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# AGRI SCIENCES WETENSKAPPE

## Four academics promoted to distinguished professors

The promotion to distinguished professor of four researchers in the Faculty of AgriSciences is further acknowledgement of their exceptional international academic excellence and leadership, and their ability to motivate students. They are conservation ecologist Prof Michael Samways, animal and meat scientist Prof Louw Hoffman, plant biotechnologist Prof Jens Kossmann and postharvest technology expert Prof Umezuruike Linus Opara.



Michael Samways



Louw Hoffman



Jens Kossmann



Umezuruike Linus Opara

**MICHAEL SAMWAYS** is an A-rated entomologist and conservationist, and has ably chaired the Department of Conservation Ecology and Entomology for the past decade. He has received numerous accolades throughout the course of his career, the latest being a Citation of Excellence from the World Conservation Union/Species Survival Commission Chair. Based on the scientific citation indexing service Web of Science's latest rankings Samways is now globally the leading author in insect conservation, and is ranked third among authors in biodiversity conservation. He has authored 57 book chapters, and 15 books/special issues – all with renowned publishers. He is amongst others also President of the international Orthopterists' Society and Associate Editor of *Journal of Insect Conservation*.

**LOUW HOFFMAN** of the Department of Animal Sciences is the only scientist worldwide who researches the quality of game meat from Africa. His focus falls almost exclusively on meat species indigenous to South Africa. His recent paper on contamination within the local processed meat industry led to new nationwide regulations being promulgated on how meat products should be labelled. He holds the Research Chair in Meat Sciences: Genomics to Nutri-nomics as part of the DST/NRF SA Research Chair Initiative (SARChI), and also serves on South Africa's Agricultural Research Council (ARC). Last year he received the International Lectureship Award from the leading American Meat Science Association (AMSA). He has published over 160 peer reviewed papers.

**JENS KOSSMANN** is the Director of the Institute of Plant Biotechnology in the Department of Genetics and holds the Research Chair in the Genetic Tailoring of Biopolymers being funded through the DST/NRF SA Research Chair Initiative (SARChI). He is the author of more than 125 publications and holds 25 patents. His research on sugarcane, strawberries and most recently also the indigenous *Sutherlandia* plant attracts recognition and funding by global industries, such as Schering, AgrEvo, Aventis CropScience, Bayer CropScience and Syngenta. In August he will be a keynote speaker at the Conference of the International Association of Plant Biotechnology – an event that only takes place every four years. He also represents South Africa in this organisation.

**UMEZURUIKE LINUS OPARA**, as the SARChI Research Chair in Postharvest Technology in the Department of Horticultural Sciences, develops postharvest engineering and technology techniques that add value to agribusinesses. His promotion to distinguished professor at SU follows shortly after also being named as distinguished visiting professor of Food and Process Engineering at the University of Shanghai in China and visiting professor of Agricultural Engineering at the University of Nigeria. Opara is a Director of the Board of the Postharvest Project in the USA. This founding editor-in-chief of the *International Journal of Postharvest Technology* and Innovation has published over 150 articles in peer-reviewed journals, book chapters and industry journals.

## KALENDER 2014

**23 – 24 June**  
5th Postharvest  
physiology and  
technology short  
course of fresh  
horticultural crops

**27 Junie**  
Einde van eerste  
semester

**21 Julie**  
Aanvang van klasse  
vir 2de Semester

**20 November**  
Fakulteit se Gholfdag

## Danie Brink neem waar as Visedekaan

**N**a 'n loopbaan van 25 jaar aan die Universiteit Stellenbosch (US), waartydens hy onder meer Akwakultuur as navorsingsveld gevestig het, is genetikus prof Danie Brink gereed vir nuwe uitdagings wat op hom wag. Vroeër vanjaar is hy as Visedekaan: Navorsing en Onderrig van die Fakulteit AgriWetenskappe aangewys en sal nou vir 'n onbepaalde tyd as Dekaan in die plek van prof Mohammad Karaan waarneem wat op sy beurt tydelik as die US se Viserektor: Gemeenskapsinteraksie en Personeel aangewys is in die plek van prof Julian Smith, wat met sabbatsverlof is.

Dit het meegebring dat Brink as voorsitter van die Departement Genetika uitgetree het. Hy bly egter steeds aan as hoof van die Divisie Akwakultuur wat hy in 1988 aan die US help stig het.

