

Voedselwetenskap **NUUSBRIEF**

jun2013



in hierdie uitgawe

Prof Marena Manley presteer
'Herfs' Produktontwikkeling
Maart gradeplegtigheid
Kongresbywonings
Nuwe aanstelling
Prestasies deur VW Alumni
Gemeenskapsbetrokkenheid

Middel van die jaar 2013...

Dit was weer asemskeptyd ,
middel van die jaar. Tyd om stil
te word saam met die wingerde
wat rus in die winter se koue
en te beplan ...

... seker te maak dat die einde
van die jaar met groot sukses
bereik sal word. Na die eerste
week van klasse agter die rug,
is die blaaskans reeds lank ver-
gete en is almal hard aan die
werk!

There are quite a few
things to mention and celebrate
at this halfway mark & we hope
to keep up the good work till the
end of the year.

Thanks to all our readers
for your keen interest in the
Department of Food Science,
US.

A Lombard

Food Science Department



THE **WORLD WALKS** FOR **WATER & SANITATION** **2013**

Graduation March 2013

At the March 2013 Graduation Ceremony a record number of 16 PhD's graduated in the Agri Science Faculty.

Amongst these 16 candidates there were 3 Food Scientist, namely:

Oluwafemi Caleb (Modified atmosphere packaging of pomegranate arils),

Anreza van der Merwe (Quantification of genotypic variation and consumer segmentation related to fruit quality attributes in apple (*Malus x domestica* Borkh.))

Paul Williams (Near infrared (NIR) hyperspectral imaging and X-ray computed tomography combined with statistical and multivariate data analysis to study *Fusarium* infection in maize).

Karla van Zyl also graduated (BSc Food Sc)

Nika Schoeman & Lionie Schutte (MSc Food Sc)

Nikki Neethling & Alet Venter (MSc Food Sc CUM LAUDE)

We are very proud of you and wish you all of the best for the new challenges that await you.

Also remember that you are now alumnus of the University of Stellenbosch so please stay in touch with your alma mater by way of www.matiesalumni.net

Awards & academic achievements



The South African Milk Processors' Organization (SAMPRO) awards bursaries to undergraduate, senior undergraduate and post-graduate students at selected tertiary education institutions with the aim of supporting the enhancement of knowledge and skills in Food Science and Technology (identified in the Sector Skills Plan as scarce skills) and related disciplines, with specific reference to the applied discipline of Dairy Science and Technology. Funds for such bursaries are made available by Milk South Africa (Milk SA). This bursary was awarded to Letitia Schoeman, a final year student.



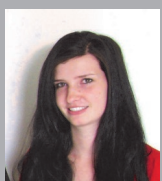
Stephanie Bosman, MSc student was awarded the SAAFoST Academic Achievement Award 2013 based on results obtained in her final year of study, for a completed first degree in Food Science.



Magriet Muller also a final year student received the Aubrey Parsons study grant. This grant is for students with an undisputed record of academic distinction and an average of at least 70% for the past study years.



Francois Olivier was the receiver of the SAMPRO student merit award.



Alex Schulze received the NRF Scarce Skills bursary to the value of R70 000

Congratulations to these student with your brilliant results!

KEEP
CALM
and
STUDY

FOOD
SCIENCE

New lecturer appointed @ Food Science



Dr Wasseela Verachia grew up in Lenasia, Johannesburg and did her undergraduate and postgraduate studies at the University of Pretoria. She received her BSc(Hons) in Microbiology and Human Physiology in 2003 and furthered her studies at the University of Pretoria with a MSc in Food Science (2005).

Wasseela did her PhD at the University of Otago in New Zealand and graduated in 2011 with her study on the effect of post-harvest handling and processing on the quality and shelf life of the New Zealand sea urchin (*Evechinus chloroticus*) gonads.

Wasseela joined the Department of Food Science at the beginning of 2012 for a post-doc, working with prof Marena Manley on food security of staple foods: Minimising food deterioration while optimizing nutritional content with minimal processing.

In January 2013 she was appointed permanently as a lecturer at the Department of Food Science, SU. Currently she is co-lecturing the FS 478 and 441 modules with Prof Trevor Britz.

