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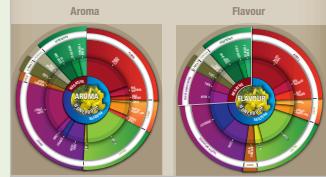
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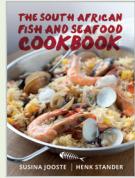


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## Prof Mohammad Karaan: die pad vorentoe

*Prof Mohammad Karaan geniet tans 'n welverdiende sabbatsverlof, nadat hy die afgelope jare onder meer dekaan van die Fakulteit AgriWetenskappe, lid van die Nasionale Beplanningskommissie én daarbenewens die US se Waarnemende Viserektor: Gemeenskapsinteraksie en Personeel was. Engela Duvenage het met hom gesels.*



**M**ense sê prof Mohammad Karaan het 'n andersheid oor hom. Hy's 'n werkermier wat tog nie gebaande paadjies volg nie. Hy't vir sy studente in landbou-ekonomiese gedigte gegee om te lees. Hy's 'n verhaalverteller, 'n kunsliefhebber én 'n digter daarby.

Allereers is hy egter net 'n man met 'n maklike glimlag wat boer wil wees op sy plaas in die Hemel-en-Aardevallei. En wil sien dat landbou in Suid-Afrika rég doen. En aan reg gedoен word.

Seker dié dat sy gunstelinggedig "Vroegherfs" van NP van Wyk Louw is, oor die verloop van seisoene en die nodigheid vir 'n nederige, gestroopte lewensbeskouing.

### Die dekaansjare

Hy't in 2008 Dekaan geword nadat die heeltydse stoel vir twee jaar leeggestaan het. "Die Fakulteit se lewensvatbaarheid was in gedrang; dit moes omgedraai word," onthou hy duidelik die doel voor oë.

Sedertdien het Karaan nie net die Fakulteit se profiel help uitbou om veranderinge in die landbousektor te bewerkstellig nie, maar het

ook die US se rol hierin na buite aansienlik uitgebrei.

Diegene wat destyds voorbrand kom maak het oor sy moontlike dekaanskap is juis deeglik gewaarsku dat hy nie heeldag agter 'n lessenaar kan sit nie. Hy wil eerder sy oor nabij die grond hou, te midde die bedryf, en dan dié insigte terugbring Fakulteit toe.

Hy erken by name sy kollegas in die dekaansafdeling en die departementeale voorsitters wat sedertdien saam met die akademici en studente vir sovele van die Fakulteit se suksesse gesorg het. "En veral vir die positiewe gees wat heers," beklemtoon dié gebore Stellenbosser wat erns maak met die verantwoordelikhede van 'n leier.

### Die 2030-plan

Danksy 'n telefoonoproep van Trevor Manuel self het hy pas vyf jaar lank saam met 25 ander lede in die Nasionale Beplanningskommissie gedien – as stem vir die landbousektor, én ook die enigste Matie wat help skryf het aan Suid-Afrika se 2030-plan.

Dit was 'n groot voorreg én verantwoordelikheid om saam met die Presidensie, gesiene sakelui en ander kenners te kon werk. Daar was min tyd oor vir die Fakulteit en vir sy gesin, erken hy. Sestien-uur werksdae ten spyte.

Ja, die plan se miljoen nuwe werkgeleenthede vir die landbousektor is heeltemal haalbaar. Hy het immers self daardie veelbesproke som gemaak. Ja, dit klink dalk vir sommiges onlogies én ondenkbaar binne die huidige klimaat van meganisasie en arbeidswouelinge.

"Die landbou is die redding van hierdie land," benadruk hy sag dog ferm. "Dis die plek waar die siel van die mens gevoed word, waarin arm ongeskoolde mense 'n bestaan kan maak en wat vir baie mense werk kan bied."

"Met 'n land soos ons s'n, met soveel werklose mense, dink ons werklik hulle gaan in die IT-bedryf of in die mynbedryf werk kry?" kom die retoriiese vraag.

"Die landbou is geskep om mense te absorbeer, maar die afgooi van mense gebeur weens 'n swak beleidsomgewing en die keuse om eerder 'n tegnologiepad van groter masjinerie te stap nog voordat die produktiwiteit van mense heeltemal ontsluit word," reken dié voorsitter van die Landbank en direkteur van talle agrisekondernemings.

'n Klimaatsverandering is egter nodig. En dis 'n uitdaging en 'n half, kom dit eerlik. Mens sien egter ampers hoe Karaan sy hande heldhaftig vryf, baie lus om dié mantel om te hang.

"My rol is om steeds 'n leier in die landbou te wees en rigting te wys, al is daar 'n klomp mense wat sê dit kan nie werk nie," benadruk hy.

Dié manier van doen het hy geleer by sy held, prof Eckard Kassier, wat 'n onwrikbare én onverskrokke geloof in die vryemarkstelsel gehad het. Sy ideologie is oplaas tot uitvoering gebring met die deregulering van die landbousektor.

"Jy kan nie net 'n akademikus wees wat sit en oor teorie praat nie. Jy moet seker maak jy het 'n impak waar dit saak maak, op boerdery-en op beleidsvlak," onderstreep Karaan.

### Sy eie plan

Sy NBK-termyn het in Julie verstryk, en hy het 'n mooi bedankingsbrief van president Jacob Zuma ontvang. En nou? Dalk word hy weer dosent in die Departement Landbou-ekonomiese, dalk is daar 'n leerstoel wat wink? Sy sabbatsverlof gee hom huis nou kans vir besinning.

