
Transparent Soil Reveals Plant Roots

The James Hutton Institute

A new transparent soil is helping to reveal the dark, underground secrets of plant roots. A team of researchers from the James Hutton Institute and the University of Abertay Dundee have developed a see-through soil which will enable them to study roots in detail for the first time. Addressing global issues such as food security, disease transmission and climate change presents researchers with a variety of challenges, including the study of the underground world of plant roots; called the rhizosphere. The creation of the new see-through soil marks a milestone in the study of the rhizosphere and will have applications in many different areas of research. Lionel Dupuy, a theoretical biologist in the Ecological Sciences group at the James Hutton Institute, said: “With this new technique, scientists now have a way to observe soil processes, live and *in situ*. This is exciting because there are so many things to discover in soil and we don’t know yet what they are”.

After two years of painstaking research to find a compound that could replicate soil chemistry, Dr Dupuy and his colleagues found success with a synthetic composite known as Nafion, often used in power-generating fuel cells. This artificial soil is not especially transparent on its own: it becomes translucent when saturated with a special water-based solution.

The product is a substrate which is very similar to real soil in terms of physical and biological variables, such as water retention, ability to hold nutrients and capability for sustaining plant growth.

Dr Dupuy explained: “There are many different scientific disciplines that could benefit from this research. Transparent soils could be used to study the spread and transmission of soil borne pathogens. “In crop genetics, transparent soils could be used to screen the root systems of a range of genotypes. This would help breed crops with more efficient root systems so that agriculture can rely less on fertilisers. “Physiologists could also use transparent soils to understand how plants or microbes access nutrients that are heterogeneously distributed in soil. Soil ecologists could use this system to make microcosm experiments where observation on interactions of different species can be observed,” he added.

According to the team behind the see-through soil, future paths of research will focus on controlling a greater range of chemical and physical properties, so that applications of transparent soils to the many disciplines of soil biology are possible. They also hope to lower the overall cost of the technique, so that it can be used by everyone and at a larger scale.



Paper quoted: Transparent Soil for Imaging the Rhizosphere. 2012. Downie, H., Holden, N., Otten, W., Spiers, A.J., Valentine, T.A., Dupuy, L.X. PLoS ONE 7(9): e44276. (doi:10.1371/journal.pone.0044276)

SANSOR Appoints new General Manager

SANSOR Press Release

The South African National Seed Organisation (SANSOR), is pleased to announce the appointment of Dr Lukeshni Chetty as its new General Manager. Chetty brings to the position a wealth of experience in the agricultural industry as a geneticist and biochemist, having worked in laboratories and the field with farmers, to assist in better understanding crop yields and the impacts of natural biodiversity.

“We are delighted that Lukeshni has joined our team and believe she brings with her fresh ideas and a new approach, at a time when the farming industry itself is facing a number of challenges due to climate, land availability and economic support,” states Brian Lever, chairman of SANSOR. “I believe she will form an important part of the SANSOR team.” Chetty boasts a B.Sc in Genetics and Biochemistry; B.Sc Honours in Genetics; her M.Sc in Genetics with distinction; and her Ph.D in Genetics. She has presented at numerous industry events, is seen as a leader in the industry by her peers and many of her papers have been published.

“As a highly motivated individual who is passionate about this industry I am looking forward to my new role at SANSOR, and in particular working with our members to create improvements in agriculture for the benefit of us all and the country as a whole,” states Chetty.



Dr Lukeshni Chetty

Established as a private not for profit company in 1989, through the amalgamation of a myriad of associations that represented the seed industry, SANSOR’s mission is to act as a representative of the seed trade, protect and promote industry interests, serve as a Secretariat, and render specific services to its members.



23rd Annual Congress of SANSOR 8 to 10 May 2012

SANSOR Press Release

The South African National Seed Organization (SANSOR) is the leading authority for the provision of industry-related, strategic services to the South African Seed Industry. Its mission is to represent, protect and further the interests of the seed trade to the benefit of its members. The 23rd Annual Congress of SANSOR was recently held on 8 – 10 May 2012 at the Irene Country Lodge, Pretoria, Gauteng. Highlights of the Congress included:

An Outreach Programme at Irene Homes for the mentally disabled where staff and members of SANSOR painted window frames and planted trees.