Die 4 personeellede, (Petro Du Buisson, Daleen Du Preez, Nina Muller & Anchen Lombard) is elk vanjaar vereer met 'n Rektorstoekennings vir uitnemende prestasie. Baie geluk!

International Conference and Committee activities

Marena Manley

Prof Marena Manley attended the 16th International Conference on Near Infrared Spectroscopy in La Grande Motte, France during the first week of June 2013 where she presented a talk “Characterisation of growth kinetics of *Fusarium* spp. with near infrared hyperspectral imaging” in one of the hyperspectral imaging sessions. She acted as chairperson for the other imaging session. Marena was also nominated and elected Chair-Elect of the Executive Committee of the International Council of Near Infrared Spectroscopy (ICNIRS) for the period 2013-2017. She previous served as secretary of the committee for 8 years (2005-2013).

Subsequently Marena attended the 8th International Triticale Symposium in Ghent, Belgium (10-14 June) where she presented a Key-note “Novel, non-destructive cereal quality analysis: potential for triticale”. From 8-12 July she will be attending the 12th International Chemistry Conference Africa in Pretoria, where she will present a Plenary lecture “Non-destructive characterisation of cereal grains with near infrared hyperspectral imaging and micro X-ray computed tomography”. Marena is also currently the Chair of the Executive Committee of Cereal Science Technology – South Africa (CST-SA).



Members of the newly elected Executive committee of ICNIRS. From left to right: Pierre Dardenne (Immediate Past-Chair), Ana Garido-Varo (Chair); Mui Saranwong (Secretary); Marena Manley (Chair-Elect) and Peter Flinn (previous Immediate Past-Chair). Steve Holroyd (Treasurer) not present.

WHAT IS NEW PRODUCT DEVELOPMENT AND WHY?

PROF TJ BRITZ
Department of Food Science

South Africa’s economy has been in a spiralling business cycle since 2000, the longest period of economic expansion in the history of our country. What is even more wonderful of our beautiful country is that on average more than a half million 500 000 consumers move per year from a lower LSM grouping to the middle and even upper economic classes. This means that every year more and more people have an increased disposable income. With current health food trends this means an increased health food sector, with an obvious flow into the snack food segment. This economic situation provides many opportunities for new and innovative products to satisfy the growing consumer demand for safe, healthy and nutritionally acceptable food products.

As the final training before qualifying for the degree BSc in Food Science, the final year students in the Department of Food Science at the University of Stellenbosch have to develop innovative new food products. The students have to complete the whole new product development process from developing a concept, identify a niche and the buyers’ market where the product can compete, write

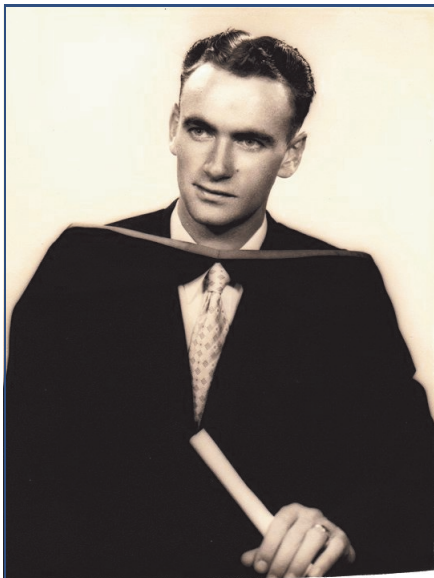
the product specifications, develop a stable and safe product including production and processing details, nutritional and allergy specifications, develop suitable packaging and even outlining likely marketing strategies. This year students took part in creating products ranging from speciality spreads to nice-to-eat snacks.

To encourage innovative new ideas the Western Cape Branch of SAAFOST kindly sponsor two prizes, firstly for the “best overall project and presentation” and, secondly one for the “product with best commercial potential”. The innovation catalyst company “SynNovation Solutions” also yearly sponsors a prize for the product representing “real life innovation in food”.

Please see photographs of the products and groups who participated in the past Product Development presentations that were held in May 2013.



Stellenbosch se eerste Voedselwetenskapstudent steeds aktief werksaam op 80!



Christiaan Johannes (Johan) Burger is gebore 17 Julie 1933 op Elsenburg, waar hy as seun van Navorsingsbeampte, Isak Burger, vroeg in sy lewe blootstelling aan voedselverwerking gekry het.

