



AGRIPRENEUR

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**The Food Garden
Project**

**Information
Technology in
agriculture**

Chief Jongusapho Bokleni: an emerging citrus grower



Kayaletu Sotsha
Managing Editor: Agripreneur

THE AGRIPRENEUR QUARTERLY:

A PUBLICATION BY THE SMALLHOLDER MARKET ACCESS RESEARCH UNIT OF THE NAMC

Welcome to the sixteenth edition of the Agripreneur publication of the National Agricultural Marketing Council (NAMC). Through this publication, the NAMC seeks to create a platform where agripreneurs and farmers, particularly smallholders, share their knowledge and skills, challenges, experiences and insights with one another. It is believed that this publication will assist smallholders in learning from one another, developing strategies, adopting models, and becoming part of the value chain through marketing commodities and products that meet market standards and are safe for consumption. Agripreneur also serves to promote and profile aspects of South African agriculture as a brand. Each issue will feature good stories that will hopefully convince the reader to **#LoveRSAagric**.

Presented in Agripreneur 16 are the following topics:

- (1) The Dis-Chem Foundation's food garden project
- (2) The application of information technology in agriculture: lessons and experiences from China
- (3) The Jozini goat market reinvigorated
- (4) Chief Jongusapho Bokleni: an emerging citrus grower
- (5) Mulilo Hot Sauce

AGRIPRENEUR

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Photo by Bongani Radebe

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The Dis-Chem Foundation's food garden project

By: Kayaletu **Sotsha** & Bongani **Radebe**

Our nation has a very high rate of unemployment and has a need for food security. Numerous organisations, NGOs and the government have in the past invested in innovative programmes focusing on food security. Dis-Chem is one of the companies that have extended a hand to meet the need for food security.

In 2006, Dis-Chem established a foundation, pioneered by Ivan and Lynette Saltzman, based on their concern about the growing level of poverty in South Africa. The foundation aims to provide care and support to improve the lives of individuals while relieving the burden on communities, families and friends. The foundation runs several projects, but this article's focus is on the food garden project, which was established in 2013.

The food garden project is led by a Sustainable Agricultural Project Development specialist, Mr Lebogang Malinga. In 2015, Mr Malinga obtained a National Diploma in Agricultural Management (Cum Laude). He is currently in the final stretches of a Bachelor of Technology (BTech) degree in Agricultural Business and Management at the University of South Africa (UNISA).

The food garden project seeks to promote nutrition, job creation, skills development, research, education, entrepreneurship development, mentorship, sustainable development goals and agricultural innovation. The project focuses mainly on growing and marketing vegetables and some herbs.

The project currently employs 14 permanent people from the community of Ivory Park and takes in five to 15 casual labourers. In addition to job creation, the project seeks to transfer skills to the locals, mainly on how to properly grow vegetables organically – soil preparation, planting, application of nutrients into the soil, irrigation and marketing.



Project Manager: Mr Lebogang Malinga

The Dis-Chem food garden project hosts students from institutions of higher learning who come to do their research on various topics around food security, development studies, soil science and engineering. Currently, there are two students from the Tshwane University of Technology (TUT), namely Ms Boipelo Molai, an intern who graduated with a National Diploma in Commercial Mixed Farming and a BTech in Crop Production, and Ms Kelebogile Magongoa who is doing her work-integrated learning in Commercial Mixed Farming. This sort of partnership assists the project through information sharing, because the students do come up with recommendations on how the project could implement certain things better.



Some of the Dis-Chem food garden employees



“The foundation aims to provide care and support to improve the lives of individuals while relieving the burden on communities, families and friends.”

In addition to hosting students, the project also hosts children from various schools around Gauteng to assist them with practical experience of what they are learning in class in natural science, life science and agriculture subjects. The project also tries to showcase agriculture, convincing the children that agriculture is “fashionable” and important for food security. Below is a photo of the signs that are used to excite children as they learn about different types of vegetables.

There is also some work being done with various organisations, including people with disabilities, to try to integrate them into such an initiative through mentorship. This work involves developing tailor-made programmes and implementing such programmes. One example is Cluny Farm, a centre for disabled people in Kyalami.

Dis-Chem sponsors a number of rehabilitation homes, and patients are also invited to assist with various activities, including the design of materials, contours, marketing strategies and so forth. These activities also assist them in discovering their talents in a way.