SANSOR's inaugural Golf Day was held at Irene Country Club with a small group of enthusiastic players enjoying a wonderful afternoon of competition, while also planting trees.

The trees planted at Irene Homes, Irene Country Club and Irene Country Lodge is part of

SANSOR's ongoing effort to reduce our carbon footprint wherever we have our Annual Congresses.

The theme for this year's Congress was Sustainable Trade - Opportunities and Responsibilities. The Keynote Address was by Dr Ferdi Meyer, Director: Bureau for Food and Agricultural Policy covering challenges and opportunities in Agriculture in view of the National Development Plan's vision for 2030. In his presentation he shared views and challenges that face the seed industry.

Other guest speakers included:

Mr Caiphus Ramoroka from Technology Innovation Agency covering technological innovation in the seed industry and how they can assist the seed trade in developing and access technology to the benefit of all South Africans.

Mr Kevin Kabunda from USAID Southern Africa Trade Hub covering the SA seed industry's relationship with SADC and how they plan to work together with the SA seed industry in not just South Africa but throughout SADC.

Mr Jerry Madiba from AgriSETA covering employment opportunities in the SA seed industry and how the SETA can assist the seed industry in learnerships and the funding of bursaries.

During the Congress the Annual General Meetings of the Agronomy, Horticulture and Forage Divisions were held, as well as a new Board elected from these divisions. The new SANSOR Board of Directors (non-executive) for the 2012/13 financial year is:

Brian Lever (Advance Seed) – Chairman
Gert Heyns (Monsanto SA) – Vice-Chairman
Susan Allen (Sakata SA) – Director
Jan Coetzer (Pannar Seed) – Director
David Durandt (Seedcor) – Director
John Odendaal (Pannar Seed) – Director



New SANSOR Board of Directors for 2012/13 (bottom from left: Gert Heyns Susan Allen, Gerrie Reitsma; top from left: John Odendaal, David Durandt, Brian Lever, Jan Coetzer)



eLearning Africa 2012 Report

Julie Levy

The Communication Initiative

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The eLearning Africa 2012 Report describes how Africans are using new technologies to enhance education and training across the continent. The report: uses data collected from 447 survey respondents; contains analyses by a number of commentators, including traditional chiefs, investors, and academics from across Africa; and includes the perspectives of elearning professionals and a range of other stakeholders across 41 different countries in Africa.

The survey results indicate that the majority of respondents use information and communication technology (ICT) in classroom teaching and learning. Although most of those who participated in the survey were encouraged by the potential of ICT to improve the quality of their teaching practices, 16% of respondents were constrained by limitations in bandwidth, funds, electricity supply, and insufficient human resource capacity. The large increase in the number of mobile phone subscriptions across Africa is reflected in the number of respondents who use mobile phones in their teaching practices.

Key findings from the eLearning Africa 2012 survey website:

- The number one factor constraining the African eLearning sector is lack of bandwidth.
- The top consideration for African organisations is access to appropriate content.
- The most important change agent is the government.
- The top motivation for using ICT is to improve the quality of teaching.
- 48% use mobile phones in education.
- 36% use shared resource computing in education.
- 74% use ICT for classroom teaching and learning.

The full report be accessed by visiting http://www.elearning-africa.com/pdf/report/ela_report_2012.pdf.

University of Fort Hare Green Week 2012 Report

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In response to the pressing issues of climate change and sustainability the University of Fort Hare Student Green Campus Initiative (SGCI), a collaboration between World Student Community for Sustainable Development (WSCSD) and South East Africa Climate Consortium-University of Fort Hare, was formed in February 2012. SGCI is leading a student crusade to tackle issues of sustainability and climate change.