"Ek ontvang elke dag aanbiedinge, van

(vervolg op bl 2)

### KALENDER 2015

4 Sept	Einde van die derde kwartaal.
5-13 Sept	September-reses
14 Sept	Klasse vir vierde kwartaal begin
24 Sept	Openbare vakansiedag: Erfenisdag
30 Sept	• Laaste dag vir betaling van verskuldigde balans van onderrig-, losies- en ander geldte tov 2015 • Laaste dag vir inlevering van laataansoek om toelating as voorgraadse student vir 2016. Oorweging hang af van beskikbaarheid van plek in die program waarvoor aansoek gedoen word. • Laaste dag waarop modules tov die tweede semester en jaarmodules amptelik by fakulteitssekretaries in Admin A gestaak mag word.
23 Okt	Klasse vir die vierde kwartaal eindig
27 Okt	Nov-eksamen (1ste geleentheid) begin

### Faculty's Golf Day coming up 19 November

AgriSciences' annual Golf Day will take place on 19 November at the picturesque De Zalze golf estate just outside Stellenbosch en route to Strand and Somerset West. The proud sponsors of this year's event are Freshvest, Suiderland Plase and Nexus.

The proceeds of the day are in aid of AgriSciences' bursary fund for current undergraduate and postgraduate students striving to pursue a career in Agriculture, and also for prospective students who wish to study in the Faculty.

For further information on the Golf Day and sponsorships for the Faculty's Bursary Fund, contact Carin Bruce at cbruce@sun.ac.za (tel. 021 808 9047), or Monika Basson at e-mail: mh@sun.ac.za (tel. 021 808 2978).



## Karen Esler: A bridge builder of note

*From invasive plants clogging up rivers to ecological restoration, from Karoo and fynbos veld to palaeontology, bulbs and early man – these are some of the diverse topics that energise and interest plant ecologist Prof Karen Esler.*

Esler explains: “My whole career is marked by a collaborative approach, working on the interface of different disciplines. I really like the stimulation of trying to find how we can communicate across the boundaries of different disciplines, because it is often the case that something happens at such edges to spark innovation.”

She believes such exposure to multiple disciplines trains students in collaborative methods through team research, and promotes new forms of collaboration and integration across disciplines. Recently, for instance, she (in collaboration with others) grouped some of her conservation ecology postgraduates together with economics students in a project that identified possible markets and uses for restoration projects.

“We cannot solve many of our very tricky challenges by only looking at it from the perspective of one discipline,” she describes why she often advocates the need to bridge the so-called “knowing-doing gap” to ensure sustainability. “Of course one needs to maintain disciplinary depth, but one should also work out how to work across

boundaries.”

This approach has had a significant impact on her career, and has resulted in her being a highly productive scientist. This often cited researcher has co-authored 69 of her 120 scientific papers in the past eight years, peer reviewed articles for many top-quality journals in the fields of ecology and sustainable science, and was the editor of two practical books for landowners on how to manage their Karoo or fynbos veld.

She is a core member of research teams such as the ICSU Southern African Program on Ecosystem Change and Society (SAPECS), the DST-NRF Centre of Excellence for Invasion Biology (CIB) and TSAMA Hub, and plays her part in national conservation and environmental efforts such as the Fynbos Forum. Esler also represents South Africa in the International Society for Mediterranean Ecology.

It is also an approach this former chair of the SA Association of Botanists is taking into her new position as chair of the Department of Conservation Ecology and Entomology. She took over earlier



*Prof Karen Esler likes the stimulation of trying to find how she can communicate across the boundaries of different disciplines, because “often something happens at such edges to spark innovation.”*

from Prof Michael Samways, after already serving the Department as among others co-ordinator of the undergraduate programme in conservation ecology. On a national level, she is enjoying her second term as board chair of the Higher Education Resource Services (HERS-SA), which promotes women in academia.

Currently she is involved in a much larger project involving South African and international experts from various disciplines. She adds her interest in landscape ecology and know-how about South Africa’s exceptionally rich diversity of bulbs and other geophytes to the package. It’s all in an effort to understand how early man was able to survive in Africa some 165 000 years ago, during an extremely harsh period when other human ancestors across the planet were wiped out.

She sets the scene: “We know from genetic evidence that all of us come out of Africa, and from the same small stock of people.”

The interdisciplinary team is using their combined knowledge to reconstruct how the environment and the plants growing in it looked like some 165 000 years ago. “That the rich biodiversity of the Cape landscape likely supported our ancestors through tough times is a compelling message for conservation today,” she points out.

Esler adds: “The confluence of all of the evidence points to the Cape where our species survived, among others because of the abundance of seafood available along the coast. Archaeological evidence suggests that this diet was supplemented by geophytes and berries.”

## Prof Mohammad Karaan: die pad vorentoe (van bl 1)



(vervolg van bl 1)

rebaar die wêreld, maar ek wil op Stellenbosch wees waar ek gebore is,” benadruk hy. “Ek is lief vir hierdie plek, ek is lief vir hierdie dorp; dit het my gemaak wie ek is.”

Wanneer hulle kleintyd “verby die plek met die rooi dakke” gery het, het sy oupa, ‘n smous van Cloetesville, hom altyd attent gemaak op die Universiteit.

“Ek wil vir Stellenbosch help

om sy eie toekoms te bou; ek dink ek kan help daarmee.”

Die gebeure verlede jaar waartydens hy gekaap, ontvoer en aangerand is, het hom heel menslik byna laat immigrer op soek na vreedsamer weivelde.

“Daar het baie lelike dingé aand gebeur,” kom dit met sug van onthou. “Ek kon deur genade ontsnap, en het huis toe gehardloop uit Kayelitsha, vieruur die oggend terwyl mense in karre aankom en op my skiet.” Om presies te wees, het hy 24,48km ver gehardloop, want hy het die afstand na die tyd gaan meet.

Hy het egter besef sy invloedsfeer lê in Suid-Afrika, waar hy reeds ‘n verskil maak. In Amerika sou hy net “some professor from South Africa” wees.

“Wat help dit ek’t help skryf aan ‘n wonderlike plan vir hoe die land moet lyk, maar ek’s die eerste ou wat sê ek loop nou!”

Hy wil vir jongmense met oortuiging sê: “Luister, bly hier en gaan boer, want dis lekker in hierdie land.”