Those that struggle to fit in with one of the aforementioned activities are usually transferred to Dis-Chem stores and warehouses where they are given some type of job to do. The long-term aim of the project is to bring in life coaches to ensure that these individuals receive comprehensive support from the Dis-Chem Foundation.



TUT students: Boipelo Molai (Left) and Kelebogile Magongoa (right)



Cluny Farm before



Cluny Farm after

There is a great deal of innovation within the project, ranging from collecting 20-litre drums (used for mobile seed beds and in-field water harvesting) and old tyres (used for holding the soil for planting) to growing vegetables on a concrete floor. Below are photos of some of the innovations on the Dis-Chem food garden project site.

This site used to be under-shade parking for Dis-Chem employees. It still has a concrete floor, but it has now been turned into a garden, using old car tyres and small concrete slabs to hold the soil.



"Barriers" on either side

The "barriers" pictured above were later discovered not to be barriers, but rather structures for people to lean on and feel comfortable as they engage in conversation, particularly during marketing days.

In 2017, the project won the Best Provincial Water Care Award from the Department of Agriculture, Forestry and Fisheries (DAFF). In 2018, the project received the same award at a national level.

One of the key focus areas of the project is sustainability, considering that funding may stop at some point due to various reasons. Should this ever happen, the project should be in a position to run on its own. In this case, Mr Malinga believes that strong linkages with the markets are essential. He believes that this is an area they need to strengthen in the short to medium term. Currently, the project supplies the Dis-Chem canteen, local communities, Dis-Chem staff and restaurants. They are also piloting a vegetable stand in the Bryanston organic and natural market.

Some challenges include the lack of a packhouse, processing facility and seedling propagation tunnel.

For more information, contact Lebogang Malinga on 063 218 7971.



About NAMC

The NAMC was established in terms of the Marketing of Agricultural Products Act No. 47 of 1996, as amended by Act No 59 of 1997 and Act No. 52 of 2001. We are a statutory body reporting to the Minister of Agriculture, Forestry and Fisheries.

Our mandate is captured in our four core divisions namely;



**Agribusiness
Development**



Agricultural Trusts



Statutory Measures



**Markets and
Economic Research
Centre (MERC)**



Our Vision

Strategic positioning of agriculture in a dynamic global market.



Our Mission

To provide marketing advisory services to key stakeholders in support of a vibrant agricultural marketing system in South Africa.

The work of the NAMC is aligned to the four strategic objectives as set out in Section 2 of the MAP Act, 1996 namely;

Increasing market access
to all market participants



More efficient marketing of
agricultural products



Increased export earnings
from agricultural products



Enhanced viability of the
agricultural sector



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Photo by JESHOOOTS.com from Pexels

The application of information technology in agriculture:

LESSONS AND EXPERIENCES FROM CHINA

By: Thulisile Mokoena

Agricultural information technology may be used as a technical foundation for the modernisation of agriculture. The potential contribution of information technology application in agriculture can be viewed through cost reduction, increase in efficiency and productivity improvement (Milovanović, 2014). In simple terms, agricultural information technology has great significance in increasing quantity and improving quality of agricultural production and speeding up agricultural development.

Nanjing Agricultural University has established exchange relationships and has developed programmes with other countries. Since 1990, it has been undertaking seminars and workshops on Human Resources Professional Development for professionals coming from developing countries, as a joint initiative between the Ministry of Commerce, Ministry of Education, Ministry of Agriculture and other national ministries and commissions.

The Training on Information Technology Application in Agriculture for Developing Countries seminar was launched in 2004. The objective of this seminar is to explore measures to enhance agricultural information technology co-operation between developing countries.