Brink was die afgelope kwarteeu gemoeid met die ondersoek na en totstandkoming van talle kleinskaalse boerderyprojekte in die plaaslike en Namibiese akwakultuurbedryf, en het reeds in talle verwante regeringsadviesgroepe en panele gedien.

Hy is sedert 2001 lid van die Wêreld Akwakultuurvereniging en het reeds verskeie termynne as voorsitter van die Akwakultuurvereniging van Suider-Afrika gedien. Hy is onder meer 'n direkteur van die maatskappye AquaStel, NutroScience, die Overstrand Plaaslike Ekonomiese Ontwikkelingsagentskap en die Hands-on Fish Farmers Koöperatief.

Brink sien uit na die nuwe uitdaging om die navorsings- en opleidingsinisiatiewe van die Fakulteit AgriWetenskappe verder uit te bou. "Om die



Proff Danie Brink en Mohammad Karaan

Suid-Afrikaanse landboubedryf kerngesond te hou, is dit belangrik dat ons navorsingswerk industriebehoefte bly aanspreek, en dat die onderrig van ons studente aktueel en vernuwend is," glo hy. "Deur die aanbod van toepaslike kortkursusse kan ons ook ons alumni help om op die voorpunt van nuwe ontwikkelings en tegnologie te bly.

"Ons wil nie net wetenskaplikes oplei wat in 'n vooruitstrewende boer kan ontwikkel nie, maar wil ook genoeg kundigheid verseker vir die talle steunomgewings van die landbou."

# Oorweldigende steun vir die Prof Daan Strydom-beursfonds

Die totstandkoming van die Prof Daan Strydom-beursfonds aan die Universiteit Stellenbosch (US), waardeur die lewensbydrae van een van die vaders van die Suid-Afrikaanse sagtevrugtebedryf erken word, geniet oorweldigende steun uit die bedryf en van elders. Dit was duidelik ná 'n saamtrek op Stellenbosch van meer as 150 oudstude- nte, oudkollegas of nywerheidsleiers op wie se lewens dié 83-jarige gewese hoof van die Departement Hortologie 'n merk- bare invloed gehad het.

Dr Lynn Hoffman, voorsitter van die Departement Hortologie, het gesê die beursfonds sal help om behoeftige studente met 'n ak- tiewe belangstelling in Hortologie aan die Universiteit Stellenbosch van hulle tweede jaar af finansi- eel te ondersteun.

Tydens die geselligheid is ook aangekondig dat HORTGRO

Science sy jaarlikse kontantprys aan die beste voorgraadse Hortologie- student aan die US hervernoem na die HORTGRO Science/Prof Daan Strydom-kontantprys.

Al die sprekers op die ge- selligheid het hulde aan Strydom gebring vir sy leierskap, visionêre navorsing, menswees en die wyse waarop hy die departement en die bedryf tot internasionale vlak help uitbou het.

Strydom was van 30-jarige ouderdom vir drie dekades hoof van die US se Departement Hor- tologie. Navorsing saam met sy studente het onder meer aan die bedryf die 1-2-3 snoeireël vir kernvrugte gegee, asook die eerste werk in Suid-Afrika oor hervestigingsprobleme by appels. Danksy hom is die opleistelsels vir kernvrugte verander van die kelk- fatsoen na die gebruik van sentrale leiers by aanplantings teen hoër digtheid. Daarby het hy nuwe rus-



Meer as 150 oudstude- nte, oudkollegas en nywerheidsleiers het die saamtrek op Kleine Zalze bygewoon.

brekende middels help evalueer en chemiese uitdunprotokolle vir appels ontwikkel.

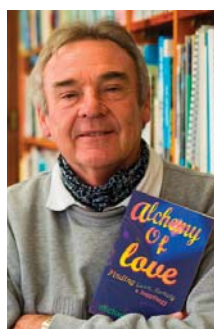
Strydom, wat steeds by sy familie se uitvoerproteaboerdery naby Porterville betrokke is, het na sy aftrede lank plaaslik en in- ternasionaal as konsultant gewerk. Hy was een van die stigterslede van die invloedryke Kaaplandse Pomologievereniging, en is in 2012 vir sy bydrae tot die sagtevrug- tebedryf met die OSH Reinecke- toekenning vereer.