Op ‘n onlangse reis na die kleine dorpie Karaan in Indonesië waarvandaan sy oupa in 1897 na Suid-Afrika vertrek het, het hy

besef: “Daar’s ‘n groter doel wat ons almal hier plaas, en as ons nou gaan, om watter rede ookal, en daardie doel is nie vervul nie, wat dan?”

“Die misdaad wat ons hierervaar, is ‘n bose wat oorneem vir ‘n tyd. Daar’s net een manier om die bose teen te werk, en dis om die goeie te laat voortgaan.”

Dan kom dit beslis: “Jy moet die uitdagings van ons omgewing met waagmoed aanpak, met die trauma wat daarmee saamgaan en die koste wat ons daarvoor moet betaal. En mens moet mense leer om goed vir mekaar te wees.”

## US-navorser vors geskiedenis van honde internasionaal na

'n Studieprojek oor die oorsprong van honde wêreldwyd het die soeklig laat val op die moontlike genetiese verbintenis tussen dié troeteldiere in Madagskar en die diere van antieke setlaars uit Indonesië. Die internasionale span, wat genetikus dr Barbara van Asch van die US insluit, is egter verras deur hulle bevinding. Anders as wat hulle verwag het, kon die wetenskaplikes geen spoor van 'n moontlike Indonesiese afkoms onder die eiland se honde vind nie. Pleks daarvan wil dit lyk asof alle Malgassiese honde Afrika-wortels het.

"Dis 'n raaisel," sê die skrywers van 'n artikel in die joernaal *Royal Society Open Science*, waarin die DNA van 145 honde van Madagskar en 184 van die Afrika-vasteland vergelyk word. "Ons was



verras toe ons die resultate sien. Ons het verwag dat 100 persent of 50 persent van hulle uit Indonesië sou stam, maar dit was nul persent."

Die internasionale navorsingsprojek oor Madagskar se hond is geleei deur prof Peter Savolainen van die Koninklike Instituut vir Tegnologie (KTH) in Swede. Dié studie het ook ander kollegas van KTH sowel as die Université d'Antananarivo in Madagskar en die nasionale Insti-

tuut vir Genetiese Ingenieurswese en Biotecnologie in Iran ingesluit.

Van Asch, wat haar vroeër vanjaar by die US se Departement Genetika as senior lektor aangesluit het, is sedert 2010 deel van Savolainen se uitgebreide navorsingsprojek. Deel van haar PhD in biologie aan die Universiteit van Porto in Portugal het gefokus op die oorsprong van huisdiere. In 2013 was sy die hoofskrywer van 'n

artikel oor die afkoms en geskiedenis van Noord-Amerikaanse honde. Uit dié studie is dit duidelik dat Amerikaanse honde uit Asië kom. "Die geskiedenis van honde as mense se eerste huisdiere fassineer my, en veral hoe hul onderlinge verhouding lig wêr op mense se migrasiepatrone," verduidelik sy.

Van Asch rond nou die navorsingsspan se studie af oor die oorsprong van honde in Afrika. Dit wil voorkom asof baie eksklusiewe en antieke hondestamme in Afrika gevind word en nêrens anders nie. "Die teenwoordigheid van honde in Afrika mag ouer wees as wat voorheen gereken is," dui sy aan. Die finale studie word teen die einde van vanjaar verwag.

Van Asch is een van die medeskrywers van die Malgassiese artikel.



### How do we know we're eating Karoo lamb?

**S**arah Erasmus (picture), a PhD student in the Departments of Food Science and Animal Sciences, is investigating the potential of analytical techniques to authenticate regionally-produced South African lamb meat, such as Karoo lamb.

As part of her study, Sarah investigated the potential of the isotope ratios of carbon and nitrogen to discriminate between lamb meat samples produced in different regions of SA. Sarah hypothesized that the isotope composition of the natural vegetation endemic to a region will be reflected in the meat of lambs grown in a specific region, thus allowing for the authentication

of the origin of the said meat samples. In the cases where the diet is linked to a region, e.g. when sheep consume the typical Karoo shrubs, the isotope signature of the meat is expected to correlate with the characteristic flavour associated with Karoo lamb.

By determining carbon isotopes, one can determine whether the sheep predominantly ate C<sub>3</sub> (i.e. trees, bushes/shrubs, lucerne, etc.), C<sub>4</sub> (i.e. tropical grasses, roots, maize etc.) or succulent crassulacean acid metabolism (CAM) plants. The nitrogen isotopes in turn, can be influenced by the number of legume plants consumed and the use of organic fertilisers in pasture

production systems.

This study indicated that it is indeed possible to distinguish between mutton produced from different origins (farms) through the determination of the isotope content of the meat, with the isotope content of vegetation collected from the respective study locations, being correlated with that occurring in the meat. The analytical technique thus proved to be successful in linking meat samples to the location it was produced in. Overall, the technique holds promise to be used as a tool to authenticate the origin of meat, thus certifying that Karoo lamb is indeed Karoo lamb.

## SU Plant Pathologists participate in BMGF-funded project

Prof Altus Viljoen and post-doctoral fellow Dr Diane Mostert of the Department of Plant Pathology recently attended a workshop in Kampala, Uganda, to launch a project funded by the Bill and Melinda Gates Foundation (BMGF) on the improvement of bananas for small holder farmers. The five-year project seeks to boost ongoing efforts to deliver high-yielding, disease resistant and superior cooking banana varieties to increase food security in the Great Lakes region.

The 12 million dollar project is led by the International Institute of Tropical Agriculture (IITA) in collaboration with the Ugandan National Agricultural Research Organisation (NARO). It will attempt to boost national banana breeding efforts to develop superior varieties of two popular groups of cooking

banana – the East African Highland bananas, locally known as Matooke in Uganda, and the Mchare in Tanzania.