We recognise that students, as potential leaders and key players in society, have a responsibility to respond to what has become one of the strongest moral callings of our time by exerting our influence to create more sustainable societies in order to protect the rights of current and future generations to an environment that is not harmful to their health or well-being, as enshrined in Section 24 (a) of the South African Constitution. In order to do so we are working towards the following goals:

1. Our primary aim is the creation of a network that hopes to establish, as a moral and social norm amongst students across South Africa, an engagement with issues of sustainability and climate change;

2. To facilitate discussion and cooperation amongst members, societies, NGOs and individual student researchers;

3. To create and develop a knowledge base, which can be utilised by students and non-students and SGCI and non-SGCI members alike in their endeavours to tackle climate change and issues of sustainability;

4. To create a broad activism base from which to influence policy on an institutional, business and governmental level;

5. To create and develop on-the-ground, practical sustainability initiatives and models that can be utilised to tackle issues of climate change and sustainability in varying contexts, as well as shared through our knowledge network;

6. To raise awareness and funding in order to strengthen the response to issues of sustainability and climate change;

7. To stimulate and collate research in the field of climate change and sustainability;

8. To educate the broader public on issues of climate change and sustainability;

9. To assist Universities to become more environmentally friendly;

10. To assist local communities to sustainably co-exist with their natural environment;

The Green Week 2012

The Student Green Campus Initiative is rapidly becoming one of the most progressive student organizations at UFH bringing together hundreds of different students in varying academic disciplines, year of study, culture, and background to lead a student crusade to tackle issues of sustainable development and climate change. SGCI is a member of the Grassland Society of Southern Africa and works together with a number of other important organizations like the Sustainable Seas Trust, Wildlife Environmental Society of Southern Africa, Bluebuck Network and the Wilderness Foundation as well as various institutions from the four universities across the Eastern Cape. This sort of engagement is most certainly required if we are to tackle issues as complex and difficult as those we are up against as future leaders. However, we set out to bring together representatives from all of these sectors to meet and pilot the way forward for SGCI and its partner organisations. Running under the theme “Make a Green Difference, Be Green, Be Responsible”, Green Week 2012 played an incredibly imperative role in charting the way forward for SGCI, developing partnerships, sharing knowledge and experience and pooling our resources and skills to form a more comprehensive response to the defining moral issues of our time.

Tree Planting Day: Saturday 25 August 2012

The green week kicked off with a tree planting day in Alice, where 20 indigenous trees were planted, including the national tree, the yellow wood, in a drive to replenish the local heritage. Over 75 participants were present including the Acting Deputy Vice Chancellor Prof. G. de Wet, Director for Post Graduate Studies Prof. C. Nikodem, Dr. Makura from TLC and representatives of various departments and the SRC. Also present were representatives from WESSA, UFH ARDRI, Grassland Society of Southern Africa, Nkonkobe Municipality, Department of Environmental Affairs, Walter Sisulu University and WESSA volunteers from Germany. Thanks to the Green Week, we were able to raise awareness among budding environmental enthusiasts about the prevalent condition of our local environment, and how carrying out a tree plantation drive was one of the many ways in which we could help salvage this current deplorable situation. We also made a commitment to monitor the 100 trees that have survived from the previous year's tree planting.

Green Pledge and Panel Discussion: Monday 27 August/East London and Tuesday 28 August/Alice Green pledge and stakeholders panel discussion kicked off with each panellist presenting how their organization is “Being Green and Responsible”.

Discussions then concentrated on issues about making a Green Difference in the context of UFH, South Africa, Africa and the World. A great deal of discussions were focused on the role of students and staff as academics and citizens of the world in bringing issues of a Green Economy, Society and Environment to the fore of our everyday decision making as well as the opportunities that are present for participation. The various organizations who took turns to make up the panel for both the Alice and East London discussions are listed below:

Monday 27 Aug/East London UFH Campus: Panellists

- Dr. S. Mamphweli – Fort Hare Institute of Technology
- Mr. M. Buti – Wildlife and Environment Society of South Africa

Tuesday 28 Aug/Alice UFH Campus: Panellists

- Mr. S. Mhle – Department of Agriculture, Forestry and Fisheries
- Mr. P.Tembela – Department of Agriculture, Forestry and Fisheries
- Dr. M. Lesoli – Grassland Society of Southern Africa
- Prof. C. Nikodem – Govan Mbeki Research Development Centre University of Fort Hare

More than 1500 students and staff members made a commitment to live a Green Life by making a palm print or signing on a Green Pledge cloth. By pledging to live a Green Life one made a promise to consider environmental issues in their day to day decision making whether shopping or travelling.

