spearheaded novel research on processing, the phenolic composition, health-promoting properties, value-addition and the sensory properties of honeybush tea. She and her team members collaborated with researchers at other research organisations, including the Medical Research Council of South Africa, University of the Free State and Stellenbosch University (SU), as well as international scientists. Outputs from these projects are described in research articles by Joubert and her research collaborators.

Prof Lizette Joubert, pioneer of honeybush product and processing research at ARC Infruitec-Nietvoorbij. Photo supplied by ARC.

Under her leadership, controlled processing of honeybush tea was explored, refined and placed in practice. In 1994, Prof Lizette Joubert (ARC) did preliminary experiments to set the scene for an MSc study by Jaco du Toit (SU) during 1995 to 1996. Under her guidance, Du Toit investigated controlled honeybush tea processing and the first guidelines for processing were established. Controlled high-temperature fermentation was shown to be essential for a good quality product. Several processors attempted the use of a variety of static heating vessels. However, these vessels resulted in poor heat transfer and distribution. Previously, Joubert successfully applied the concept of rotary drum fermentation to rooibos. She subsequently advised the use of this technique for honeybush tea processing to achieve uniform and controlled high-temperature fermentation. In 1998, the first prototype rotary fermentation drum was built by TFD Designs, Stellenbosch, and exhibited during a honeybush farmers' day in the Langkloof. Rotary fermentation eventually became the industry norm.

A honeybush timeline: milestones, highlights and interesting snippets

2008 – 2008 – Strategic planning workshop for industry stakeholders, George, convened by Marlise Joubert (ARC Infruitec-Nietvoorbij) and Goodwell Dingaan (Western Cape Department of Economic Development and Tourism).

2008 – 2008 – An anti-diabetic extract of honeybush was patented with Prof Lizette Joubert as co-inventor (Patent application PCT/EP2008/052863; WO2008/110552 A2; US2011/0045108 A1; US20120251643 A1; EP2120924 B1).

2010 – W2010 – Industry seminar, George: estern Cape Provincial Government committed itself to increase its support to the industry, recognising honeybush as one of the unique indigenous products from South Africa; SAHTA launched its new strategic plan to improve tea quality, cultivation and breeding material.

One of the regular visits to Prof Lizette Joubert by her international research collaborators from Tokyo University of Agriculture and Technology, Fuchu, Japan, in 2017 to learn more about honeybush tea.
Fltr: Japanese post-graduate students, Oji Nakamura and Kazunobu Okon, Prof Lizette Joubert, Prof Yutaka Miura, Marlise Joubert.
Photo supplied by Lizette Joubert.

During 1998, Joubert produced the first batches of green honeybush on an experimental basis. To process green or 'unfermented' honeybush tea, the green plant material is cut and dried without fermentation. Research on green honeybush tea remains a prominent component of the work by Prof Lizette Joubert in collaboration with her colleagues at national and international institutions. This includes the production of extracts with high levels of specific bioactive compounds, modification of the aroma profile of green honeybush to enhance sweet, fruity notes and the investigation on health-promoting properties.

Ongoing research into the many health-promoting properties of honeybush tea contributed to increased awareness and appreciation from international tea markets. This included research into the potential of honeybush to combat cancer and diabetes, the therapeutic potential of its phytoestrogens, and its confirmed status as a caffeine-free tea. Understanding the complex blend of compounds that occur in honeybush, and the synergistic health effects of these compounds, remain a key focus of product-orientated honeybush research under the leadership of Prof Lizette Joubert. Apart from distinguishing honeybush from rooibos and other herbal teas, the phytochemical profiles of *Cyclopia* species also give direction to potential value-addition opportunities and the development of niche products.

Prof Dalene De Beer, specialist researcher at ARC Infruitec-Nietvoorbij, joined Joubert's research team in 2006. As part of the Plant Bioactives Group of the Post-Harvest and Agro-Processing Technologies Division, they have been heading numerous research activities elucidating the phenolic composition of different *Cyclopia* species to guide value-addition and evaluation of bioactivity aimed at nutraceutical development. De Beer plays an important role in unravelling the phenolic composition of *Cyclopia* species and investigations into the effect of processing on these important phytochemicals.

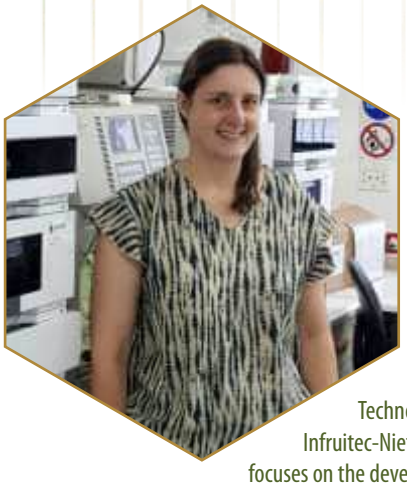
A honeybush timeline: milestones, highlights and interesting snippets

2010 – Antimicrobial composition comprising an extract from *Cyclopia* was patented by inventors Prof Marinda Viljoen-Bloom and Prof Lizette Joubert (Patent ZA2010/03568).