The project builds on the successes of the many years of joint collaboration between the banana breeding efforts of NARO and IITA that led to the development of 25 hybrids for food and juice – dubbed NARITA hybrids – as part of the CGIAR's Research Program on Roots, Tubers and Bananas. Stellenbosch University (SU), together with the University of Malaya, SLU-Sweden, Cornell University-USA, KU Leuven-Belgium and the University of Queensland in Australia are all collaborating partners, as well as the national breeding programmes of the Brazilian Agricultural Research Corporation (EMBRAPA) and the Indian National Research Centre for Banana

(NRCP).

Banana is an important crop in the Great Lakes region of central and east Africa where it serves as staple food and a source of income for millions of smallholder farmers. However, production is often hampered by a myriad of pests and diseases which reduce yields as much as 90%. Viljoen was appointed as the work package leader for pests and diseases, and will co-ordinate the evaluation of banana varieties. As part of capacity building within the banana project, three new PhD students will be registered at SU.

The overall objective of the BMGF project is to develop hybrid banana varieties with at least 30% higher yield and 50% better resistance to at least three of the target pests and diseases compared with the current varieties grown by the farmers.



An IITA breeder explains the potential of new cooking banana varieties during a field visit at NARO breeding site in Kampala, Uganda.

Viljoen has been extensively involved in global banana Fusarium wilt research over the past 15 years, and is currently dealing with the introduction of an Asian strain of the Fusarium wilt fungus into Africa, which is devastating export Cavendish banana plantations in northern Mozambique.



A dam in a grassland ecological network among pine afforestation. Such dams play an important role in conserving the local dragonfly fauna, and The Goldtail, one of the scarce endemic dragonflies conserved in ecological networks.

## Water bodies among commercial forestry conserve many dragonflies

New generation plantation forestry sets aside natural land in order to conserve biodiversity. It is important to verify whether this is in fact the case. By sampling 60 sites, made up of dams, ponds, marshes and rivers, Gabi Kietzka, James Pryke and Michael Samways of the Department of Conservation Ecology and Entomology showed that there was remarkable dragonfly diversity in these afforested areas. Interestingly, and counter-intuitively, disturbances from human activity had less effect than did various natural environmental variables. This emphasises the importance of conserving as wide a range as possible of natural landscapes in and among commercial forestry. This can be done by designing the land set aside with a range of wetland types within large-scale ecological networks, which are sets of interconnected grassland corridors. These ecological networks conserve a wide range of species, including rare endemic ones.

## Wesp teen wesp: natuurlike vyande bekamp bloekompes

Bosboukundiges en byeboere in die Wes-Kaap hou duimvas dat die natuurlike vyand van 'n Australiese wesp 'n teenvoeter sal wees vir die toenemende voorkoms van dié ongewenste insek in die provinsie se bloekomplantasies.

Bloekombome en veral die blomme wat hulle dra, is 'n belangrike bykomende voedingsbron vir byekolonies in die Kaapse fynbosstreek.

*Leptocybe invasa* (ook bekend as die bloekomgalwesp) kom oorspronklik uit Australië, waar bloekoms natuurlik voorkom. Dit is die eerste keer in 2007 in Suid-Afrika opgemerk.

Die wyfies veroorsaak die grootste kopsere vir byeboere en plantasie-eienaars. Sy lê haar eiers in onder meer die blaarstele en are van bloekomblare. Die ontwikkelende larwes veroorsaak knopperige galle in die besmette blare en dit bring mee dat die bome se blare afval, dat hulle hul lewenskragtigheid verloor en mettertyd doodgaan. Dit is nog onseker wat die effek van hierdie wespe op ouer bome is.

Dié insekteplaat word plaaslik toenemend op veral die bloekomspesie *Eucalyptus grandis* en kruisings hiervan gevind. Onlangs is dit ook opgemerk in die eksperimentele aanplantings wat die Departement Bos- en Houtkunde op die Coetzenburg-berggrond bedryf.

Lede van die US Departement se Afdeling

Boskultuur – onder leiding van Deon Malherbe – het daarom besluit om biologiese beheermiddels eerder as chemiese produkte te probeer. Hulle het gaan aanklop by kollegas van die Instituut vir Bosbou- en Landboubiotegnologie (FABI) aan die Universiteit van Pretoria.

"Biologiese beheermaatreëls sluit gewoonlik die natuurlike vyande van 'n spesie in wat in die land van oorsprong voorkom. So 'n swam of insek kan op natuurlike wyse help om die verspreiding van die pes in bedwang te hou," sê Malherbe.

In die geval van *Leptocybe invasa* is sukses al onder meer behaal met bekendstelling van 'n ander soort wesp, die parasitiese *Selitrichodes neseri*. Studies deur FABI het reeds vasgestel dat dit nie jag sal maak op die inheemse insekte wat



Die parasitiese wesp *Selitrichodes neseri*.

Foto: Anton Kunneke

ook in die plantasies leef nie.

Insekte is daarom van FABI bekom en op 16 April by die Coetzenburg-berggrond vrygelaat. Dit is die eerste keer dat dit in die Wes-Kaap gedoen is.

Daar word beplan om die vordering en effek wat dié wesp het om *Leptocybe invasa* in toom te hou deur die loop van 'n MSc-navorsingsprojek fyn dop te hou.

Tipies sal die parasitiese wesp 'n besmette plant besoek en dan 'n eier lê in die gal wat gevorm is nadat *Leptocybe invasa* 'n eier in die blaarsteel gelê het. Omdat die parasitiese wespe eier bo-op die larwe van die galwespe gelê word, broei dit uit en roof-voed dan op die probleemwesp.

Malherbe verduidelik: "Die parasitiese wesp verlaat die gal as 'n volwasse insek en vlieg dan na die volgende besmette plant. Op hierdie wyse keer dit die verspreiding van die indringer-galwesp, wat nie kans gegun word om verder te ontwikkel en eiers te lê nie."