Dank gaan aan almal wat 'n bydrae gelewer het tot die Daan Strydom-beursfonds. 'n Spesia- le dank aan ons top 10 dona-

teurs: Hortgro; mnr RN Antro- bus; mnr AJ Erwee; mnr GH Smuts; Witzenberg Properties (Pty) Ltd (Pieter Graaff); Fruitways Group (Alastair Moodie); Graaff Fruit Pty Ltd (Robert Graaff); DuToit Agri (Edms) Bpk; Suider- land Plase (Edms) Bpk (Dr André Neethling) en Capespan

Die beursfonds word bestuur as 'n oop fonds wat voorsiening maak vir nog bydraes en erkennings.

- Indien jy wil bydra tot die Prof Daan Strydom-beursfonds, kan jy dit inbetaal by: Standard Bank, Stellenbosch, rekeningnommer 073006955, verwysingsnommer R1715 5373.



Michael Samways dis- plays his book, *Alchemy of Love: finding love, harmony and happiness*.

## Samways sets sights on matters different...

Globally recognised as the leading author in insect conservation, Prof Michael Samways' list of achievements is never ending; he is indeed a man for all seasons.

And of late this remarkable and popular aca- demic, who has headed Conservation Ecology and Entomology in the Faculty of AgriSciences for the past decade, has set his sights on matters entirely different, namely love and happiness, and authored a book titled *Alchemy of Love: finding love, harmony and happiness*.

The book combines his insights into spiri- tuality, biochemistry and biology which he has gleaned during years of studying nature and learning from the spiritual leaders he has met during his numerous travels.

Apart from offering biological insights on the more obvious aspects of romantic love, for instance how to woo a woman and find a partner, Samways also dwells much deeper on ways in which people should tune into their subtle senses, and repair their relationship with themselves, their family and their friends. In the Western world at least, people aspire to find love and happiness. All aspects of giving love (in its various forms) with enthusiasm converge on happiness, and that one's spiritual journey to love, and eventual happiness, involves first overcoming trauma and disillusionment.

- Prof Michael Samways in short: Received the Distinguished Scientist Award (2011) at the Global Conference of Entomology; recipient of the Senior Captain Scott Medal from the South Africa Academy for Science and Art; the John Herschel Medal from the Royal Society of South Africa, and the Gold Medal from the Academy of Science of South Africa; received SU Rector's Awards, most notably a double in 2013 for both his publications and postgraduate output, Fellow of the Royal Society of South Africa, a member of the Academy of Sciences of South Africa and current President of the International Orthopterists' Society.

## Faculty's Forest and Wood Science building celebrates 50 years



The Paul Sauer Building, which houses the Department of Forest and Wood Science at Stellenbosch University (SU), is a half century old this year.

The E-shaped building was inaugurated on 15 May 1964 by the then Minister of Forestry, Mr Paul Sauer. It was erected for a mere R180 000 thanks to financial and building material donations from industry.

Full use was made of sustainable building materials and techniques which are becoming popular today through "green" architecture.

The building boasts many firsts – SU's first computer network was installed there, also the first electron microscope. It is currently the home of the only industrial scale X-ray computer tomograph (also known as a CT scanner) on campus.

Training in forest and wood science started at Stellenbosch University in 1932. SU is still the only tertiary institution in South Africa which offers graduate courses in wood products science, forestry and natural resource management. Currently the Depart- ment offers tuition to 70 undergraduate and 30 postgraduate students, including many from various African countries.

## Five from SU attend IPRI meeting in Marrakesh

Five members of the Cereal Genomics research group in the Genetics Department recently attended the 21st Bi-annual International Plant Resistance to Insects (IPRI) meeting in Marrakesh, Morocco.

The meeting focussed on host resistance to pests, pest avoidance strategies, host and pest genomes, integrated pest management and pest control, as well as the development and release of new resistance cultivars. Some 150 scientists from 38 countries were in attendance.

Two of the Stellenbosch students, Anandi Bierman and Francois Burger, were awarded prizes for their oral presentations in the student competition. The next IPRI meeting will be held in Cape Town in 2016.



*Pictured here are the five members of the Cereal Genomics research group who attended the IPRI meeting in Marrakesh – (from the left) Francois Burger, Laura de Jager, Prof Anna-Maria Botha-Oberholster, Wynand Cloete and Anandi Bierman.*

## Melanie se doktorsgraad lei tot Cederberg se eerste bierbrouery

Vir dr Melanie Nieuwoudt was haar doktorsale studie oor bierbrou veel meer as bloot 'n akademiese aangeleentheid. Haar PhD in Voedselwetenskap wat op die US se gradeplegtigheid in April aan haar verleen is, stel bierbrouers nou in staat om konsekwent 'n bier te maak wat benewens 'n stewige skuimkop ook 'n verlengde raklewe het. Haar doktorsgraadstudie oor vier jaar het gelei tot die vestiging van 'n mikro-bierbrouery in die Cederberg op die Nieuwoudt-familieplaas, Kromrivier.

