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Nick Vink in Reserwebank se direksie verkies

Prof Nick Vink, voorisier van die Departement landbou-ekonomie in die Fakulteit AgriWetenskappe, is deur die aandeelhouers van die Suid-Afrikaanse Reserwebank as nie-uitvoerende direkteur van die Bank se direksie verkies. Sy aanstelling geld vir drie jaar.

Nog ‘n akademikus met US-bande, prof Ben Smit, is terselfdertyd stelling geld vir drie jaar.

Vink se hy hoop sy nuwe rol sal hom die geleentheid bied om te help skep aan ‘n groter bewustheid oor hoe die Reserwebank se besluite ‘n impak op die landbousektor het. En voeg hy by: “Ek wil ook die Bank attent maak op hoe gebeure in die landbou die breëre ekonomie beïnvloed.”

Vink het ‘n wye belangstelling in landbou-onwetenskappe in Afrika, en is ‘n gereelde kommentator en spreker oor sake grond- en landbouhervorming, beleid en die wyne ekonomie.

Opara to lead world’s agricultural engineers

Swellendam University (SU) distinguished professor and research chair, Prof Umezuruike Linus Opara has been elected as the incoming president of the International Commission of Agricultural and Biosystems Engineering (CIGR). CIGR is the worldwide umbrella agricultural engineering organisation, and consists of a network of regional and national societies of agricultural engineering, as well as private and public companies and individuals globally.

Opara was elected to the position during the recent International Conference on Agricultural Engineering held in Denmark and organised by the European Society of Agricultural Engineers under the auspices of the CIGR.

This means that he will first serve on the Presidium of the CIGR for two years as incoming president, before taking up the position of president around 2019. He will then serve the CIGR for another two years as past president.

Opara is the first engineer from sub-Saharan Africa to be elected to this position and his term coincides with the 90th anniversary of the CIGR.

He will juggle his new responsibilities with those placed on him as holder of the DST-NRF South African Research Chair in Postharvest Technology at SU and as distinguished professor in the Department of Horticultural Science.

Opara, who has been on SU’s staff since 2009, is a recipient of the 2016 African Union Kwame Nkrumah Continental Scientific Award for senior researchers. He qualified as an agricultural engineer at universities in Nigeria and New Zealand, and serves on numerous international committees and editorial boards. He is a fellow of the SA Institution of Agricultural Engineers. Opara is also the founding president of the Pan African Society for Agricultural Engineering (AfroAgEng), which was established during a CIGR International Technical Symposium held at SU in 2012.

His multi-disciplinary research team is considered the international leading group working on postharvest practices that improve the postharvest handling, packing and marketing of pomegranate fruit. His research group also tests and develops packaging and quality control methods relevant to the handling and storage of fresh fruits and vegetables such as table grapes, citrus and apples. These efforts are focused on alleviating unnecessary food loss and waste, maintaining quality and adding value in the fruit and vegetable sector.

Although SU does not offer a degree in agricultural engineering per se, Opara says he is looking forward to using the new opportunity presented to him. He hopes it will help to deepen and strengthen the contributions of engineering and related programmes at SU in the agriculture, food and related sectors.

Says Opara: “The work of individual SU staff and postgraduate students in these areas are widely recognised by our peers, locally and internationally. Through collaboration and co-supervision we have several PhD and MEng students registered in the faculties of Engineering and AgriSciences working on different research topics in agricultural and biosystems engineering.”
Strengthening collaboration between Stellenbosch and the University of Nairobi

A recent visit to the University of Nairobi (Kenya) by Dr Lindy J Rose (Plant Pathology) and Prof Bradley C Flett of the ARC-GCI (Potchefstroom) saw the bonds of collaboration between these institutes being strengthened once more.

The successful completion of an AWARD fellowship by Prof Sheila Okoth (University of Nairobi) in 2011 at the Department of Plant Pathology, laid the foundation for further collaboration between the two institutes. Common interests, focusing on mitigating the contamination of maize with poisonous metabolites (mycotoxins) produced by fungi, formed the basis of a collaborative CIMMYT/CGIAR-funded project from 2012 to 2014. During the 3-day meeting, feedback on the research accomplishments and progress of the project between SU and University of Nairobi was discussed. Furthermore, a new proposal for Phase 3 funding was developed together with Dr Dan Makumbi from CIMMYT (Nairobi).