Die meeste heuning wat in die Wes-Kaap vervaardig word, is afkomstig van die korwe van bye wat op die blomme van bloekombome voed. Bye is ook 'n uiters belangrike skakel in kommersiële boerderybedrywigheide wat staatmaak op die kruisbestuwing van talle vrugte- en groentesoorte.

## The generic honeybush sensory wheels keep rolling

A new version of the generic honeybush sensory wheel was released at the recent annual general meeting of the South African Honeybush Tea Association (SAHTA), the representative body that co-ordinates activities in the honeybush industry. Honeybush, a South African herbal tea, is produced from different *Cyclopia* species, some of which is mostly harvested in the wild, while other species are cultivated commercially.

The validation and revision of the generic sensory wheel for honeybush was conducted by Lené Erasmus, as part of her MSc studies in the Department of Food Science.

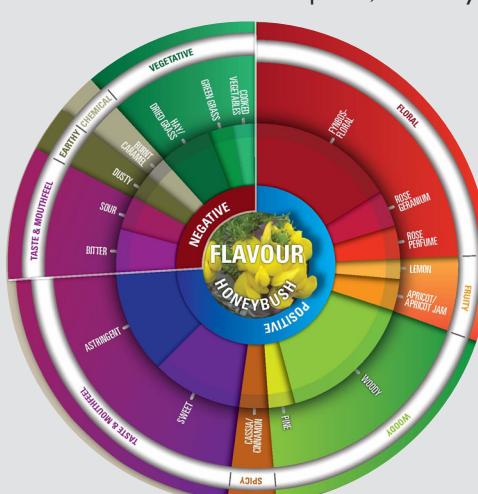
For the development of the revised honeybush sensory wheel a total of 150 samples of the species used as herbal teas was sourced. These samples differed in season, climate, processing conditions and/or geographical area. To capture more information two wheels were developed – one for aroma and one for flavour, taste and mouthfeel (see graph).

The new sensory wheel consists of three tiers. The inner tier represents the two quality

divisions, i.e. the positive and negative attributes. The outer tier contains the primary, "broad-based" attributes, whereas the middle tier contains the specific, secondary attributes. A new addition to the revised wheel for honeybush is that the relative average intensity of each of the specific attributes is indicated on the wheel by varying the width of each "slice".

Each wheel is also accompanied by bar graphs indicating the percentage occurrence of the respective attributes in the sample set tested. Addition of relative intensity and occurrence of an attribute give an indication of their importance in the honeybush industry.

Sensory wheels are widely used by the global food and beverage industry to describe and discriminate amongst products, especially in quality control, product development and research. They can also be used as a viable communication tool. This is especially relevant for the local export industry where it is important to develop new international markets for honeybush tea.



The honeybush flavour, taste and mouthfeel sensory wheel.



By die oorhandigingsgeleenthed was (van links) prof Nick Kotze, voorstander van die Universiteit Stellenbosch se Departement Agronomie, dr Lynn Hoffman, voorstander van die US Departement Hortologie, en mnr Ig Ferreira, hoofbestuurder: Yara Cape. Foto: Engela Duvenage

## Yara gee drie beurse aan US-landboustudente

In Verbintenis wat onder meer deur die skenking van kunsmis begin is, is pas verder verstewig deur 'n belegging in die kennuisuitbreiding van landboustudente aan die Universiteit Stellenbosch (US). Die internasionale maatskappy Yara, wat spesialiseer in plantvoedingsprodukte- en dienste, sal drie naagraadse beurse aan studente in AgriWetenskappe beskikbaar stel.

Die beurse sal studies in Agronomie en Hortologie ondersteun. 'n Derde beurs sal aan 'n student uit 'n Afrikaland buiten Suid-Afrika gegee word, of aangewend word om 'n spesifieke innovasieprojek aan die US na te vors.

Die verhouding tussen Yara en die US strek oor verskeie jare aangesien 'n hele aantal oudstudente by dié internasionale maatskappy werkzaam is. Dit het reeds tot informele samewerking en verskeie geborgde navorsingsprojekte geleid. Yara skenk ook reeds plantvoedingsprodukte wat op die US se Welgevallen-proefplaas gebruik word.

"Ons brei nou dié verhouding uit deur ook in jongmense se lewens te belê en hulle te help floreer op akademiese gebied," het mnr Ig Ferreira, Yara Cape se hoofbestuurder in die Paarl verduidelik. "Ons hoop dat ons geldelike ondersteuning as't ware 'kunsmis' vir hulle studies sal wees om sodoende die kennisbasis in landbou in Suid-Afrika en Afrika te help voed en uit te brei."

Yara is 'n internasionale maatskappy wat volhoubare oplossings vir die landbou sowel as die omgewing bied. Landbou word bedien deur onder meer die bemarking van plantvoedingsprodukte, asook spesifieke kundigheid en tegnologie wat dit ondersteun. Die maatskappy, met sy hoofkantoor in Noorweë, doen sake op ses kontinente en in meer as 150 lande. In Suid-Afrika het Yara kantore in die Paarl en Johannesburg en is wyd betrokke in die res van Afrika.

Die bekendstellingsgeleenthed het saamgeval met 'n navorsingsdag wat op die US se Welgevallen-proefplaas gehou en ook deur Yara geborg is. Onder die sprekers was prof Danie Brink, Waarnemende Dekaan van AgriWetenskappe, dr Ilse Trautman van die Wes-Kaapse Departement van Landbou en dr Anke Kwast van Yara se navorsingsentrum in Duitsland. Hortoloog dr Elmi Lotze en kweekhuiskenner Estelle Kempen het ook navorsingsbevindinge gedeel en besoekers is kans gegun om huidige navorsingsprojekte te besigtig.