Media Day and Life Knowledge Action Lectures Alice: Wednesday 29 August/Alice

On Wednesday 29 August 2012 in Alice, we held a Department of Environmental Affairs career exhibition where students had a chance to find out about career opportunities in the environmental sector and the various bursary and internship opportunities available from the department. Also on the same day we conducted Life Knowledge Action (LKA) lectures during the LKA programme focusing on creating a Green Campus at our University. During these lectures a quiz was undertaken to identify students who were to receive bags donated by the Grassland Society of Southern Africa. Four individuals were identified and walked away proud owners of the lovely bags.

Launch of Green Projects: Thursday 30 August/Alice

The launch of Green Campus Projects on Thursday 30 August 2012 in Alice was attended by interested students as well as project partners such as the Centre for Trans-disciplinary Studies, the Grassland Society of Southern Africa, Nomzamo Co-operative, Students In Free Enterprise (SIFE) UFH team

and the Department of Environmental Affairs. It was during this launch that future strategies of our activities were discussed and made public as well.

Observation of International Environmental Days and LKA Lecture East London: Friday 31 August

The East London Campus version of the LKA lectures took place on Friday the 31st of August with Vice Chancellor of UFH Dr. Tom Mvuyo in attendance. The lectures once again focused on creating a Green Campus as well as the prevailing sustainability issues facing us as future leaders and the steps we can take to address the impending disasters. A Department of Environmental Affairs career exhibition was also held soon after the lecture as well as further pledging.

Green Sports Day: Saturday September

The week finished off with the Green Campus games co-hosted by the Faculty of Science and Agriculture. The games were all played in celebration of the successful Green Week with the spirit to commit to "Be Green and Be Responsible".

Proposed Green Projects

1. Energy Challenge: University of Fort Hare Student Green Campus Initiative aims to create a campus-wide high impact and high-publicity energy challenge that will involve every student and staff member living within UFH residence system. The challenge will thus go out to thousands of students and hundreds of

staff across UFH and will receive publicity well beyond UFH campuses. The challenge will be to see how much each residence will be able to reduce their energy consumption per capital (and by extension, how much money they can contribute to fighting climate change). Each residence will be competing against other residences on campus, and thus the competition will harness the competitive university spirit and play on old rivalries within the university. How LKA aim to measure consumption through the installation and monitoring of energy consumption monitoring devices within the each residence.

2. Two Bin Recycling System: University of Fort Hare Student Green Campus Initiative aims to create a two bin recycling system that is easy to use and easy to collect. The system will utilize colour coded bins where the plastic carriers and the bins are coded into a recyclable materials' bin and a non-recyclable materials' bin. The pilot run of the concept will be tested on a few residences before roll out to all the residences on campus and all the buildings eventually. At the dumping site a group of previously unemployed youths who will have been trained and educated will be handed all the recyclable materials for sorting into different categories. Entrepreneurial activities will be established for the use of the recyclable material in collaboration with the Students in Free Enterprise (SIFE) UFH team and these will include selling to recyclers (bottles and cans), melting into plastic pellets, and use as media for vermicomposting (paper).

3. **Back to Back Printing:** After discovering that almost all assignments and notes at UFH are printed only on one side of each sheet of paper, the SGCI wishes to run a pilot project with the Grounding Programme (LKA) to try and encourage all staff and students to utilize back to back printing therefore saving paper and money. The campaign will then be audited and if successful implemented on a larger scale with the involvement of the entire university.

4. **WildREACH:** WildREACH proposes to foster a valuable relationship between student volunteers and local communities in which knowledge is shared and applied in an effort to promote social and environmental sustainability through wildlife conservation. Outreach entails getting student volunteers (which we will call student mentors) involved in helping local youth (which we will call mentees) between the ages of 15 and 18 to develop new or further any existing interest in wild areas, the natural environment and their importance. WildREACH's larger projects involve taking a group consisting of 20-40 mentees, 5-10 student volunteers and any potential speakers for a weekend away at a local game reserve or nature conservation area.

Green Week Challenges Faced

The success of the Green Week was one fought for given that there were many challenges that the organisers faced. Co-ordination of the different people handling the different activities was a major challenge.

Communication from the various internal and external departments that were supporting the event was sometimes late. This left organisers in some instances having to do more in a short space of time to get things in order resulting in crisis management of situations.