“Om deurlopende kwaliteit en smaak te verseker bly vir bierbrouers 'n uitdaging, want soveel hang af van die rou produkte, en veral van die mout, wat daarin gebruik word,” vertel sy. “Mout se smaak en gehalte wissel afhangende van waar dit verbou is, tussen variëteite en selfs tussen oesseisoene.”

Haar studies, wat 'n ruim skoot biochemie bevat, is onder leiding van prof Marina Rautenbach van die Departement Biochemie en prof Marena Manley

van die Departement Voedselwetenskap voltooi. Haar resultate word reeds deur die multinasionale bierbrouer SABMiller toegepas, wat ook onder die befonders van die projek was.

Haar familie bly reeds sewe geslagte lank op die gewilde gasteplaas Kromrivier, digby die Stadsaalgrotte.

Bouwerk aan die Ceder Brewery het pas volgens Nieuwoudt se spesifikasies begin. Die etikette vir die bierbottels is reeds ontwerp, en verleen erkenning aan die ryke inheemse vislewe wat in die Kromrivier voorkom. Indien alles vlot verloop, sal besoekers aan die Cederberg aan die einde van hierdie winter hulle eerste bottels Kurper Ale, Yellowfish Lager, Sand Fish Weiss en Chubbyhead Stout kan knak.



Melanie Nieuwoudt

## Age old art of making brandy intrigues PhD students

The age old art of making brandy was the subject of two doctor's degrees obtained by Dr Nina Bougas and Dr Leani Louw in the Department of Viticulture and Oenology at Stellenbosch University's recent graduation ceremony.

In her study Bougas, a water

laboratory manager at Pathcare, looked at factors influencing the style of brandy. By law brandy has to be matured in oak barrels for at least three years, meaning that producers also have to wait three years before they know the style of their brandy.

Said Bougas: “Due to the fact

that brandy is the largest locally produced spirit in South Africa, it is crucial to investigate the factors that influence its production as better understanding and control of these processes leads to the production of a brandy that is more consistent in quality and style.”

Local producers can produce three categories of brandy, and within those categories, different styles in order to cater for diverse consumer needs. Her research now enables producers to determine the style of brandy prior to maturation –therefore having a “blue-print” of styles.

Louw, who works as sensory research manager in Distell's Quality Management and Research Department, investigated rapid profiling techniques for brandy. She developed screening

tools for high alcohol products that provide fast and cost-effective complementary methods to conventional sensory profiling.

Louw believes these techniques could be used as alternatives to conventional methods by a brandy tasting panel without, or at least with, very little training. She explained: “These methods help to establish a more efficient link between trained sensory panels and consumer perceptions.”

Louw's research supports the use of so-called projective mapping, also known as Napping®. This is a rapid sensory profiling method by which a holistic overview of the sensory differentiation between products can be gained, without the time and cost implications of conventional methods.



Nina Bougas



Leani Louw



Linus Opara

## High Chinese honour for Opara

deal for providing exciting opportunities for the exchange of researchers and postgraduate students – this is basically the general view in the Faculty of AgriSciences after the recent appointment of Prof Umezurike Linus Opara, DST/NRF SARCHI Professor of Postharvest Technology in the Faculty, as Distinguished Visiting Professor of Food and Process Engineering at the University of Shanghai for Science and Technology.

Opara's appointment was granted by the State Administration of Foreign Experts Affairs (SAFEA) of the People's Republic of China through a globally competitive bid by research universities in China. He will be expected to visit China periodically to deliver university seminars and lectures on a range of research issues including research leadership, the mentoring of young researchers, exploring the teaching-research nexus, as well as emerging technologies in the areas of food science and postharvest engineering.