## Hortologiestudent van Ceres se harde werk beloon

Helen Marais is die ontvanger van die HORTGRO Science/Prof Daan Strydom-toekenning as die beste student in hortologie aan die Universiteit Stellenbosch (US). Dié oud-leerdeer van Hoërskool Charlie Hofmeyr



Helen Marais het die HORTGRO Science/Prof Daan Strydom-toekenning as die beste student in Hortologie aan die Universiteit Stellenbosch ontvang. Dit is aan haar oorhandig deur Steven Rabe, voorstander van die HORTGRO Science Adviesraad.

Foto: Engela Duvenage

is die tweede student in slegs drie jaar vanuit die Ceresomgewing om dié toekenning te verwerf. Die eer het ook in 2013 vir Gerrit van der Merwe van die Koue Bokkeveld te beurt gevall.

Die toekenning word gedoen aan die beste finalejaarstudent in die voorafgaande jaar (2014), en word ondersteun deur HORTGRO Science, die navorsingsbedryfseenheid van die sagtevrugtebedryf.

Dr Lynn Hoffman, voorstander van die Departement Hortologie, het Marais as 'n "baie deeglike student" beskryf.

"Sy het baie goeie tegniese insigte wat haar eendag goed te staan sal kom," het Hoffman gesê tydens die toekenningsgeleenthed, wat saamgeval het met die jaarlikse HORTGRO Science tegniese simposium op Simondium.

"Al wat belangrik is, is 'n passie vir en 'n belangstelling in die vakgebied wat jy studeer," verduidelik Marais die rede agter haar sukses.

## PhD student wins award at international conference



Nikki Neethling (picture), a PhD student in the Departments of Food Science and Animal Sciences, has done her Faculty and the University proud. Apart from becoming the first South African student to attend the annual Reciprocal Meat Conference (RMC), presented by the American Meat Science Association (AMSA), Nikki also fared extremely well in a RMC competition. The annual RMC is the largest gathering of meat scientists in the world. This year more than 800 delegates from many countries attended. Nikki's poster she submitted for the aforementioned competition was placed second in the graduate student competition (PhD division).

## Veggy snack wins Innovus-Food Science competition

At last, a winner! Pop-In's has been adjudged the most innovative new snack that 4th year Food Science students in the Faculty could come up with. Pop-In's is a gluten-free snack with a North African styled filling that can be popped into a toaster.

The competition to find the most innovative new snack was sponsored by SU's technology transfer company, Innovus to stimulate creative and innovative product development among Food Sciences students.

The winning team's members were BSc (Food Science) students Megan Kleyn, Paula Louw, Lauren Todd, Sumare Marais, Megan Twentyman-Jones and Danie Haumann. The judges were so impressed by the entrees that Innovus upped the prize money to R5000.

Pop-In's also received the first prize in the Department's recent internal competition for



The winning team of (in front) Megan Kleyn, Paula Louw, Lauren Todd, Sumare Marais and (back row) Megan Twentyman-Jones, Christle de Beer (Innovus), Chisala Ngandwe (lecturer) and Danie Haumann.

Picture: Engela Duvenage

4th year students. It is a frozen product made of rice flour and cauliflower dough. It ticks all the right boxes when it comes to catering for different niche markets. Not only is it a vegetarian snack, but also gluten-free, soy-free and dairy-free.

## Du Toit Prins bags Ballie Wahl Merit Award

Du Toit Prins, a 4th year student in the Department of Horticultural Sciences, recently became the second recipient of the Ballie Wahl Merit Award. This award is presented annually to the best third year student in the citriculture course of the Department of Horticultural Sciences. In this course attention is given to important aspects such as cultivar selection, the influence of climate on citrus production, as well as important factors to consider when establishing new citrus orchards. This merit award which was recently instituted, is disbursed by the Citrus Technical Association (CTA), an independent association of technical citrus researchers and consultants founded in 1984. The major aim of this merit award is to reward student excellence and encourage further studies in citrus.



Du Toit Prins receiving his award from Mr Ballie Swart.

## More R&D will boost economic growth, say experts

By 2019 South Africa would have had to increase its spending on research and development (R&D) across all sectors from the current level of 0,6% of GDP to 1,5%. This was stated recently by the Minister of Science and Technology Ms Naledi Pandor at the Stellenbosch Institute for Advanced Study (STIAS).

If achieved, this would double R&D investment in five years – from R24 billion in 2014 to R48 billion in 2019. Said Pandor: “I am working on establishing a joint task team consisting of people from the Department of Science and Technology (DST) and the National Treasury”.

She was speaking at a seminar on R&D in the agricultural sector hosted by the Faculty of AgriSciences in association with the auditing, tax and advisory firm KPMG.

The minister said the expansion of business expenditure on R&D has a direct and immediate impact on economic growth and that the state should therefore not bear the burden alone.

“The private sector is more likely to embrace related commercial opportunities by creating new and improving products, services and production technologies. We are keen to see the private sector become a major player in R&D investment.”

Pandor said few companies in South Africa prioritise employing people who have master's and PhD degrees.

“There is a need to alert the private sector about the advantages knowledge workers can bring to companies. These people bring innovation.”

She added that the DST is working very hard to attract international R&D and to take better advantage of South Africa's integration into global R&D value chains.

The seminar heard that the Western Cape Government spends more than 10% (R108 million) of its provincial budget on agricultural research. It runs seven research farms, a feed laboratory, an analytical laboratory (flora, water and soil) and



*Present at the seminar on R&D in the agricultural sector, were (from the left) Prof Johan van Rooyen, Mr Alan Winde (Western Cape Minister of Economic Opportunities), Dr Naledi Pandor (National Minister of Science and Technology), and Messrs Mohamed Jada and Christian Wiesener of KPMG.*

11 research herds. And it has done extensive research in conservation agriculture.

The seminar at STIAS was aimed at providing insight into the tax incentives available for undertaking R & D in the agriculture industry to boost economic activity.

## Genetika se groeikamers kry nuwe (helder) baadjie

Vyf MSc-studente van die Departement Genetika se Planteteeltlaboratorium is van die eerste Maties wat die geleentheid gebied word om hulle graanproewe in die gemoderniseerde groeikamergeriewe van die Fakulteit AgriWetenskappe uit te voer.