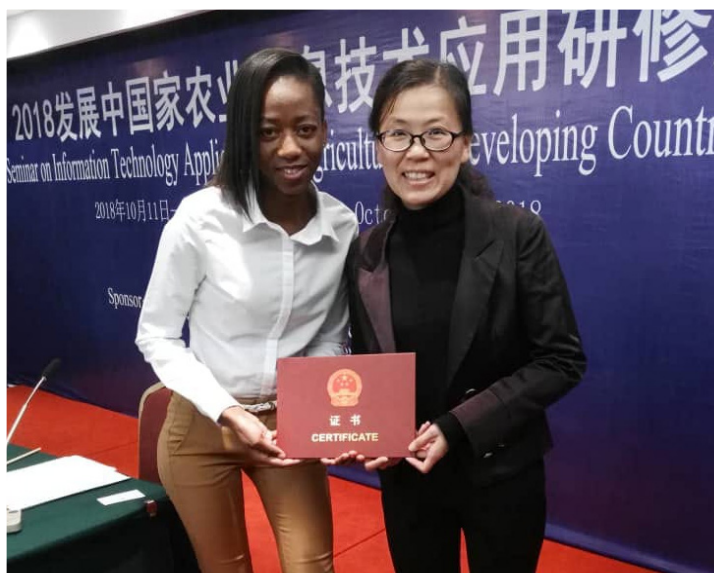
In October 2018, Nanjing Agricultural University hosted a seminar on Information Technology Applications in Agriculture for Developing Countries. The purpose of the seminar was to orientate participants from developing countries on the application of information technology in agriculture. The seminar was sponsored by the Chinese government and hosted by Nanjing Agricultural University from 11 to 31 October 2018. There were 28 participants from 11 participating countries from Africa (Ethiopia, Morocco, Uganda, Nigeria, Botswana and South Africa), South America (Suriname, Venezuela and Panama), North America (Jamaica) and Asia (Indonesia).

Seminar model

University professors and agricultural researchers delivered lectures covering China's achievements in agricultural development through the development of agricultural information technology. The seminar explored measures to enhance agricultural information technology co-operation between developing countries.

The seminar model included class lectures and field trips. Thematic areas covered during the seminar included:

- » Smart agriculture (application of information technology in agricultural development, application of remote sensing in agriculture, crop growth simulation and productivity prediction techniques, transgenic crop approaches and bio-safety);
- » Record management (file information management of breeding technology);
- » Storage and processing technology (physical methods, characteristics of cold storage, application of registered storage);
- » Introduction to Chinese culture (evolution of Chinese culture, language, food and art);
- » Field-guided tour on Chinese culture (Xian, Beijing and Nanjing); and
- » Field visit to agricultural research sites (Xian, Beijing and Nanjing).



From left, Prof. Hu Fong, Prof. Liu Zhimin, Dr Zhao Yuhong and Mrs Mokoena

Major lessons observed throughout the programme:

- » Increased agricultural productivity and marketing are dependent on a well-developed infrastructure.
 - ♦ China has a well-developed infrastructure (road networks, power lines, irrigation systems, processing plants and communication systems). This infrastructure acts as an enabler for the Chinese people to succeed in agricultural production and contributes to the country's ability to apply more advanced technology in the process.
 - ♦ China mostly uses greenhouses, complemented with agricultural information technology. It has been noted that more than 85 % of the

world's greenhouses are found in China, covering more than 3.8 million hectares of land. There is more control throughout the production process and weather-related risks are reduced.

- ♦ The promotion of scientific and technological innovation and advanced "green" agricultural development has created an agricultural sector that is profitable and globally competitive.
- ♦ China has invested heavily in agriculture and this has increased its food production and reduced poverty. The country has a population of over 1.3 billion people, which is the largest population in the world. However, it can feed its nation and unemployment is relatively low.



Certificate recipients

» The history of the Chinese nation

♦ China has a long history, which is embraced and well documented. Chinese people appear to be united and they appreciate their culture.

♦ Chinese tourism sites were always packed during the tour, which is an indication that their cultural sites contribute significantly to the country's GDP.

Conclusion

Agricultural information technology can be used as a basis for the improvement and transformation of traditional agriculture into modern agriculture, and by doing so may contribute to an increase in agricultural productivity. South Africa should invest more in the agricultural sector to improve food security and to address the current economic challenges of unemployment, poverty and inequality.

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TRADE PROBE

The theme of the current issue looked at trade implication of diseases outbreak in the agricultural sector. It is notable that beside the disease outbreak, the sector has been facing challenges associated with adverse environmental conditions such as drought.

The publication looked at four diseases outbreak

(i) FMD – neighbouring countries have placed bans on imports of cloven-hoofed animals from South Africa. Given the imposed imports bans, SA is bound to lose significant market share in favour of Namibia as it already supplies the biggest portion of live animals in the region.