Reflecting on his appointment, Opara noted that he was particularly surprised and impressed by the direct interest shown by the central government of China to

promote and facilitate interaction between overseas academics and Chinese counterparts through this kind of globally competitive honorary appointment. Perhaps this is not surprising as Prof Opara further recounts a recent experience he had during the postharvest technology conference held in Guangzhou during which some members of the Technical Board on postharvest technology of the International Commission on Agricultural & Biosystems Engineering (which he chairs) were taken to meet the Provincial (Guangdong) Governor. In his remark, the governor basically said: "Thank you all for coming to the economic, business and food capital of China. About 30 years ago, the world wondered who would feed China, but with your help – by sharing your knowledge with us – we now not only feed our people, but also many others around the world!"

Opara recalls his first visit to China in the mid 1990s when he was a lecturer in postharvest engineering at Massey University in the USA, working with colleagues at the China Agricultural University in Beijing to implement in-country training programmes in Shanxi Province on postharvest management of apples. He has seen major and rapid changes in all spheres of the Chinese economy, also at universities and regarding research.



KABENGELE SENTERLY is the first recipient of the Eckart Kassier bursary in the Department of Agricultural Economics, Stellenbosch University. He was born in the city of Kolwezi of Katanga Province in the DR Congo. The decision to study here was based on the culture of academic excellence and cutting edge developments in Agriculture. Senterly began his journey at Stellenbosch University in 2009 and was capped for his MScAgric degree in April of this year.

## Prestige RCA-geenootskap aan Marcellous le Roux toegeken

Die Nasionale Navorsingstiging (NNS) se Navorsingsloopbaanbevorderingsgeenootskap (RCA) wat vir vyf jaar geld, is aan dr Marcellous le Roux, tans die bekleër van 'n nadoktorale pos in die Fakulteit AgriWetenskappe se Departement Agronomie, toegeken. Die vermeldde departement sal hom vir dié tydperk akkommodeer.

Le Roux het in die eertydse Departement Botanie van die Fakulteit gestudeer waar die graad MSc in Natuurwetenskappe aan

hom toegeken is. Hierna het hy die graad PhD aan die Universiteit van Wes-Kaapland verwerf.

Hy was maar 'n kort rukkie in diens van die Universiteit Stellenbosch toe nog 'n geleentheid hom in die vorm van die bovermelde RCA-geenootskap onder beskerming van die NNS voorgedoen het.

Sy huidige navorsing, asook dié in die verlede as plantwetenskaplike, het die interaksie van plante met hulle abiotiese en biotiese omgewing – met die klem op plantvoeding – behels.

Voorts maak sy wye belangstelling in 'n omvattende reeks dissiplines hom uiters geskik om tot die Departement Agronomie se missie en visie by te dra – met volle aandag gerig op die produksievermeerdering van voedsame graan-, proteïen- en olie-saadoeste op meer volhoubare en billike wyse wat deurslaggewend is om voedselsekerheid vir die ontluikende plaaslike en wêreldbevolking te verhoog.

Le Roux het reeds heelwat as navorser vermag en die hoop is



Marcellous le Roux

uitgespreek dat sy toekomstige bydraes die navorsingsprofiel van die Departement Agronomie sal verstewig en uitbou tot een van die sleutel-departemente in dié opsig in die jare wat voorlê.

## Zimbabweese student beste in Hortologie

'n Zimbabweese student, Deon Kirstein, is as die beste voorgraadse student in Hortologie in die Fakulteit AgriWetenskappe aangewys en die Hortgro Science/Prof Daan Strydombeurs is tydens die onlangse HORTGRO Science tegniese simposium op Simondium aan hom toegeken.

Dr Lynn Hoffman, voorsitter van die Departement Hortologie, meen Kirstein is nie net akademies voortreflik nie, maar is ook een student wat nooit skroom om ander internasionale studente spoedig op die Matiekampus te laat tuis voel nie. Hy studeer op die oomblik aan 'n MSc in Hortologie onder studieleiding van prof Karen Theron met die fokus op meganisering opspies vir die uitdun van kernvrug.

HORTGRO Science het onlangs sy jaarlikse kontantprys vir die beste student in Hortologie aan die Universiteit Stellenbosch hervernoem uit erkenning vir die waardevolle bydrae van die akademiese en nywerheidsleier, prof Daantjie Strydom. Hy het in die sowat 30 jaar wat hy personeelid in die Departement Hortologie was onmeetbaar veel gedoen om die gehalte van plaaslike navorsing – veral op sagtevrugte – tot internasionale standaard uit te bou.



Deon Kirstein



*Congratulations to Dr Carien Coetzee, a postdoctoral research fellow at the Department of Viticulture and Oenology, who was the ladies winner in HR's Wellness Fun Run, which was held on 10 April.*