

*SOIL SCIENCE  
SOCIETY OF SOUTH  
AFRICA*



**NEWSLETTER**

**No. 105**

**May 2018**

## **SSSSA COUNCIL/GVSA RAAD: 2017-19**

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**The SSSSA does not necessarily agree with opinions expressed in this newsletter.**

***Die GVSA onderskryf nie noodwendig die menings van bydraes tot sy nuusbrieff nie.***

## MESSAGE FROM THE PRESIDENT/ BOODSKAP VAN DIE PRESIDENT

Dear colleagues/*Beste kollegas,*

Alice Walker said: "Time moves slowly but passes quickly". New Year's Day 2018 feels like yesterday and yet I cannot believe that the first five months of this year have gone by so quickly. Fortunately, most parts of the country were blessed with good rain and it is wonderful to see how nature responded. The 2018 African Combined Congress at Ratanga Junction in Cape Town was attended by 373 delegates of which 23 were international delegates. I am grateful to all the SSSSA members who attended and contributed. A special word of thanks to Dr Cathy Clarke for all the arrangements and smooth running of the soil science excursion.



*Alice Walker het gesê: "Tyd beweeg stadig maar gaan gou verby." Nuwejaarsdag 2018 voel soos gister en tog kan ek nie glo dat die eerste vyf maande van die jaar so vinnig verbygegaan het nie. Gelukkig was die meeste dele van die land geseën met goeie reën en dit is wonderlik om te sien hoe die natuur daarop gereageer het. Die 2018 Afrika Gekombineerde Kongres by Ratanga Junction in Kaapstad is deur 373 afgevaardigdes bygewoon, waarvan 23 internasionale afgevaardigdes was. Ek is dankbaar aan al die GVSA lede wat die kongres bygewoon het en 'n bydrae gelewer het. 'n Spesiale woord van dank aan Dr Cathy Clarke vir al die reëlins en die gladde verloop van die grondkunde ekskursie.*

During recent Congresses, it was evident that the numbers of members from the four Societies attending the Congress as well as making presentations are decreasing. One obvious reason is that the tough economic conditions also contributed to decrease in numbers. For this, and a number of other reasons, the Southern African Plant and Soil Sciences Committee (SAPSSC) has decided that the next two Combined Congresses will be held in Bloemfontein, and thereafter it will rotate again between coastal and inland venues. The local organizing committee have already started with planning and arrangements. They are planning something "big", something that none of us can afford to miss. There will be new and exciting changes to the program and the possibility of a world-renowned international scientist as the guest speaker. Members are requested to make a note in their diaries and start working on their abstracts, as the first announcement will soon be circulated.

*Oor die afgelope paar Kongresse is dit waargeneem dat die aantal lede van die vier Vakverenigings wat die Kongres bywoon, sowel as die lewering van aanbiedings, afgeneem het. Dit is waar dat die moeilike ekonomiese*

*toestand ook bygedra het tot die afname in bywoningsgetalle. Om hierdie rede, en 'n aantal ander redes, het die Plant- en Grond Wetenskappe Komitee (SAPGWK) besluit dat die volgende twee gekombineerde kongresse in Bloemfontein gehou sal word en daarna weer sal roteer tussen kus- en binnelandse streke. Die plaaslike reëlings komitee het reeds begin met beplanning en reëlings. Hulle beplan iets "groots", iets wat niemand van ons kan bekostig om mis te loop nie. Daar sal nuwe en opwindende veranderinge aan die program wees en die moontlikheid van 'n wêreldbekende internasionale wetenskaplike as gasspreker. Lede word versoek om 'n aantekening in hul dagboeke te maak en begin werk aan hul uittreksels, aangesien die eerste aankondiging binnekort gesirkuleer sal word.*

I would like to congratulate all the SSSSA award winners at the 2018 Combined Congresses for the best oral and poster presentations in the various categories. I would in particular like to congratulate our new honorary members, Dr Koos Eloff and Prof Alan Bennie on this achievement. Prof Bennie was absent during the Combined Congress and will receive his award during the Combined Congress in Bloemfontein in January 2019. Apart from the awards mentioned above, the SSSSA has other prestigious awards in the form of gold and silver medals for exceptional service to promote soil science in South Africa. You are encouraged to recommend candidates to the council for these prestigious awards. Submit the names with a short motivation (half page) to the Vice-President, Mr Martiens du Plessis, at [martiens@nwk.co.za](mailto:martiens@nwk.co.za). You are also encouraged to visit our website (<http://www.soils.org.za/>) to look at the different award categories for which members can qualify at a Combined Congress. One of these awards is for the best Soil Science article by a SSSSA member published in the South African Journal of Plant and Soil (SAJPS). Therefore, SSSSA members are encouraged to publish their results in the SAJPS.