Onder hulle is Irma van Zyl, wat eksperimente uitvoer om kruisbaarheid en stuifmeelvloei in klein-

grane te ondersoek en Wandile Ngcamphalala, Jabulani Mthembu, Nondumiso Cebehulu en S-W Meintjes se navorsing hou verband met die Planteteeltlaboratorium se koringvoortelingsprogram.

Met die draai van 'n skakelaar kan hulle die spektrumlig wat op die plante skyn verander, en weet dat temperature in die groeikamer konstant sal bly.



*Planteteler Willem Botes van die Departement Genetika en MSc-student Irma van Zyl aan die werk in een van die groeikamers.*

Foto: Engela Duvenage

Die geriewe is verbeter danksy die Fakulteit AgriWetenskappe se Strategiese Fonds, waar R2 miljoen oopsig gesit is. “Daardeur wil ons seker maak ons bly op die voorpunt van graan- en genetikanavorsing in Suid-Afrika, tot voordeel van die plaaslike nywerheid,” verduidelik dr Michael-John Freeborough, bestuurder van die Fakulteit AgriWetenskappe.

Die gebou op die Welgevallen-proefplaas waarin dit gehuisves is, is destyds deur die Koringraad ingerig. Dit het egter weens onbruik begin vervalle raak. “Die beligting was baie energie-ondoeltreffend en verouderd en moes met die hand verander word, terwyl instandhouding 'n kwessie geraak het,” vertel planteteler Willem Botes van die Departement Genetika.

Die bestaande agt groeikamers binne die gebou is gesloop en die

ruimte herbenut om ses nuwe groeikamer-eenhede en 'n voorbereidingsruimte in te rig. Elke kamer het 'n kleinerige ingangsarea met 'n dubbeldeurstelsel om temperatuur doeltreffender te bestuur, en ook aspekte rondom bioveiligheid aan te spreek. Nuwe werksareas en energiebesparende LED-beligting, waardoor temperatuur beter gereguleer kan word, is ook deel van die opgradering.

Die stelsel is deur 'n Suid-Afrikaanse verskaffer, Tech Trend, ontwerp en geïnstalleer.

Buite die Planteteeltlaboratorium word die geriewe ook gereeld deur die Departement Agronomie en prof Anna-Maria Oberholster van die Departement Genetika se Graangenomikalaboratorium gebruik.

Daar word beoog om die oorblyvende kapasiteit ten opsigte van groeikamers vir ander navorsers binne die Fakulteit beskikbaar te stel.

## SU and ICFR's SA standard for time studies well under way

To address concerns relating to scientific methodology, data analysis and productivity standards, the Department of Forest and Wood Science and the Institute for Commercial Forestry Research (ICFR) have teamed up to develop the “South African Forest Industry Time Study Standard.”

The Standard was developed with the intention of creating a uniform protocol to be followed when conducting time studies on forestry operations. Tailored for a variety of industry workers from small growers to researchers, it will allow the industry to remain competitive, while presenting an opportunity to improve fibre yield as well as reducing production costs in forest operations. It will also aid in productivity developments, control systems and higher level research on par with international benchmarks.



*Pictured here are contributors to the South African Forest Industry Time Study Standard.*

In the past year, not only has the team accomplished their goal of creating an explicit protocol, but they are also actively disseminating information. A website – [www.forestproductivity.co.za](http://www.forestproductivity.co.za) – offers instructional material as well as downloads to relevant software.

Hopefully, this procedure will facilitate the piloting of time studies and enable communication of results within the industry, as well as to those interested outside of the academic sphere. Overall, a better understanding of the work being performed, will aid in the resources being used as efficiently as possible.

By aiming for the highest possible levels of production, the “Standards for Time Studies for the South African Forest Industry” should help to reduce strain on the resources and on the land.

## Viskenner, Henk Stander, kook met nuwe resepteboek



A kwakultuurkenner Henk Stander (foto) is 'n man wat jou alles kan leer oor hoe om met vis te boer. Daarbenewens kan hierdie kos liefhebber jou ook sommer 'n resep of twee in die hand stop oor hoe om 'n stukkie vis of seekos ten beste voor te berei. Nie verniet het hy dus nou saam met die Stellenbosse koskenner Susina Jooste kragte saamgespan om 'n nuwe resepteboek, *Die Suid-Afrikaanse Vis- en Seekoskookboek* uit te gee nie. Stander is hoofbestuurder van die Fakulteit se Afdeling Akwakultuur. Jooste, op haar beurt, is direkteur van The Private Hotel School op Stellenbosch.



Hulle sagtebandboek van 160 bladsye word in Engels en Afrikaans deur LAPA Uitgewers gepubliseer. Dis 'n deeglike gids wat stap-vir-stap en foto vir foto aantoon hoe om vis en seekos ten beste voor te berei. Benewens resepte bied die boek ook waardevolle riglyne oor die koop van vis en seekos, en hoe om dit vars te hou, te vries of te rook. Dit toon ook aan hoe om 'n vis te ontgraat, te ontvel en in fillette of steaks (mooitjies) te sny. Die voorbereiding van bykosse soos pasta en risotto word beskryf.

Stander is reeds sedert sy grootwordjare 'n ywerige visserman. Na skool was hy onder meer 'n vakleerling van kosghoeroe Peter Veldsman by sy Emily's Restaurant in Kaapstad. Daarna het Stander BAgri(Admin) aan die US gestudeer en dit met 'n MPhil in Akwakultuur opgevolg. Hy is sedert die laat jare negentig by die Jonkershoek-foreplaas betrokke en sedert 2000 heeltyd by die US werksaam.

## kongresse • congresses • kongresse • congresses

### AfroSense sal die smaakbreinselle prikkel



Kongresorganiseerde dr Helene Nieuwoudt (agter) en Nina Muller van die US saam met een van die sprekers, prof Tormod Næs van Nofima in Noorweë.