(ii) Avian Influenza – the monthly imports increased from an average of 38 000 tons in 2015 to 43 607 tons in 2018, which is equivalent to a 15% growth in imports. Therefore, the increasing imports raises concerns about the SA production of poultry. The degrading local production is likely to be due to disease outbreak, feed costs & persistent drought.

(iii) Listeriosis – the outbreak of listeriosis has resulted in some African countries restricting processed meat imports from SA. The general impact of the listeriosis outbreak and other factors can be determined looking at the monthly trade trends. The export value of processed meat decreased by R3 853 between March 2017 and December 2018.

(iv) Fall armyworm invasion – this invasion affects mainly the maize industry and the trade performance of maize can be driven by the outbreak and other factors such as drought. The monthly exports decreased by R188 133 between January 2017 and December 2018.



If you want a copy, the Directory is always available online (Ebook or a PDF).
Get it at <https://www.namc.co.za/category/research-publications/publications/trade-probe/>

THE JOZINI GOAT MARKET REINVIGORATED



By: Kayaletu Sotsha

“The communal farmers of the KwaZulu-Natal Province, particularly the Jozini area, have taken the formal market by storm through auction sales.”

South Africa produces a relatively small number of goats. In the commercial sector, there are different breeds kept for specific purposes, for example, the Boer goat, Savanna and Kalahari are kept for the production of meat, skins and cashmere; Angora produces mohair, while Saanen, Toggenburg and Alpine produce milk.

In the communal sector, there are various types of goats collectively classified as indigenous goats. These are in the hands of communal producers and are primarily kept for family needs as opposed to marketing purposes. As in the commercial sector, there are different products (including meat, skins and milk) that are derived from the production of indigenous goats. However, the difference is that meat and milk are used for own consumption, and skins for traditional purposes.

Figure 1 shows the production of goats in the country as well as the comparison between the value of exports and imports from 2009 to 2018. Note that there was no production data available for 2018. The trend shows that production has been declining steadily over the years. The value of imports, on the other hand, has been fluctuating but remains well above the value of exports for the period 2009 – 2018. The last time the value of exports was higher than that of imports was in 2009.

¹ Source: Department of Agriculture, Forestry & Fisheries (DAFF). 2015. Statistics and Economic Analysis. Pretoria, South Africa. Available at www.daff.gov.za.
Department of Agriculture, Forestry & Fisheries (DAFF). 2018. Abstract of Agriculture Statistics. Pretoria, South Africa. Available at www.daff.gov.za.