Planning of future events has to be communicated to supporting departments in time to give them the necessary time to make decisions. Budgetary issues were also a major challenge since we had a very stringent budget compared to what had been planned initially resulting in some other activities being cut short. Getting majority of students and staff to participate especially in panel discussions was a hustle but we did manage to get a substantial number of participants in both panel discussions. Going into the future more effort should be put on advertising and incentivising for more participants.





Alice Campus—Green Pledge



Planting trees on campus



Planting indigenous trees



Panel Discussions



Creating Change



Gauteng Department of Agriculture and Rural Development (GDARD) Research Symposium

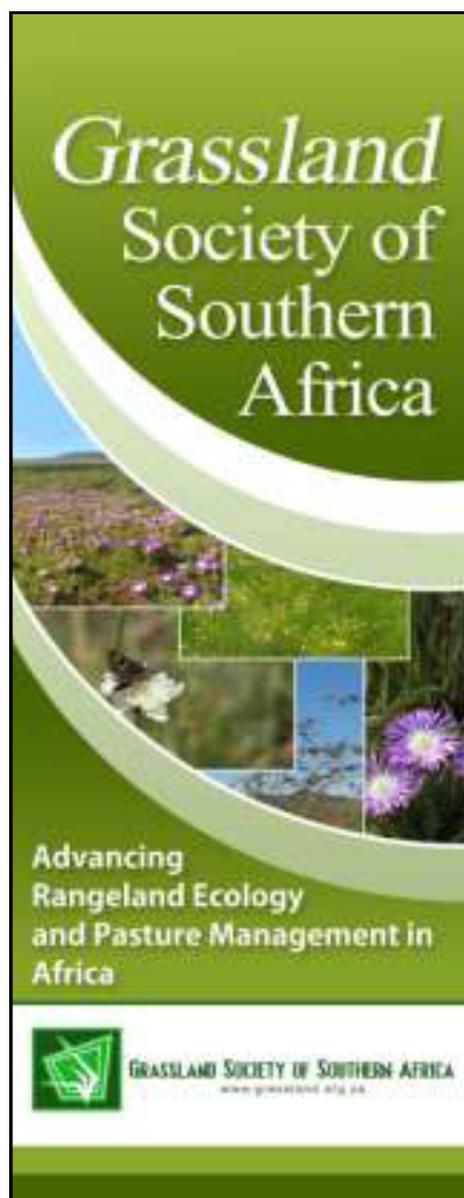
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Gauteng Department of Agriculture and Rural Development (GDARD), Directorate: Technology Development and Support (TDS) held a Research Symposium on the 6 June 2012 at Saint George's Hotel, Pretoria.

TDS is responsible for implementation of agricultural research programme, training and advisory on plant and animal production; and agricultural disaster risk management functions.

GDARD: TDS fund agricultural research related projects in Gauteng province, and during the day different researchers from research councils and universities presented their research work funded by GDARD. Calls for submitting proposals are made yearly. This is an opportunity for researchers, especially young researchers conducting research in Gauteng province to apply for such funding.

For more information regarding funding opportunities at GDARD visit www.gdard.gov.za or call 011 355 1374.



National Science and Technology Forum 41st Plenary Meeting

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I attended the National Science and Technology Forum (NSTF) 41st Plenary Meeting on behalf of the Grassland Society of Southern Africa. The NSTF is the stakeholder body for all science, engineering, technology and innovation (SETI) organisations in South Africa and is also registered as a non-profit organization with the Department of Social Development. The commonly asked question is “what is the return on investment or was it worthwhile attending the NSTF meeting or being a member of NSTF?” I will say yes, because of the following reasons:

- NSTF is a vehicle for organisations to give input to government policy and a platform to express the views of their management and members regarding SETI policies,
- Members can stay updated on developments in SETI policies,
- Organizations can get involved in activities that motivate and enrich the experience of science learners
- NSTF allows members to register and upload their bursary information for free, and gives them total control to edit and update this information.

Some of the discussions held during the meeting included post-school education and training, South African Graduate Development Association (SAGDA), the Square Kilometre Array (SKA) and spin off opportunities, and the finalists announcement for the NSTF-BHP Billiton Award.