*Ek wens alle GVSA prysweners van die 2018 Gekombineerde Kongres vir die beste mondelinge en plakkaataanbieding in verskeie kategorieë geluk met hul prestasies. Ek wil veral ons nuwe erelede, Dr Koos Eloff en Prof Alan Bennie gelukwens met hierdie prestasie. Prof Bennie was afwesig tydens die Gekombineerde Kongres en sal sy toekennings tydens die Gekombineerde Kongres in Bloemfontein gedurende Januarie 2019 ontvang. Afgesien van die toekennings hierbo genoem, het die GVSA ander gesogte toekennings in die vorm van goue en silwer medaljes vir uitsonderlike diens om grondkunde in Suid-Afrika te bevorder. U word derhalwe aangemoedig om kandidate aan te beveel om deur die Raad oorweeg te word vir hierdie gesogte toekennings. Dien die name met 'n kort motivering (halwe bladsy) in by Mnr Martiens du Plessis, vise-President, by [martiens@nwk.co.za](mailto:martiens@nwk.co.za). U word ook aangemoedig om ons webtuiste (<http://www.soils.org.za/>) te besoek en te kyk na die verskillende toekennings kategorieë waarvoor u kan kwalifiseer tydens die*

*volgende Gekombineerde Kongres. Een van hierdie toekennings is vir die beste Grondkunde artikel deur 'n GVSA lid wat in die Suid-Afrikaanse Joernaal vir Plant en Grond (SAJPG) gepubliseer is. Daarom word GVSA lede aangemoedig om hul resultate in SAJPG te publiseer.*

Our website and Facebook are very active and are regularly updated with SSSSA news, Congress photos, notifications regarding upcoming events and happenings. I want to encourage members to visit our website (<http://www.soils.org.za/>) and Facebook page for more information. Minor changes were made to the Constitution of the SSSSA in order for the SSSSA, Southern African Plant and Soil Sciences Committee (SAPSSC) and the other three Societies to be registered as a non-profit organization (NPO) for tax purposes. These changes were circulated to all SSSSA members, and were discussed and accepted at the Annual General Meeting (AGM) during January 2018.

*Ons webtuiste en Facebook is baie aktief en word gereeld opgedateer met GVSA nuus, Kongresfoto's, kennisgewings rakende opkomende gebeurtenisse en aktiwiteite. Ek wil lede aanmoedig om ons webtuiste (<http://www.soils.org.za/>) en Facebook bladsy te besoek vir meer inligting. Geringe veranderinge is aan die Grondwet van die GVSA aangebring sodat die GVSA, Plant- en Grond Wetenskappe Kommittee (SAPGWK) en die ander drie Vakverenigings vir belastingdoeleindes as 'n nie-winsgewende organisasie geregistreer kan word. Hierdie veranderinge was aan alle GVSA lede versprei, en dit was tydens Algemene Jaarvergadering (AJV) in Januarie 2018 bespreek en aanvaar.*

Since January 2018, fifteen (15) new members have joined the SSSSA. I would like to welcome the new members and would like to encourage all of you to be active members. SSSSA membership information is still not up to date and serious efforts will be made to update all details of our membership.

*Sedert Januarie 2018 het vyftien (15) nuwe lede by die GVSA aangesluit. Ek verwelkom graag die nuwe lede en wil u almal aanmoedig om aktiewe lede te wees. Die GVSA lidmaatskapinligting is nog nie op datum nie en daar sal ernstige pogings aangewend word om ons lidmaatskapbesonderhede op te dateer.*

I would like to encourage all soil-related organizations and companies to make use of the SSSSA Social Media Marketing Platform to advertise jobs, products, services, marketing activities and upcoming events to soil science and agriculture professionals. Included in this newsletter (p9) is a "SSSSA Social Media Marketing Platform" flyer with more information that you may like to put on your office noticeboard.

*Ek wil graag alle grondverwante organisasies en maatskappye aanmoedig om van die GVSA se Sosiale Media Bemerkingsplatform gebruik te maak om poste, produkte, dienste, bemerkingsaktiwiteite en opkomende geleenthede aan grondkunde en landboukundiges te adverteer. In hierdie nuusbrieff (bl. 9) is 'n GVSA Sosiale Media Bemerkingsplatform pamflet ingesluit vir meer inligting en wat u gerus op u kantoorkennisgewingbord kan aanbring.*

Prof Cornie van Huyssteen will lead a team of three students to represent South Africa at the "Soil Judging" competition that will be held at the 21<sup>th</sup> World Congress of Soil Sciences (6<sup>th</sup> to 11<sup>th</sup> Aug 2018) in Rio de Janeiro, Brazil. We wish them all the best of luck with their activities.