As hoof van hierdie afdeling van die WP Vrughtenavorsingstasie (NIVV), was sy pa, Izak Burger, ook grootliks verantwoordelik vir die totstandkoming van 'n vakrigting in Voedseltegnologie by Universiteit Stellenbosch vroeg in die vyftigerjare, wat later ontwikkel het tot 'n Departement in die Agriwetenskap Fakulteit, nl Voedselwetenskap

Dit het waarskynlik aanleiding gegee dat hy as oudleerling van Paul Roos Gimnasium besluit het om hierdie vakrigting te volg. In 1955 was hy die eerste student, saam met Jan Hofmeyr, om die graad BSc Voedseltegnologie in Suid Afrika te ontvang.

Sedert 1957 was hy werksaam by die NIVV en aanvaar in 1960 die pos as Tegniese Bestuurder by die Schlesinger Organisasie wat besluit het om 'n verwerkingsfasiliteit aan te skaf vir sitrusvrugte wat as gevolg van eksterne kwaliteit nie uitgevoer kon word nie. Ter voorbereiding het hy vir opleiding in sitrusverwerking gegaan by Minute Maid in Florida, USA.

Die fabriek naby Tzaneen, wat steeds as Letaba Sitrusverwerkers(LCP) bekend staan, het in 1961 tot stand gekom. Sitrus vrugte word verkry van o.a. Letaba Landgoed. In 1965 word die maatskappy (LCP) deur die Coca Cola Uitvoerkorporasie oorgeneem en word hy as Besturende Direkteur aangestel. In hierdie rol word hy in 1974 na Harvard, Boston, gestuur en voltooi hy die PMD (Program for Management Development) daar.

In 1987 word LCP deur die eienaar van Letaba Landgoed, African Realty Trust (ART) oorgeneem en hy gaan voort as Besturende Direkteur tot 1998. Op die stadium 65 jaar oud, sy aanvanklike affree ouderdom.

Hy word egter direk daarna genader vir die pos as Uitvoerende Direkteur van die Suid-Afrikaanse Sitrusverwerkersvereniging en bekleë hierdie posisie tot en met 2005 waarna hy op versoek van die aandeelhouders van ART terugkeer na LCP as Algemene Bestuurder & direkteur.

Met die verhuising van hom en sy vrou na Groot Brakrivier in 2009 verbreek hy sy uitvoerende pligte met LCP, maar bly aan as Direkteur van ART. Hy is tans nog nou betrokke op konsultasie basis en woon steeds die kwartaallikse vergaderings van LCP en Letaba Landgoed by.

Hy het onlangs, op 17 Julie, 80 jaar oud geword en oorweeg nog nie finale aftrede uit die voedselbedryf nie. Wat 'n toonbeeld van sukses en 'n inspirasie vir elke jong student en Voedselwetenskaplike!



Johan Burger met sy kleinseun, Pieter Coetzee, ook 'n Paul Roos Gimnasium student.



Produkontwikkeling 2013 Product development



Photo from left to right: **GROUP 1**

Makasi Thandeka, Claire Kirkby, Anne van Jaarsveld, Marilet Laing, Carmen Bester

MARUVA RUOMBA

creamy yoghurt balls flavoured with rose and lemon pelargonium

Photo from left to right: **GROUP 2**

Brigitte Atwood, Eric Labushagne, Francois Olivier, Cecil Mitchell, Milandi van Heerden

XPRESS-O

fermented espresso liquid centre sweet



Photo from left to right: **GROUP 3**

Kristie Du Toit, Tharina Breytenbach, Anja van Zyl, Jessica Kemp, Rensa Pronk, Letitia Schoeman

BEAN BITES



Photo from left to right: **GROUP 4**

Kara Muller, Dale Carr, Jana Louw, Ilze Mostert, Gerdia van der Merwe, Charlene Janssen

KEFFLES





Photo from left to right: **GROUP 5**
Leah Bessa, Daniella Stephen, Bianca Dempers, Mariesa Cillie, Magriet Muller, Bianca Botha

VEG-TO-WRAP
gluten-free wrap from fermented sweet potato

Photo from left to right: **GROUP 6**
Alton Pretorius, Landi Pelser, Adriaan Oosthuizen, Taryn Nel, Elizma Greeff, Shaun Booysen

COPO'S
baked sweet potato and coconut kefir doughnut-like bites



Pryswenners vir Mei 2013 Produkontwikkeling



Group 2 with Dr Gunnar Sigge (SAAFoST President), winners of the SAAFoST prize for 'best project & presentation'



Group 5 with Helen Andrews & Tania Vergnani from SynNovation, received the SynNovation Prize for the product representing "real life innovation in food".