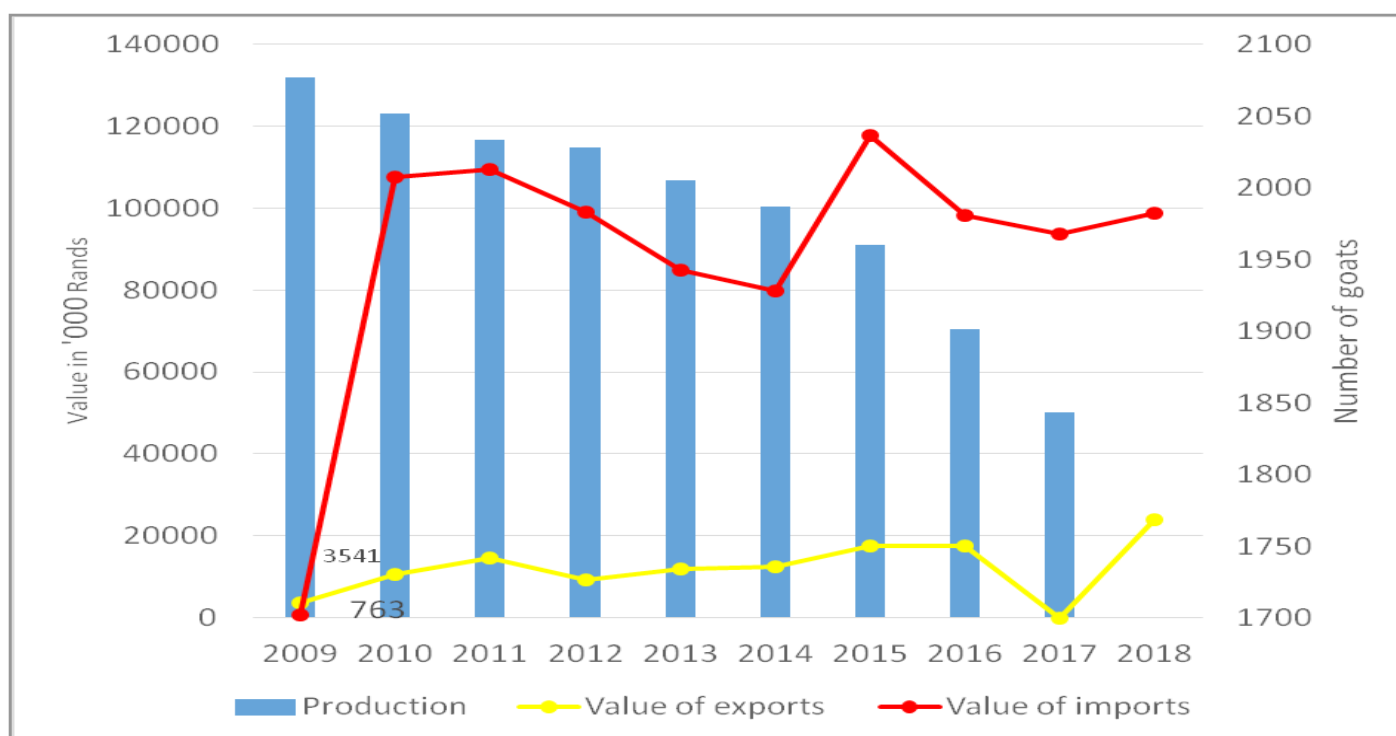


Figure 1: Production, imports and exports

Source: DAFF (2018)

Figure 2 shows the production areas of goats in South Africa. Due to the lack of recent data, this article uses the 2015 data, which shows that the Eastern Cape, Limpopo and KwaZulu-Natal provinces (combined) have 70% of the total number of goats in the country (DAFF, 2015). It is also worth noting that these provinces have a relatively larger proportion of rural households compared to the rest of the provinces.

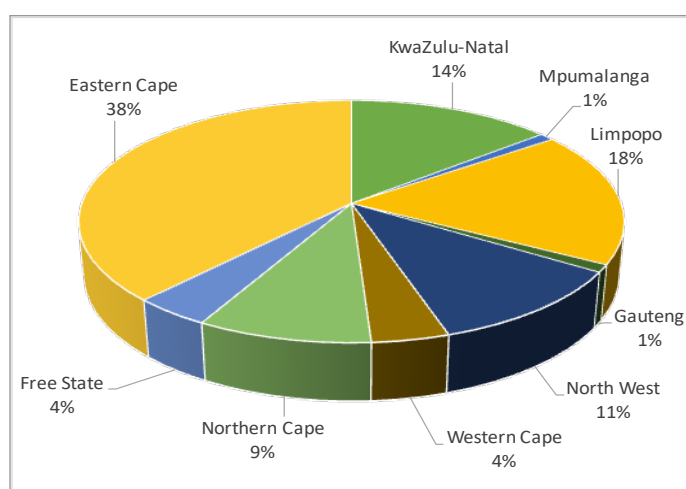


Figure 2: Percentage distribution of goats by province

Source: DAFF (2015)

Against this backdrop, the communal farmers of the KwaZulu-Natal Province, particularly the Jozini area, have taken the formal market by storm through auction sales. Figure 3 shows the auction sales of goats from communal farmers of the Jozini area from October 2018 to February 2019. During this period, the Jozini farmers sold 1 438 goats, generating an income of R1.5 million at an average price of R1 037.03.

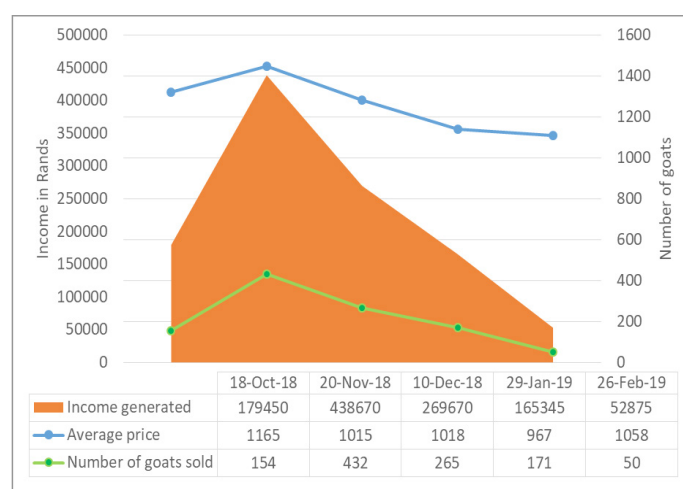


Figure 3: Jozini goat auction sales

Although these are small numbers, it is tempting to say that communal goat farmers have a lot of potential. Together, they could contribute to South Africa's goat production and reduce the value of imports significantly, thus further justifying the inclusion of goats in the National Red Meat Development Programme (NRMDP).