The NSTF website has an online Discussion Forum, where anyone (not just members) can discuss and debate current policy issues. A platform like this can be good for the GSSA. The Science Councils and Statutory Bodies Sector Symposium will be held from 26 to 27 September 2012 at the Mintek Auditorium in Randburg. The purpose of the symposium is to provide a platform for awareness of policy issues, to share practices and to identify gaps for green technology in South Africa. The symposium theme is Green Technologies, Innovation and Collaborations.

Finally young researchers or students can learn from NSTF award finalists/winner in their field of expertise and career opportunities, and as such it was a good return on investment. I will encourage the GSSA to remain as a member of NSTF.

South African Council for Natural Scientific Professions (SACNASP)

Loraine van den Berg, Leslie Brown, Wayne Truter, David Grossman, Brian Dawson and Mike Peel

SACNASP Voluntary Associations Workshop

Four delegates from the Grassland Society of Southern Africa attended a SACNASP Voluntary Associations Workshop in Pretoria on 3 August 2012. The new CEO of SACNASP and the Chair of the Board stated that the purpose of the workshop was to present the “new” SACNASP to the Voluntary Associations recognized by SACNASP.

The delegates included Wayne Truter, Loraine van den Berg, Dave Grossman and Brian Dawson. At the conclusion of the workshop the delegates agreed upon the fact that SACNASP is making some positive progress in terms of being accommodating and attempting to make the registration process easier, less onerous, and seeking ways to accommodate the groups and prospective members who are “falling between the cracks”. Various issues were raised during the workshop and will be discussed in some more detail.

SACNASP legal framework

SACNASP is a function of the Natural Scientific Professions Act (Act 27 of 2003). Any individual not registered with SACNASP and practising science in any of the fields of practice listed in Schedule I of this Act is doing so illegally and can be prosecuted. Therefore it is compulsory for anyone practising Natural Sciences to register with SACNASP. The fact that many have not yet done so is indicative that something was “not right” and hence the “new” approach.

The 'new' SACNASP

This change in legislation in 2003 has led to reorganization within SACNASP resulting in a move towards a ‘new’ SACNASP, which was introduced during the workshop. To date a total number of 4938 individuals is registered with SACNASP, with an increase of 583 new registrations from 2006 to 2012. SACNASP is also becoming younger and more beautiful with 38% of the members being younger than 40 years of age and 27% being female. The demography of SACNASP is also more representative with 23% black, coloured and Asian members. The distribution of fields of practices in which members are registered are presented in Table 1.

Field of Practice	%
Geological sciences	28%
Earth sciences	11%
Earth sciences	11%
Agricultural sciences	8%
Animal sciences	8%
Chemical sciences	6%
Ecological sciences	4%

Table 1. Distribution of fields of practice

It was announced that SACNASP is also improving on the old registration process by moving towards an online registration process. This system will be in place in the second half of 2012. In addition they will also be introducing a regular newsletter as part of their active media campaign.

They expressed a willingness to be involved in Voluntary Associations' Congresses and Conferences, including advertisements in abstract books or presentations. SACNASP Council members have organised regional breakfast sessions in the Western Cape, KwaZulu-Natal and Gauteng Provinces. A similar event will be organised in the Eastern Cape Province in November. They are also in the process of forming links with industry improving their visibility in this sector as well. SACNASP introduced a Facebook page as well as a website to increase visibility, but more importantly to improve communication with members.

It was indicated SACNASP will approach the GSSA to add a link to SACNASP on our website. It might be a good idea to possibly drive that process from the GSSA's side.

It was stressed that the management of the 'new' SACNASP intends to align their focus with the needs of the Voluntary Associations.

Education and Training

During the workshop SACNASP requested inputs from delegates on the matter of the extent to which SACNASP should be involved in education and training. They indicated that SAQA and CHE requested inputs on curricula development and that SACNASP could provide some sort of function in this area e.g. leading a process of guiding tertiary education to align their curricula to comply with SACNASP registration requirements.

Continuing Professional Development (CPD)

SACNASP instituted a system of CPD in 2011, which is linked to the renewal of registration from 1 January 2011 for all registered persons according to the CPD policy. The CPD document has been circulated to all Voluntary Associations and more information is available from SACNASP.