Indien jy belangstel in die wetenskap agter hoe die mens smake en geure ervaar, sal die eerste AfroSense 2015-konferensie in jou kraal wees. Dit word van 23 tot 27 November vanjaar by STIAS op Stellenbosch aangebied, en sal ook fokus op wyses waarop die nywerheid die sensoriese kwaliteite van produkte bepaal. Die konferensie word deur die Departement Voedselwetenskap en die Instituut vir Wynbiotecnologie aangebied en sal 'n akademiese inslag hê met internasionale wetenskaplikes wat spesialiseer in sensormetrie, sensoriese wetenskap en verbriukersgerigte studies wat navorsing uniek tot die plaaslike wyn-en voedselnywerheid sal aanbied. Onder die sprekers is gerekende internasjonale kenners soos prof Tormod Næs en dr Paula Varela van Nofima in Noorweë en prof Dominique Valentin van AgroSup in Frankryk.

### Symposium on Silviculture and Dryland

Almost successful first symposium on Silviculture and Dryland Forests was recently held in Stellenbosch. The symposium was hosted by Stellenbosch University and the International Union of Forest Research Organisations (IUFRO). It was attended by more than a hundred delegates from companies and universities in 15 countries. With keynote speakers from Brazil, Australia, Germany and South Africa a combined effort was made to unite decision-makers,

ecologists, forest scientists, forest practitioners, academics, forest managers and researchers, who are interested in plantations, woodlots or natural forests in dry regions to share and review information, developments, concepts and ideas within the broad spectrum of the listed themes.



*A number of the delegates who attended the first symposium on Silviculture and Dryland Forests.*

### Plant pathologist presents in Germany

Gideon van Zyl, a researcher with Citrus Research International and PhD student of the Department of Plant Pathology, recently presented a paper at Suprofruit 2015, an international workshop on fungicide and pesticide spray application in fruit growing. The workshop was held on the island of Lindau, situated in the picturesque lake Constance in Germany. Van Zyl's paper was on reduced volume fungicide spray application in South African citrus orchards.



*Workshop delegates visit a local spray machine design and construction firm to test and discuss sprayers.*

### FAO-US werkswinkel fokus op voedselproduksie

Maniere om onder meer die jongste verpakkings- en produksietegnologie in te span om



voedselverlies te voorkom, is onlangs tydens 'n werkswinkel aan die Universiteit Stellenbosch deur kenners van regoor die Suidelike Halfrond bespreek. Dié geslotte werkswinkel is in samewerking met die Verenigde Nasies Voedsel- en Landbou-organisasie (FAO) se Divisie vir Landelike Infrastruktuur en Agri-Industrieë, die Suid-Suid Same-werkingspan (TCSS) en die FAO-verteenwoordigerspan in Suid-Afrika georganiseer. "Ervaringe is uitgeruil en voorstelle gedoen om innoverende en waardetoevoegende tegnologie te ontwikkel, oor te dra, te verkry en te gebruik in prosesseringsfasies, in die verbetering van voedselkwaliteit en vir die vermindering van na-oes verliese," het organiserer prof Linus Opara, uitgelese professor in na-oestegnologie en beklaer van die Suid-Afrikaanse Navorsingsleerstoel in Na-Oes Tegnologie aan die US, verduidelik.

### SU co-convenes first African symposium on Mycotoxicology



*Profs Altus Viljoen (left) and Sheila Okoth (right), conveners of the 1st African Symposium on Mycotoxicology.*

The first African symposium on Mycotoxicology was held in Livingstone, Zambia, recently. The majestic Victoria Falls, a UNESCO world heritage site, provided a picturesque backdrop to the conference jointly convened by Stellenbosch University (SU) and the University of Nairobi in Kenya. Prof Altus Viljoen of the Department of Plant Pathology co-chaired this auspicious event together with Prof Sheila Okoth of the University of

Nairobi. The conference theme, *Reducing mycotoxins in African food and feed* aimed to create awareness on the importance of mycotoxins on the African continent. The scientific programme focussed on the impact of mycotoxins in Africa, specifically food and feed value chains, health and economic impacts, and the detection and identification of mycotoxicogenic fungi and their mycotoxins.

### Entomologienavorsers na EGSA-kongres

Die Departement Bewaringsekologie en Entomologie was goed verteenwoordig op die onlangse 19de kongres van die Entomologies Gemeenskap van Suider Afrika (EGSA) wat by die Universiteit van Rhodes op Grahamstad aangebied is. Dié kongres is saam met die 37ste kongres van die Zoologie Gemeenskap van Suider Afrika (ZGSA) gehou. Elke twee jaar kom entomologienavorsers van regoor die land byeen om hulle navorsing aan plaaslike, asook aan navorsers van ander lande ten toon te stel – daar is altyd wetenskaplikes van verskillende lande by dié EGSA-kongresse teenwoordig. Die velde wat deur die US se navorsers gedeel is, sluit databasisse, geïntegreerde pesbestuur, insekbiodiversiteit, sistematiek en taksonomie, invertebraatpatologie, steriele insekttegnologie, biologiese beheer en indringerbiologie in. Die Universiteit van Pretoria sal in 2017 die gasheer wees vir die 20ste EGSA-kongres.



*Staande (vlnr): dr Shelly Johnson, Andri Visser, dr Corey Bazelet, dr K-D Dijkstra, dr Minette Karsten, Leigh Torrence, dr Berlize Groenewald, Deidre Odendaal, Inam Yekwayo, Eleonore Slabbert, Thomas Platt, Andrew Briggs, Aileen Thompson, Gabi Kietzka, dr Francois Roets, Sam Adu Acheampong, dr James Pryke en dr Rene Gaigher. Sittend (vlnr): Thlou Masehela, Francois Bekker, dr Madeleine Barton, Janina von Diest en dr Pia Addison.*