For more information, contact Zanele Ngema on 079 039 5489.

CHIEF JONGUSAPHO BOKLENI: AN EMERGING CITRUS GROWER

By: Kayaletshu Sotsha

Chief Jongusapho Bokleni appeared in the second issue of the NAMC's Beef Indaba of November 2017, in which he was popular for his support of the Custom Feeding Programme (CFP) – a sub-component of the National Red Meat Development Programme – at Njiveni, Eastern Cape. The chief was quoted in the publication as saying: "I had to use my own money and resources – we just could not wait for mere processes and technicalities unknown to us." Here he was referring to the construction of the Njiveni CFP in that year.

This article shares his endeavours in farming. The chief currently plants beans, maize and potatoes, and he plans to replace these with macadamia nuts in the near future. He also has citrus trees and four-year-old gumtrees. He has thus far affiliated with South African Pulp and Paper Industries (SAPPI) for gumtrees and Macadamia South Africa Non-Profit Company (SAMAC) for macadamia nuts. He currently has marketing contracts with Spar and Boxer Super Store in Libode, one of the small towns in the OR Tambo district municipality. He enjoys the convenience and fairness of these markets and he supplies them with potatoes and oranges at "good prices", he says.

Chief Bokleni employs nine full-time employees (six males and three females). He further employs four part-time males during the citrus harvesting season. These four individuals have been assisting him for quite some time during this season and specialise in the sorting and packaging of oranges for the market.

The chief currently does not have access to storage and processing facilities, so all the produce has to be sold before it gets spoiled. As a result, a significant portion of his produce, particularly that which falls short of the market requirements, goes into the informal market (mainly neighbours in the community and hawkers). He acknowledges that he gets good deals from this market.



"It is important as a farmer to begin by researching and learning about seeds and seedlings first, then learn about the output market before actually getting on with the farming activity of a certain enterprise."

He says his competency in producing citrus and gumtrees emanated mainly from lessons learned from other farmers and the training courses he has attended. "It is important as a farmer to begin by researching and learning about seeds and seedlings first, then learn about the output market before actually getting on with the farming activity of a certain enterprise," he says. "I am doing the same with the macadamia nuts". SAPPI assisted him with learning about growing and processing gumtrees, through a field trip to KwaZulu-Natal. The Agricultural Research Council (ARC) assisted him with learning about growing orange trees, through field trips to Mpumalanga.

His future plan is to replace potatoes, maize and beans with macadamia nuts. In addition, he plans to acquire a processing facility to add value to oranges and sell them in a processed form.

For more information, contact Kayaletshu Sotsha at KSotsha@namc.co.za.



Look Out For **Food Basket Monthly Price**

The NAMC monitors food prices at retail level and releases regular authoritative reports. The Department of Agriculture, Forestry and Fisheries (DAFF) established the Food Price Monitoring Committee (FPMC) at the NAMC to track and report food price trends in South Africa; to provide explanations of the observed trends and to then advise the department on any possible action that could be taken should national and household food security be threatened. The FPMC was established after the high food price episode of 2000/01 season. The functions of the FPMC were continued by the NAMC after the FPMC completed its work in August 2004. The NAMC issues four quarterly Food Price Monitoring Reports annually and, since 2005, also publishes an annual Food Cost Review, which documents the margins between farm and retail prices of the major food products, amongst other topics. In 2015, the NAMC began releasing a quarterly Farm-to-Retail-Price-Spread (FTRPS) publication, which seeks to provide more insight into the factors driving commodity and food price margins. This publication, the Food Basket Price Monthly Report, came as a result of discussions with industry to keep a more frequent watch on the movements of food prices.