The visit was made possible by funding provided by the NRF SA/Kenya bilateral grant awarded in 2014 to Prof Altus Viljoen to facilitate continued interaction between members/collaborators of the research groups.

A subsequent visit by Prof Okoth to the Department of Plant Pathology saw her give a presentation on Management of aflatoxins in eastern and southern Africa, presenting some of the research conducted by the two institutions.

Top honours for two eminent SU scientists

Two of Stellenbosch University (SU)’s eminent scientists have received national acclaim for their outstanding contributions to their respective research fields.

Prof Michael Samways, Distinguished Professor in the Department of Conservation Ecology and Entomology in the Faculty of AgriSciences, and Prof Bert Klumperman, Distinguished Professor in the Department of Chemistry and Polymer Science, won National Science and Technology Forum (NSTF)/South32Awards.

These awards recognise, celebrate and reward outstanding excellence in Science, Engineering, Technology (SET) and Innovation in South Africa.

Samways walked off with top honours in the category: NSTF-GreenMatter Award towards achieving biodiversity conservation, environmental sustainability and a greener economy and Klumperman won a Lifetime Award for his outstanding contribution to SET and Innovation over a period of 15 years or more.

Samways won an NSTF-GreenMatter Award for his significant contribution to insect conservation and biodiversity science, in particular, over the past 40 years and he helped restore the Cousine Island in the Seychelles to its natural state. He is the team leader of the Mondi Ecological Networks Programme, a research group at SU that develops and fine-tunes design and management principles for ecological networks.

Samways has been working for some years with certain large corporates in South Africa to optimise timber production without compromising biodiversity. He also advanced the further development of sustainable wine production.

Ham elected president; award for Goldenhuyse

- Prof Coert Goldenhuyse, extraordinary professor in Forest and Wood Science, received the Dedicated Service Award of the Southern African Institute of Forestry (SAIF) at its 48th AGM held in Nelspruit recently. The award is made annually to members of the Institute in recognition of continuous and dedicated service.

- Ms Hanné Ham, a research associate at Forest and Wood Science, was elected as the 24th president of the Institute for the period 2016 to 2018. This is only the second time that a woman has been elected as president in the 48 year existence of the SAIF.

Agronomy Excels at GSSA Congress

Researchers of the Department of Agronomy excelled at the 51st annual Congress of the Grassland Society of Southern Africa (GSSA) held in Wilderness, near George. The excellence of research on pastures and forages at the Agronomy Department was acknowledged by the GSSA when three of the six scientific awards at the congress went to researchers from this Department.

Dr Pieter Swanepeol, lecturer in Agronomy, bagged two awards. The first award was for the best presentation by a young scientist (younger than 35 years) and the second award was the Norman Rethman Award for the best overall paper related to cultivated pastures.

Furthermore, a PhD student from Coventry University (UK) currently collaborating with Dr Pieter Swanepeol and Dr PJ Pieterse at the Agronomy Department, Chloe MacLaren, gained the award for the best project proposal for 2016. This is for a project on diverse forage crops for weed management in crop rotation systems.

Diversity amongst species and diversity of functional traits of species are important factors driving weed ecology in agroecosystems. This project will provide researchers and farmers in the Mediterranean region with important information on how effectively diversity could be used to suppress weeds in agro-ecosystems.

The GSSA Congress is made up of platform and poster presentations of current and ongoing research related to advancing range-land ecology and pasture management in Africa.

The congress was attended by more than 200 rangeland- and planted pasture scientists, mostly from Southern Africa, but also from Central Africa, Europe and Oceania.
Groundwork for major new bilateral project completed

Groundwork for a new bilateral project between the Institute for Wine Biotechnology, Department of Viticulture and Oenology (IWBT/DVO) in South Africa, and a project team from the Umeå Plant Science Centre and Computational Life Science Cluster (CLiC) at Umeå University in Sweden was recently done during a workshop at Stias (Stellenbosch Institute for Advanced Studies).

The aim of this project is to analyse a large and complex data set that was generated by a team of IWBT/DVO researchers in an integrated project on Sauvignon blanc funded by the South African Wine Industry, the THRIP programme and the National Research Foundation (NRF). The integrated approach implemented in this project follows on the development of workflows to conduct large scale field studies in vineyards with a “Field-Omics” approach using highly characterised model vineyards. The project “follows” wine production from the vineyard through all steps of wine making and ultimately wine perception (sensory evaluation).