Group 3 with Dr Gunnar Sigge, winners of the SAAFoST prize for the product with the best commercial potential.

The Way of St James and other well-travelled conference-goers

Gunnar Sigge

On the 22nd May the expedition to the IWA Specialized Conference, Winery 2013 Viticulture and Winery Wastes: Environmental Impact and Management in Narbonne, France commenced. Myself and three students (Louise Robertson, Adél Conradie and Michelle de Kock) were to attend the conference while another, Marlize Jordaan would join for fun. Travel arrangements were complicated to say the least, with Louise flying Turkish Airlines via Istanbul to Paris, Michelle and Marlize on Emirates via Dubai (but on different flights from Dubai), myself and family flying Lufthansa/SAA via Munich (family stopping there and me flying on to Paris) and Adél to follow two days later via Dubai! The rendezvous at Gare Austerlitz in Paris was successfully negotiated (only just), before a very interesting night train to Narbonne. All this, whilst still trying to make sense of the very un-spring like temperatures of 5°C?

Once in Narbonne, after nearly two days of travelling, we still had to be content with doing six hours of sightseeing before finally being able to check in to our hotel. Saturday was used to catch up on some sleep and sightseeing, before finding a suitable French Restaurant for dinner and the UEFA Champions League Final. Even the young ladies where unanimous that FC Bayern München were the deserved winners! Sunday proved to be slightly warmer and we made the most of the good weather and visited the nearby city of Carcassonne, with its medieval old city and castle.

The conference kicked off on Sunday evening with a reception in the old Town Hall, conference sessions on Monday, Tuesday and Wednesday and Technical visits on Thursday. Adél and Louise both gave oral presentations, while Michelle presented her research on a poster - all of which were well received by the other delegates. Several other South African researchers were also present, including Jacques Rossouw (Distell), Reckson Mulidzi and Carolyn Howell (ARC Infruitec-Nietvoorbij), Pamela Welz (CPUT), making SA the second most represented country at the conference. The common denominator for most wine producing countries is that they are often water stressed and thus the pressure on sustainable water use, wastewater treatment and re-use is increasing. There were approximately 80 delegates at the conference, which was a bit disappointing, but hopefully the next conference will attract more delegates. The next Winery conference will thus be hosted in Stellenbosch in 2015, so watch this space.

Further highlights of the conference were the visit to Abbaye de Fontfroide for the Gala Banquet and the technical visits to a collective treatment site for the cleaning of pesticide spray-tanks by the Epumobil® process at Sigean and the experimental unit of Pech Rouge (UEPR), INRA's unit for experimentation and transfer research-oriented integrated viticulture and oenology. After the conference everyone returned to Paris, before heading off in different directions.

After returning from France and Germany (some holiday time with family), I was back on a plane to Spain for the 13th World Congress on Anaerobic Digestion in Santiago de Compostela. Unfortunately, Louise Robertson had the misfortune of having her passport stolen in Italy, and was thus not able to travel to Spain to present her poster. The congress was the biggest it has ever been, with close to 800 delegates, three parallel sessions and 475 poster presentations. The conference was very well organised and many interesting papers and posters were presented. The next congress will be held in Chile in 2015.

Santiago de Compostela was also a very interesting town, with its rich history, culture and the Camino de Santiago (The Way of St James). After Rome and Jerusalem, this is the third most largest pilgrimage destination, with many pilgrims walking in excess of 700 km to reach the Cathedral, where the remains of St James are buried. A highlight was witnessing the Botafumeiro swing. The “Botafumeiro” is a giant censer, used since the middle ages to purify the air in the crowded cathedral. The amazing pendular swing is accomplished by pulling and pumping of ropes by eight men, and within a minute and a half, the censer reaches speeds of 68 km/h and forms an angle of 82° with the vertical, tracing a 65 metre amplitude arc along the transept (well worth watching on YouTube).