Markets and Economic Research Centre



South Africa's diverse weather and climatic conditions enable the country to cultivate and produce a variety of fruits. The country is known globally as a producer and exporter of citrus, deciduous and subtropical fruits. The report is released on a quarterly basis by the trade unit of the markets and Economic Research Centre.

For more information contact Sifiso Ntombela at Sifiso@namc.co.za

Visit the NAMC Website: www.namc.co.za



SA FRUIT TRADE FLOW

South Africa's different weather and climatic conditions enable the country to cultivate and produce a variety of fruits and fruit products. Globally, the country is known as an important producer and exporter of citrus, deciduous and subtropical fruits. This issue of the Fruit Trade Flow publication looks at table grapes and stone fruit (i.e. plums, nectarines, peaches and apricots), focusing on the current season's performance of these fruits, for both export and domestic markets. The current season's performance is compared with the previous season's performance. This report also assesses the global production of table grapes, giving a perspective on South Africa's production and export rankings in the world.

Get it at

<https://www.namc.co.za/category/research-publications/publications/fruit-trade-flows/>



MULILO HOT SAUCE

Written by:
Elekanyani Nekhavhambe
Daniel Rambau &
Bongani Radebe

South Africa is among the few nations tapping into the hot sauce market. Currently, there are about 14 sub categories of sauces globally ranging from vegetable, dessert, fish, soy, steak, tomatoes and hot sauces. The prime factor driving the demand for hot sauce is the increasing youth population with diverse food choices, coupled with the intercultural lifestyle and travelling experience.

Agriculture in particular has seemed not to pay great attention to this market. By contrast, to unlock youth agri-preneur opportunities such industries are seen globally as the most convenient to invest in. As noted in many platforms, the greatest challenge facing the agricultural sector especially the agro-processing industry is the involvement of youth. But there are few taking the opportunity to enter the hot sauce market like the founders of Mulilo Hot Sauce.

Global Hot Sauce Market

Globally, the hot sauce market is worth US\$18.68 billion in 2013 and is expected to touch US\$23.29 billion by the end of 2020. In South Africa, there about least 10 commercial sauce companies with emerging sauce companies few in the market.

Origins of Mulilo Sauce

Mulilo is a Tshivenda name for 'fire' with its operation located in the Vhembe District, Thohoyandou -Limpopo. Its biggest competitor in the Vhembe District is the Nandos Peri Peri and Tabasco condiments.

A brainchild of two young males Mpho Mpfuni (26) and Khuliso Gumani (27) – 3rd year University of Venda students. Started in 2018, the company produces 60 crates of chili on weekly basis with an equivalence of 400 bottles per month. Monthly, the company generates between R15 000 – R20 000 in sales revenue at a cost of R28 a product.

Mulilo Hot Sauce ingredients

Mulilo Hot Sauce contains the following ingredients - garlic, onion, chutney, vinegar and serrano chili. In terms of health benefits, Mulilo Hot Sauce is on par with other known sauces. Amongst others, its effective for body weight management, has high doses of antioxidants which can help to decrease blood pressure and ingrained with minerals such as vitamin C and A.

Tests on the health benefits of the sauce were conducted at the University of Venda laboratory. The sauce founders aim to take the products for further testing and certification in order to access the formal retail stores.



Market Reaction

Mpho and Khuliso never expected that the sauce would receive such good reception from the market. Orders for the sauce are in high demand even attracting the attention of people from neighbouring countries like Zimbabwe and Mozambique.


Mulilo Hot Sauce market is predominantly found in meat centres and independent food retail stores. For marketing purposes, the company conducts direct marketing and has strong presence in social media (on Facebook and Instagram).

Future Plans

For future plans, they plan to introduce two brand flavours including selling crushed chilies in bottle powder. Their biggest goal is to open a new branch in the Gauteng region.

Because of huge demand for the product, the company is looking to procure an industrial blender equipment, a processing cold room to store the products at right temperatures, renovate and expand the kitchen base, and plant 10 ha of land to boost production.



Get in TOUCH		Mr Mpho Mpfuni 072 658 1216		Mr Khuliso Gumani 072 658 1216
				
	mmpfuni@gmail.com			



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Agriculture is so special, I love my daily **breakfast**, not forgetting **lunch** and **supper**”

E. Nekhavhambe

Agri-Economist: Transformation

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University of Venda

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