The main grant holders and partners in the bilateral project, which is called Wine as a System, are Prof Melané Vivier (Stellenbosch) and Prof Johan Trygg (Umeå). The Swedish group has a proven record for innovative multivariate data analysis, with a strong focus on advanced systems biology data analysis workflows. These skills will be essential to develop and implement appropriate data analysis workflows for the biological data generated by the South African partners.

The funder of the project, the Swedish Foundation for International Cooperation in Research and Higher Education (STINT), has collaborated with other research councils in Sweden and awarded an amount of 5.3 million SEK (Swedish Krona) for ten projects — 103 applications were received — within the South Africa/Sweden Bilateral Scientific Research Co-operation programme for the period 2016 to 2019.

The NRF will be financing the South African groups with an equivalent amount.

nGAP-pos help Voedselwetenskap

Die Departement Voedselwetenskap het een van vier nGap-poste ontvang wat aan die Universiteit Stellenbosch (US) toegewys is. Altesaam 79 toewysings is aan universiteite oor Suid-Afrika heen gemaak.

Die Nuwe Generasie Akademici-program (nGAp), wat deur die Departement van Hoër Onderwys en Opleiding (DHOO) aangebied word, is daarop gerig om universiteite te help om nuwe personeel in lyn met hulle personeel- en ontwikkelingsplannings te werf.

Die DHOO dra die koste van dié personeel wat in sommige van die ander gebiede handel, wat as hul persoonlike inkomste bydra. Die nGAP sal ook dié nuwe personeel ondersteun om te help om onderwysontwikkelinge en navorsingsontwikkelinge te stig. Anseoksers moet jonger as 40 wees.

Prof Gunnar Sigge, Hoof van die Departement Voedselwetenskap, sê hy is baie verlig oor en in sy sirkel met die nGAp-pos wat aan sy departement toegewys is. Dit is aangeneem dat die akademiese kwaliteite van die studente wat aan die departement toegeewe word is aangesien persoonlike kwaliteite van die studente nie aan ystere gesig het nie.

In 2013, 2 013 voorsaaiers, 704 postgraduaatstudente, 30 MSc en 22 PhD ingeskrywe studente, is dus duidelik dat die akademiese personeel ‘n hoë voorsaaierskvaliteit gediende.

Why agriculture is vital for SA’s economic future

Countries that tax agricultural sectors are normally poor. Countries which subsidise the agricultural sector are normally rich.

This is according to Prof Mohammad Karaan, Dean of the Faculty of AgriSciences, who was a speaker at National Treasury’s Public Economics Winter School held recently at the University of Pretoria. Karaan shared evidence to show why agriculture should be part of economic and industrial policy.

He explained: “Agriculture must form an important part of the economic future of South Africa. Most economic evidence does not favour agriculture as a future development path. But there is enough evidence to show that agriculture can play a role in modernising economy.”

Karaan continued: “Looking at China as an example, within 15 years, the country was able to take almost 20% of its population out of poverty through agricultural development. Much of economic development in South-East Asia, China, Singapore and others was based on industrialising agriculture, introducing land reform and developing the manufacturing industry. A country’s future is also developed around planning with surplus factors of production such as labour.”

Karaan said the fact that technical change brings about specialisation and productivity, shows that agriculture should be part of an industrial development strategy. “If it was not for technical change which has taken place in the last 20 years in agricultural research and innovation, we would not be able to deal with the current drought, the worst in 100 years.”

He added: “Looking at the growth of South Africa’s real GDP per capita over the last 300 years, prior to the gold rush and the discovery of diamonds, GDP was low. At the time South Africa was largely an agricultural economy, exporting field crops, wool and wine. If a sector only relies on agriculture, it will get poorer over time, unless there is some industrialisation.”

Trees of the year: 2016

Common tree: Ficus thonnongii: Family Moraceae (SA no. 48) (left). Common name: Common wild fig, Stranger fig, Gewore wildvy, umThombo, unBombe

This evergreen tree is relative drought resistant, but grows best in the drier to moist tropics at elevations of 1 000 to 2 500m. It prefers full sun, medium rainfall areas with deep and well-drained soils. It is is planted for shade, fences, shelter, erosion control, improve nutrient status and water-holding capacity of soil. The fruits and leaves are edible and provide a valuable source of nutrition. The bark, roots and latex have medicinal properties. Bark fibre is also used for making mats and strong ropes.