Voluntary Associations and SACNASP

The role of Voluntary Associations within the SACNASP structure was discussed. According to SACNASP, Voluntary Associations, such as the GSSA, have the following influence on SACNASP:

- The composition of the SACNASP Council
- Professional Affairs Committees (PAC's)
- Qualifications Assessment Committee (QAC)
- Registration Committee
- Continuing Professional Development Committee (CPD)
- Finance and Personnel Committee
- Educational matters (Curriculum development, Training Facility evaluation)

Voluntary Association Representation on SACNASP Council

SACNASP indicated that the term of the current Council is coming to an end in April 2013 and that Voluntary Associations could play a major role in determining the next composition of the Council.

The following requirements are set for Council:

- Council must consist of >20 and <30 members

- >12 and <18 members must be Professional Members that must be nominated by Voluntary Associations (Calls for nominations will come from the Department of Science and Technology (DST))
- >4 and <6 members must be nominated and appointed by State
- >4 and <6 members must be nominated through an open process of public participation

Inputs and questions from delegates

Not all SACNASP registered members are members of professional organizations such as the GSSA. Would it be possible to decrease the SACNASP registration fee for those individuals who are members of Voluntary associations? SACNASP indicated that there is no way to decrease registration fees as their fees are in line with, and even cheaper than other professional boards. It could be a possibility if the membership numbers increase drastically.

What happens in the situation where individuals work across sciences (fields of practices) – as is the case with a number of GSSA members. It was indicated that such an individual should be registered in at least one of the listed fields of practice (the primary degree will determine in which field this should be). It was indicated that there could also be an addition to the listed fields of practice in Schedule I of the Act. This should happen in the following way:

- The Voluntary Association should identify a new field of practice
- The Voluntary Association should compile a set of criteria required for the new field of practice including required qualifications and competencies in a specific field
- The Voluntary Association should compile a document on the type of work individuals should be able to do for the new field of practice
- All these documents should then be submitted to the SACNASP Council for perusal and approval.

(The GSSA can contact SACNASP for an example as Toxicological Science was recently added as a new field of practice)

A big concern, especially from the GSSA's side was how to handle situations where members do not have pure science degrees e.g. B.Sc. Tourism or Diploma's etc. SACNASP indicated that the GSSA (PAC) should compile guidelines on the qualifications that could be acceptable and submit it to the Council. SACNASP and the Agricultural Extension Association are also currently in a process to look into how Extension Officers can be accommodated within the SACNASP registration structure.

A common concern from all attendees was that registration and re-registration for more than one field of practice is expensive.

A suggestion was made that individuals, when first applying for SACNASP registration, pay the required registration fee for each field of practice they wish to register in, but in subsequent re-registration years only pay for "one" registration. SACNASP indicated that they will look into this suggestion.

Conclusion

It appears that the 'new' SACNASP is well-intended and superior to the lacklustre and top-down approach experienced by many in the past. It seems that most of the concerns that we as a Society had are being addressed by SACNASP to some extent. The success will depend on how this new approach is implemented in the future.

“SACNASP strives to establish, direct, sustain and ensure a high level of professionalism and ethical conduct, that is internationally acceptable and in the broad interest of the community as a whole and the natural sciences”

Dow AgroSciences, The Royal Barenbrug Group Announce Strategic Relationship

Two Companies Combine Respective Strengths in Forage Grasses

INDIANAPOLIS AND NIJMEGEN, NETHERLANDS (June 29, 2012) Dow AgroSciences, a wholly owned subsidiary of The Dow Chemical Company (NYSE: DOW), and The Royal Barenbrug Group, have announced today a global strategic relationship for the development and commercialization of advanced germplasm in forage seeds.

Under the agreement, Dow AgroSciences will be a minority shareholder in Barenbrug Holding BV, part of The Royal Barenbrug Group and will provide Barenbrug access to select hybrid *Brachiaria* germplasm. This relationship will allow the two companies to maximize strengths to realize a shared vision of growth in forage grasses.

Barenbrug will form a new entity in Brazil to build a state-of-the-art cleaning, coating, and packaging facility to process hybrid *Brachiaria* for Dow AgroSciences, as well as produce other tropical grasses and legumes. “We are very pleased to be working with The Royal Barenbrug Group, the industry leader in forage grass and legume breeding and marketing,” said Antonio Galindez, President and CEO of Dow AgroSciences. “This collaboration will build upon our current seed portfolio by expanding into forage grass seed, a very important global crop.”