2011 – First honeybush seed orchards for three species were planted by Dr Cecilia Bester (ARC Infruitec-Nietvoorbij), using selected plants to ensure higher yields and tea of good quality.

2012 – First '*Honeybush Farming Guide*' for small and emerging farmers on how to farm with honeybush launched by ARC Infruitec-Nietvoorbij, under leadership of Prof Lizette Joubert and technical research performed by Marlise Joubert.

From the beginning of her honeybush research journey, Prof Lizette Joubert had the vision to improve honeybush tea quality through optimisation of processing conditions and to develop a quality grading system that would aid processors in ensuring that tea of good and consistent sensory quality reaches the consumer. From 2010, novel sensory research on honeybush tea in collaboration with SU was led by sensory scientist and principal researcher, Nina Muller, and was proceeded by Dr Erika Moelich, principal researcher and current technical manager of the Sensory Research Facility at the Department of Food Science. Over the past decade, the optimum aroma, flavour and taste of honeybush tea, as well as sensory differences between species were established through cutting-edge sensory research. Sensory quality control tools, such the honeybush sensory wheels and lexicon, have been developed for the industry. In 2021, the first quality grading manual, '*Grading of fermented honeybush tea – an illustrated guide*', compiled by Prof Lizette Joubert and Nina Muller, was published for industry role players, including honeybush processors, quality control personnel and marketers. The manual is based on research by Dr Brigitte du Preez as part of her PhD degree in Food Science.



Prof Dalene de Beer, specialist researcher in the analytical laboratory of the Plant Bioactives Group of the Post-Harvest and Agro-Processing Technologies Division, ARC Infruitec-Nietvoorbij. Her research focuses on the development of analytical techniques to measure phenolic compounds in honeybush to determine differences between *Cyclopia* species and selections, and the effects of food processing on honeybush-related products. Photo supplied by ARC.

In 2009, Prof Joubert and Dr de Lange jointly received the 'Indigenous Plant Use Forum Plant-to-Product Award' for their contribution to the commercialisation of honeybush tea. In 2018, she received an honorary medal from the '*SA Akademie vir Wetenskap en Kuns, Fakulteit Natuurwetenskap en Tegnologie*' for her contribution to rooibos and honeybush tea product research. In 2019, her contribution to plant-to-product research to further the honeybush industry was recognised by SAHTA, when she was named honorary member of SAHTA. To date, Dr de Lange, Dr Bester and Prof Joubert are the only SAHTA honorary members.

A honeybush timeline: milestones, highlights and interesting snippets

2013 – First honeybush seeds harvested from seed orchards and sold to commercial honeybush farmers by Dr Cecilia Bester (ARC Infruitec-Nietvoorbij).

2013-2021: In total, at least 60 kg seed (± 70 000 seeds/kg) was harvested from the *C. subternata* seed-orchard of which more than 55 kg seed was sold to commercial farmers and about 3 kg donated to community farmers. *C. longifolia* produced more than 18 kg of which 14 kg (± 140 000 seeds/kg) was sold. *C. genistoides* as a re-sprouter was less productive with 5 kg seed (± 140 000 seeds/kg).

2014 – First generic honeybush flavour wheel and lexicon were released.

As one of the pioneer researchers of honeybush since 1994, Prof Lizette Joubert is continuing heading invaluable product-orientated research, including that of novel processing methods of honeybush tea.

George Dico, technical assistant at ARC Infruitec-Nietvoorbij, and Joubert's right-hand in producing tea batches on laboratory scale for research over the past 10-plus years. Photo by Brigitte du Preez.

Dr Brigitte du Preez obtained her PhD in 2020 for her work on developing a quality grading system for fermented honeybush tea to evaluate and communicate sensory quality. Photo by Anton Jordaan.

A honeybush timeline: milestones, highlights and interesting snippets

2016

2016 – 23 February: A '*Honeybush Research Celebration Day*' was organised by ARC Infruitec-Nietvoorbij.

2016 – The Khoi-San is acknowledged as the custodians and knowledge holders of honeybush by Government.