Uncommon tree: Maerua cafra: Family Capparaceae (SA no. 133) (left). Common name: common bush-cherry, white-wood, gewone wibos, unTswantswane, umPhunzisa

Maerua consists of approximately 100 species of which roughly eleven occur in Southern Africa. The name Maerua cafra might be from Arabic descent as the name cafra is traditionally given to various plants from the eastern areas of southern Africa. Maerua cafra is a rare species in South Africa and grows as a low bush on dunes (dry places) to a tree in bushveld regions, rocky areas, wooded grassland and along forest margins (up to 9m – average 3m). Its perfect for landscaping, is water wise and form good hedges.

Ruforum African Higher Education Week

The Fifth Ruforum Biennial Conference 2016 (also known as ‘African Higher Education Week’) takes place from 17 to 21 October 2016 at the Century City Conference Centre in Cape Town. The theme will be ‘Linking Agricultural Universities with Civil Society, the Private Sector, Governments and other Stakeholders in support of Agricultural Development in Africa’.

For more information, contact: biennial@ruforum.org or info@rb2016.org
Insight into sustainable farming practices in Benin

Dr Emiliano Raffrenato of the Department of Animal Sciences has visited Benin to establish a long term collaboration with the University of Abomey-Calavi in Cotonou and the Department of Livestock of the Italian Ministry of Agriculture.

Raffrenato is part of a research team which collaborates with the University of Pretoria and the University Federico II of Naples in Italy to investigate ways of improving animal and farm efficiency, aimed at alleviating the poor conditions in which people in rural areas have to deal with on a daily basis. The main focus of the team is on improving the use of local resources and by-products, and the development of a farm model to use locally and potentially throughout sub-Saharan Africa.

The team also recently visited a most interesting model of farming led by five students from the University of Abomey-Calavi in Cotonou and the Department of Livestock of the Italian Ministry of Agriculture.

During his Italian sojourn Raffrenato also presented several lectures at the University of Abomey-Calavi in Cotonou.

Dairy researchers visit Utah for JAM of the ASAS and the ADSA

Dr Emiliano Raffrenato of the Department of Animal Sciences and two of his postgraduate students, Aimee Russouw and Louis Venter, recently attended the joint annual meeting of the American Society of Animal Science and the American Dairy Science Association in Salt Lake City, Utah, USA. The theme of the meeting was Big Solutions for Grand Challenges.

During the proceedings considerable time was spent on the gut microbiome and prenatal programming. The Stellenbosch University (SU) delegates contributed with one platform and one poster presentation on starch digestibility and on yeast use for ruminants, respectively.

The meeting was characterised by the introduction of e-posters which brought much more interaction between presenters and delegates. Raffrenato and his students were able to establish collaborative networks with the University of Nevada (Prof Antonio Faciola), Penn State University (Prof Kevin Harvatine) and the US Department of Agriculture (Dr MB Halli).

Faciola is due to spend ten days next month in the Department of Animal Sciences with a view of collaborating in research projects of Raffrenato and his team.
First fungal genomes from the fynbos

Unlike their pathogenic cousins, they do not seem to have obvious negative impacts on the beloved Protea plants. Since their discovery in Protea, much work has been done to establish how they move between the Protea seed cones and what factors influence their presence.

In short, the mites that infest Protea seed cones get “painted” with the sticky spores of the fungus while they walk around. These small mites struggle to move from one place to another, so they use beetles and birds as taxis. The fungi, along for the ride, are dispersed quite far in this way – some studies suggest as far as Stellenbosch to Mossel Bay.

So did these fungi just see a gap in a nice-looking seed cone and decide to live there? Why are they not causing disease in their Protea hosts and what enables them to live in dead cones that seem to have very little nutrients? The genome sequences of the two Knoxdaviesia species are not only great because they are the first from their family of fungi or from the fynbos, but they will also provide a blue-print for these to be studied and many other unanswered questions. Using these genomes, one can look at K. capensis and K. proteae from the proverbial “head to toe” and ultimately learn a little more about the amazing biodiversity of fungi.

Join the hunt for protea killing microbes

Cape Citizen Science is a new project to survey plant-killing microbes in the fynbos. The project invites citizens to participate in research by reporting dying plants, submitting samples, and even spending time in the laboratory. It also seeks to include students interested in web development, graphic design and video production. Anyone is welcome to participate.