Photo from left to right: Marlize Jordaan, Michelle de Kock, Adél Conradie, Gunnar Sigge & Louise Robertson with the magnificent Carcassonne in the background.



Cathedral in Santiago de Compostela



Botafumeiro



Abbaye de Fontfroide

Voedselwetenskaplike wen internasionale prys.

A Lombard



BAIN’S CAPE MOUNTAIN WHISKY JUDGED BEST IN THE WORLD

South Africa’s first single grain whisky, Bain’s Cape Mountain Whisky, has been announced as the World’s Best Grain Whisky at the 2013 World Whisky Awards (WWA) held in London. Distiller of Bain’s Cape Mountain Whisky & Food Science Alumni, Jeff Green, has been involved with making whisky at The James Sedgwick Distillery since 2009. This whisky was created to express the extraordinary properties of South Africa’s very best home-grown maize. South Africa’s warm climate contributed to accelerating the maturation process by the faster interaction between wood, spirit and air to produce whiskies of great smoothness. The whisky spends three years in specially selected ex-Bourbon casks and is then re-vatted for a further two years in a fresh set of casks, resulting in toffee, floral and vanilla aromas softened by sweet, spicy undertones, with a warm mouth-feel and a long smooth finish. Inspired by the Bain’s Kloof Pass and its natural beauty, Bain’s Cape Mountain Whisky is distilled and matured at The James Sedgwick Distillery, situated near the foothills of the Bain’s Kloof Pass in Wellington, in the heart of the Cape’s Boland.

Jeff graduated from SU in 2003 with a BSc in Food Science and in 2006 he completed his MSc. His MSc study was on the effluent treatment combination of ozone and a biological wetland system under the guidance of Dr Gunnar Sigge and Prof Trevor Britz.

Ever since 2006 he’s been working for Distell Corporation and in 2009 the company moved him to Wellington to become involved in the art of making Whisky. This is definitely a very unique opportunity, since the James Sedgwick Distillery is the only commercial Whisky distillery in Africa.

To go from rooky to making an award winning whisky within 4 years is quite an achievement - we will watch this space Jeff & congratulations!

Nooit te slim om iets nuuts te leer nie ...



Prof Trevor Britz (foto links) en Me Petro Du Buisson van die Departement Voedselwetenskap het verlede semester weer klas geloop!

.... Die keer het dit niks met Mikrobiologie, Voedsel of Wetenskap te make gehad nie, maar die uitdaging was die aanleer van ‘n nuwe taal. Hulle het ‘n Inleidende Xhosa kursus, aangebied deur die US Taalsentrum gevolg. Hoewel Prof Britz wetenskap as sy natuurlike talent beskou het ek lanklaas iemand ‘n nuwe uitdaging so sien geniet.

Op die foto van links na regs is nog ‘n paar klaslede. Pia Nanny, Lusanda Qelesile, Liana Swart, H  l  ne Lambrechts (dosent) en Trevor Britz.



Carmen Bester & Francois Olivier het vanjaar hul 1e Old Mutual, Two Oceans half-marathon in minder as 2uur voltooi! Hulle is beide 4e jaar studente



Wasseela Verachia, Daleen Du Preez en Anchen Lombard het Voedselwetenskap verteenwoordig by die Maties WELWEES 5km pretdraf op kampus



Prof Marena Manley met haar dansmaat, Ruan Stander (3de jaar student) is as die bes geklede danspaartjie aangewys by die 2013 'Dancing in Style', wat deur die MATIES Dance Society aangebied is. Hulle het die algehele 2de plek in die kompetisie behaal.



As part of the Madiba day celebrations 2013 the Department of Food Science students and staff joined the “Toasties for Tummies” initiative to help provide 4053 sandwiches to the greater Stellenbosch community in need.



Karen Munhuweyi (PhD student) with her firstborn Anita



Fundeka Ndyoki (3rd year) with baby Ndeka

Voedselwetenskap in samewerking met Lydia en Helderbergkoshuise het tydens 'n gemeenskapsdag by Laerskool Rietenbosch worsrolletjies aan skoolkinders uitgedeel.