2016

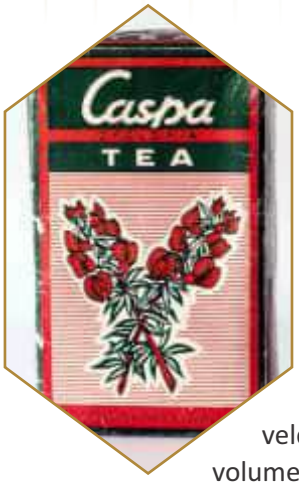
2016

2016 – Honeybush Community of Practice (HCoP) was launched by the Provincial Departments of Environmental Affairs, Western and Eastern Cape Governments.

Local growth and the start of an international footprint

From 1940 to 1990, several sporadic increases in tea production happened in the Langkloof. During this period, a few marketing attempts took place in the form of honeybush tea packaged in carton boxes. One of the earliest examples was the packaged '*Caspa Cyclopia Tea*' (ca. 250 gram) through the involvement of Benjamin Ginsberg, the pioneer of rooibos marketing in the early development of the rooibos tea industry. Later 200-gram packets were marketed through Intercontinental Foods (Johannesburg) and Goldberger Trading (East London). The inscription '*Contains no caffeine or harmful alkaloids*' appeared on these afore-mentioned packets. This labelling claim was derived from a preliminary report of the biochemical studies of honeybush tea by S.E. Terblanche (University of Port Elizabeth, now 'Nelson Mandela University') in the late 1970s. Also in the late 1970s, attempts were made to export honeybush tea to the USA, Japan and Germany, but without any success.

Since the revival of the industry in the 1990s, honeybush tea has been sold in bulk to international clients. It was exported for the first time in 1993, and again in 1995, to Japan and Germany, both major international markets for rooibos. Since then, the export market for honeybush has expanded substantially with about 632 tonnes recorded in 2011. However, shortages



This packaging of '*Caspa Cyclopia Tea*', dating back to the 1960s, is the earliest example of honeybush tea packaged and branded commercially. Photo supplied by ARC.

of plant material, as well as severe droughts and veld fires, have curbed export volumes. Major export destinations include the Netherlands, Germany, USA, Canada and UK. Apart from Japan, honeybush is also exported to traditional tea-drinking countries such as Sri Lanka, Malaysia and China. In 2019, a major shift in export to African countries was seen, indicating the potential development of new markets.

The industry also recognised the importance of local value-addition in terms of packaged products ready for the retail market. Today, honeybush products are sold as speciality and/or health products in major retail supermarkets, health shops, pharmacies, up-market farm stalls, as well as through online marketing. The involvement of major rooibos tea marketing companies contributed to the presence of honeybush products on supermarket shelves.

A honeybush timeline: milestones, highlights and interesting snippets

2018

2018 – '*The Wild Honeybush Harvesting Field Guide*', compiled by Gillian McGregor (Rhodes University, Makhanda), was published. The project was led by Albert Ackhurst, Head of Component: Biodiversity Management, Department of Environmental Affairs and Development Planning, Western Cape Government.

A variety of hot and cold beverages can be brewed from honeybush tea leaves, and the beverage can also be infused or blended with fruits, herbs and spices. Photo by Wian Hattingh.

Over the past two decades, various branded honeybush tea, herbal and/or fruit tea blend products have seen the light, many of them consisting of honeybush and rooibos blends. In addition, the subtle differences between the sensory profiles of the herbal teas produced from different *Cyclopia* species, could create opportunities for niche markets with specific taste requirements. However, the limited supply of fermented honeybush tea restricts the expansion of product differentiation based on species, and branded products consist predominantly of blends of different honeybush species.

The subtle sweet taste of honeybush tea also provides a good carrier for the combination with other indigenous South African herbal or medicinal plants ('botanicals'), including buchu (*Agathosma betulina* and *A. crenata*) and hoodia (*Hoodia gordonii*).

Honeybush tea leaves. Photo by Wian Hattingh.

Green ('unfermented') honeybush tea, produced at lower volumes, has found niche markets as an alternative tea product and source for the production of phenolic-rich extracts for the functional food, nutraceutical and cosmetic industries.

Overall, honeybush tea is benefiting from global market trends favouring naturally healthy herbal teas. In 2019, the formal honeybush tea industry reached a 20-year milestone and further post-harvest research advances were achieved. The industry is now poised for further growth – locally and globally – depending on a consistent supply of a product of good quality.

A honeybush timeline: milestones, highlights and interesting snippets

2019 – 2022: South African Department of Science and Innovation (DSI) invests in a three-year project to support the honeybush tea industry. The project is implemented by the ARC and provides training to rural communities where honeybush is cultivated and/or harvested. Emphasis is placed on community development and the establishment of small, micro and medium enterprises related to honeybush tea. This project is a follow-up on previous projects funded by DSI in 2012 to 2013, and 2015 to 2017.