The project focuses on plant-killing microbes called Phytophthora (a Greek term that literally translates to ‘plant destroyer’), which cause many plant disease epidemics around the world (e.g. potato late blight – Irish potato famine and sudden oak death), and may cause protea root rot extensively in the Western Cape. However, researchers hypothesise that there are more Phytophthora exotic and indigenous species present in the fynbos, and invite the public to join the hunt and possibly discover new, undescribed species!

Citizen Science projects are research projects committed to educational outreach. Cape Citizen Science offers public workshops on recognising plant disease and contributing samples to the project. Anyone interested in learning is welcome to participate.

Citizens can report dying plants through online tools such as IspotNature, or submit physical samples directly to the laboratory in Stellenbosch. Phytophthora species move through moist soil and water using swimming spores. Therefore, one example of how citizens can contribute to the research is by submitting water samples from river recreational activities or sources of fresh-water irrigation.

Starting in September, the project will launch a phase of targeted soil sampling, providing a form of science driven recreation.

Cape Citizen Science is based in the Diversity and Symbiosis Group headed by Dr Francois Roets in the Department of Conservation Ecology and Entomology. The project is a collaboration between Stellenbosch University, the University of Pretoria, the Forestry and Agricultural Biotechnology Institute, and the Center of Excellence in Tree Health Biotechnology. More information about the project can be found on their website: http://citscsci.co.za

Project to enhance agricultural activity in Africa takes off

Pia Addison was invited to collaborate on a new regional project involving “enhancing capacity for detection, surveillance and suppression of exotic and established fruit fly species through integration of sterile insect technique and other suppression methods.”

The first meeting to kick-start the four year project recently took place at the Eduardo Mondale University in Maputo, Mozambique. It is being funded and co-ordinated by the International Atomic Energy Agency (IAEA) and FAO. The overall objective of the project is to enhance agricultural productivity in Africa and the Indian Ocean region by supporting the production of fruit fly free fruits and vegetables, meeting international standards.

The problem is being addressed through a larger, regional project due to the transboundary nature of fruit flies; the need to exchange experiences and share research outputs between participating countries and the need for a standard response to outbreak protocols; as well as co-operation among member states on the response to potential invasions of exotic fruit flies and creation of areas of low pest prevalence – to secure export markets.

The project involves 19 African countries, including the southern African region, West and East Africa and the Indian Ocean islands. Stakeholders include ministries responsible for surveillance and eradication of invasive flies, agricultural research and extension services, as well as agricultural colleges and universities.

Pictured here are the delegates who attended the first meeting to kick-start the four year project aimed at enhancing agricultural activity in Africa. The meeting took place at the Eduardo Mondale University in Maputo.
Dragonflies can assess state of dams, rivers and streams

South Africa’s 162 sun loving dragonfly species are not only beautiful to watch, but are also helping conservationists, water managers and farmers get to grips with the state of local freshwater sources, such as rivers, streams and dams.

To show how this can be done, two Stellenbosch University (SU) researchers have written a new book which sets out how these insects can be used as freshwater monitors.

The new 224-page full colour Manual of Freshwater Assessment for South Africa: Dragonfly Biotic Index is written and compiled by Prof Michael Samways, renowned insect conservationist of the Department of Conservation Ecology and Entomology, and water ecologist Dr John Simaika, a research fellow in SU’s Department of Soil Science.

Says Samways: “Using dragonflies in freshwater assessments is so simple, because they are relatively easy to identify. All you need is a good guide, a pair of close-focus binoculars, and a sunny day.”

The book synthesises the research they have been doing together over the past decade to compile an easy-to-use biotic index that is relevant for South African water systems. In the process they have also been involved in finding new species or re-discovering ones that were thought to have become extinct.

The manual, which contains full-colour photographs and line drawings, can also be used as a field guide to locate and identify dragonfly species.

• The book can be ordered from samways@sun.ac.za

Naaldekoker nou lyf verkleurmannetjie

Wanneer die temperatuur daal, verander die mannetjie sowel as die wyfie van hierdie beestjie kleur verandering binne sekondes, vertel hy my net weer oor hoe gek ek oor insekte is.”

Vir meer navrae oor die kursus, kontak prof Gunnar Sigge van die Departement Interdisiplinêre Gesondheidswetenskappe, Afdeling Menslike Voeding.

Hulle het onlangs hul bevindings in ’n artikel in die internasionale vaktydskrif Journal of Insect Conservation uiteengestel.

Naaldekoker nou lyf verkleurmannetjie

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