“We are excited to collaborate with Dow AgroSciences, a significant player in seeds and traits,” said Bastiaan Barenbrug, Chairman and CEO of The Royal Barenbrug Group. “Through this relationship with Dow AgroSciences, we get access to new technologies, germplasm, and the accelerated entrance into the tropical forage seed market with unique germplasm. Together with Dow AgroSciences we will be able to grow further as a company also in the tropical regions of the world.” Financial details of this transaction were not disclosed.

About The Royal Barenbrug Group

The Royal Barenbrug Group is a family-owned business, whose core activities are plant breeding, grass seed production and international marketing of seed for turf and forage grasses and legumes. With 25 branches in 16 countries on 6 continents, Barenbrug has been the leading grass seed business in the world for over 100 years. They provide local solutions for the dairy, meat and livestock industries as well as the professional turf grass market in temperate and sub-tropical zones.

For more information see
www.barenbrug.com
www.dowagro.com

Changing the Livestock Menu

Matthew Cawood
Farm Weekly

NEW understanding of animal behaviour can transform the economics of raising livestock, and the landscapes they are raised on, American researcher Fred Provenza believes. The Wildlands Resources Emeritus Professor at Utah State University, Dr Provenza has spent decades digging deep into animal learning and behaviour. For instance, livestock can add weeds to their daily menu - not because they are forced to, but because they get a payback from the weeds' nutrients. Or, stock can be trained not to eat certain plants. Dr Provenza's team has trained sheep to mow vineyard grasses without touching the vines. He will be in Australia soon talking about some of his team's arresting discoveries.

The big picture, Dr Provenza thinks, is creating livestock herds adapted to specific landscapes. These herds could browse a wide suite of plants, denting the competitive vigour of weeds, and maintaining their health and vigour through their intake of different compounds. But achieving this will mean a new angle on farm biodiversity, and on animal behaviour.

"We have to move away from this idea that animals are machines, and that genes are destiny," said Dr Provenza, who ran a Colorado sheep ranch before becoming a scientist. "Animals are learning from conception on, and there's a million knobs and dials to tweak along the way. While they are learning, genes are switching on and off in ways that allow the whole genome to adapt to what's happening." "If you can wrap your mind around that, you create a ton of opportunities."

When Dr Provenza began working on learned behaviour in animals, the conventional scientific wisdom was that animals couldn't select their diet based on nutrient or toxin feedbacks. "They have this huge rumen, this vat, and everything is mixed together," said Dr Provenza on the thinking of the time. "How are they going to pick up signals?"

Thanks to a research flock of goats that refused to browse palatable new growth on blackbrush, a forage shrub, and instead chose to eat old woody growth, Dr Provenza's team established that animals definitely do alter their diet in response to plant compounds.

Over time, this learning can become genetic expression. Young animals pick up understanding from their mothers and peers. Over generations, this morphs from being a behaviour, to being how a group of animals express their genetics in a particular environment - the essence of local adaptation. Dr Provenza's work has progressed through many stages, and along the way linked up with research by CSIRO scientist Dean Revell. Working with the Future Farming Industries CRC, Dr Revell identified compounds in native shrubs that can suppress livestock parasites and improve conditions for rumen digestion. Dr Revell found that diverse stands of selected shrubs can provide animals with on-tap pharmaceuticals that they can use to "self-medicate" according to the needs of their own biochemistry. Shrubs also extend the resilience and usefulness of typical grass and forb-based pastures. Another piece fell into place when Trangie, NSW, farmer and educator Bruce Maynard introduced the Utah State team to his "Stress Free Stockmanship methods", which have since become integral in training animals to eat plants regarded as unpalatable.

Together, this body of knowledge adds up to new ways of managing animals to build landscape, animal and ultimately human health, Dr Provenza said. Put to work on the farm, it also means lower inputs, less labour and greater profitability. Dr Provenza wraps up his thinking as "a philosophy of change" - a process of working with change, rather than resisting it, by harnessing the natural mechanisms of adaptation.