2019-2022

Looking into the future . . . Dr Hannes de Lange, Pioneer of the formal honeybush industry, December 2020

"In view of the current COVID-19 pandemic, one should not lose courage – in the past, world trade has faced greater challenges. The honeybush tea industry must place emphasis on cultivation and must be less dependent on natural plant populations, except for the few instances in which sustainable harvesting is possible. Greater emphasis should be placed on plant breeding and selection. Research on the health properties of honeybush tea is essential. The quality of the tea must be at all times non-negotiable."

A vision for the honeybush industry: Joyene Isaacs, chairperson Agricultural Research Council Board | Former HOD Western Cape Department of Agriculture, March 2021

*"Honeybush is one of the crops that we as South Africans have not appreciated fully. We should discover this tea and talk about **our** honeybush tea. That would be our best marketing tool."*

"All the answers are available, but you need a specialist to put it together in a plan that delivers a pull and a push. Research is the push factor that can get a high-quality product to market, but markets are needed to pull products off the shelf." – Joyene Isaacs, Chairperson of the ARC Board, says a strategic marketing plan is key to the development of the honeybush industry. Isaacs was actively involved in the establishment of SAHPA (later SAHTA) in the late 1990s and the development of the honeybush tea industry.
Photo supplied by ARC.

A honeybush timeline: milestones, highlights and interesting snippets

2020 – 2020 – First honeybush grading system was developed with funding from Western Cape Department of Agriculture.

2021 – 2021 – Information pamphlet on a survey of honeybush diseases and preventative control measures was compiled and published by ARC Infruitec-Nietvoorbij. Funding was received from Foundational Biodiversity Information Programme (FBIP).

2021 – 2021 – A draft Business Management Plan (BMP) compiled by Department of Environmental Affairs was published in the Government Gazette for public comments.

In a recent interview, Joyene Isaacs, chairperson Agricultural Research Council Board (2021), emphasised that the honeybush industry needs a marketing strategy, supported by sustained funding for at least five to ten years, along with a dedicated specialist marketing team to execute it. She stressed that such a strategic approach would be critical to ensure the development of a sustainable industry. The challenge for industry role players is how they should *"take it to the next level"*. She highlighted five key aspects that should be considered to ensure the development of the industry.

1) A parallel system of research and effective consumer communication.
2) An improved organisational structure to ensure the effective two-way flow of information between researchers, the agricultural sector and the commercial sector.
3) Funding to help mitigate the risks of farming with a new crop.
4) Production volume is critical. Volume is required for effective marketing; however, a market for the product is also required. *"Marketing and volume go hand-in-hand. Local market development is not receiving sufficient attention and investment. Product quality is also linked to volume, as well as marketing."*

Technology week celebration in Soweto, 28 July 2012. Photo supplied by ARC.

5) The documentation and use of indigenous technical knowledge.

It is important to understand that marketing and volume go hand in hand, Isaacs explains. "We are not paying enough attention to development of local and global markets, but at the same time we have to deliver enough product of a consistently high quality", she adds. Isaacs emphasises that honeybush tea has the potential to become 'irresistible', provided we can achieve sufficient volumes and consistent quality.

A honeybush timeline: milestones, highlights and interesting snippets

2021

2021 – ARC Infruitec-Nietvoorbij begins with the rollout and implementation of the honeybush grading system through the publication of a manual, '*Grading of fermented honeybush tea – an illustrated guide*', and training workshops for industry. Funding was received from DSI.

2021-2024

2021 – 2024: ARC receives funding from the Technology Innovation Agency (TIA) to continue with development work in communities and research on an accelerated oxidation ('fermentation') process.

Sources of information

The following individuals are hereby acknowledged for their invaluable contribution to this documentation of the story of honeybush:

- *Dr Hannes de Lange – for his information, documented storytelling and photos on the history of honeybush, the beginning of the formal honeybush industry and his view on its future.*
- *Dr Cecilia Bester and Prof Lizette Joubert – for their contributions, including interviews, information, photos, and editing of this document.*
- *Joyene Isaacs – for the interview on her vision for the honeybush industry.*
- *Marlise Joubert – for her information.*
- *Christa Lombard (ARC-NRE) – for the layout and design of the Honeybush tea - a uniquely South African story.*

In addition to notes and interviews with key role players, the following academic texts were used as key sources of information:

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- *To all honeybush farmers who graciously welcomed the researchers and students on their farms and played a significant role in finding answers, helping to grow the industry, and generously supplying plant material for experiments.*

- *To the many role players who went out of their way to assist to make honeybush tea a success story even though there are still many challenges.*

- *Lastly, to all the funders who made research and progress in the industry possible, especially the ARC, DSI and Western Cape Department of Agriculture, for their continued support and funding.*