*Prof Cornie van Huyssteen lei 'n span van drie studente om Suid-Afrika te verteenwoordig tydens die "Grondbeoordelings" kompetisie wat gedurende die 21<sup>ste</sup> Wêreldkongres van Grondwetenskappe (6 tot 11 Aug 2018) in Rio de Janeiro, Brasilië, sal plaasvind. Ons wens hulle baie sterkte toe met hul aktiwiteite.*

The International Union of Soil Sciences (IUSS) designated the period 2015 to 2024 as the decade of soils. To celebrate the period a book is published every year. This year the theme of the book is proverbs related to soils unique to regions or countries. Included in this newsletter is more information on how you can contribute. We are looking forward to many exciting contributions. Lastly, "Time is not measured by clocks but by moments - Anonymous". Let's make sure that for the rest of 2018 we build moments. I wish you all the best for the second half of 2018; let us make sure that we spend our time wisely.

*Die internasionale liggaam vir grondkundiges, "International Union of Soil Sciences" (IUSS), het die periode 2015 tot 2024 as die dekade van gronde verklaar. Om die tydperk te vier, word 'n boek elke jaar gepubliseer. Vanjaar is die tema van die boek "gesegdes" wat verband hou met gronde wat uniek is aan streke of lande. Ingesluit in hierdie nuusbrieff is meer inligting oor hoe u kan bydra. Ons sien uit na baie opwindende bydraes. Laastens, "Tyd word nie deur horlosies gemeet nie, maar deur oomblikke - Anoniem". Kom ons maak seker dat ons vir die res van 2018 oomblikke bou. Ek wens jou die allerbeste vir die tweede helfte van 2018 toe; laat ons seker maak dat ons, ons tyd verstandig spandeer.*

Warmest regards/Beste wense

**Cobus Botha**  
(082 414 4386; [BothaC@arc.agric.za](mailto:BothaC@arc.agric.za))

## EDITORIAL/REDAKSIONEEL

We usually think of our field of activity, namely soils, as a science, using phrases like “soil scientist”, “scientific discipline” and so on. While that is completely correct, we perhaps need to stop occasionally and think of the more artistic aspects of the soils around us, and how they can be used or depicted.



Elsewhere in the newsletter, you will find articles on the recent SSSSA “Beauty of Soils” photographic competition, where some stunning photos were submitted. Also included in this issue is an item from USA where students at Cornell University used soil-based pigments to create paintings, with a quite amazing range of colours and imagination.

On a more down-to-earth (but related) note, I was at the Getaway show last year and bought myself an African “Dirt Shirt” (as far as I remember, I am following in the footsteps of Cornie van Huyssteen, who wore one at the Soil Classification Conference in Bloemfontein in 2016).



As you can see from the right-hand photo, the shirts are dyed with soil-based dyes to represent the hues of the soil of Africa (I also liked the slogan, which will resonate with every soil surveyor). So yes, we can say we are soil scientists, but perhaps some of us have a bit of an artistic heart, too!

Regards,

**Garry Paterson**

(012 310 2601; 083 556 2458; [garry@arc.agric.za](mailto:garry@arc.agric.za))

## **COUNCIL MATTERS/RAADSAANGELENTHED**

Dear Member,

The International Union of Soil Sciences (IUSS) declared the period 2015 to 2024 the “Decade of soils”. To celebrate the period, a soil-themed book is published every year ([http://iuss.org/index.php?article\\_id=667](http://iuss.org/index.php?article_id=667)). This year the theme of the book is “Proverbs related to soils unique to regions or countries”. This is your opportunity to make a contribution to this book. Your contribution should reach us by Monday 4 June 2018. Use the following format:

- Your name and surname;
- Name of the region or country where the proverb is used;
- Proverbs in author's original language/dialect;
- Proverbs literally translated into English.
- Short explanation of the origin and meaning of the proverb in English.

Send your contribution to Nancy Nortje: [admin@soils.co.za](mailto:admin@soils.co.za)

*Geagte Lid,*

*Die internasionale liggaam vir grondkundiges “International Union of Soil Sciences” (IUSS) het die periode 2015 tot 2024 as die dekade vir grondkunde (“decade of soil science”) verklaar. Om die periode te vier, word ‘n boek met grond as tema elke jaar gepubliseer ([http://iuss.org/index.php?article\\_id=667](http://iuss.org/index.php?article_id=667)). Die tema vanjaar is “gesegdes”, verwant aan grond, wat uniek aan ‘n streek of land is. Hierdie is jou geleentheid om ‘n bydra tot hierdie boek te maak. Jou bydra moet ons teen Maandag 4 Junie 2018 op die laaste bereik. Gebruik die volgende formaat:*

- *Jou naam en van;*
- *Naam van die streek in Suid-Afrika waar die gesegde gebruik word;*
- *Die gesegde in die outeur se oorspronklike taal/dialek;*
- *Die gesegde letterlik vertaal in Engels;*
- *‘n Kort verduideliking van die oorsprong en betekenis van die gesegde in Engels.*

*Stuur jou bydra na Nancy Nortje: [admin@soils.co.za](mailto:admin@soils.co.za)*

**Dr Cobus Botha (SSSSA/GVSA President)**





The Soil Science Society of South Africa (SSSSA) now provides a **Social Media Marketing Platform** for your business

Reach potential customers with  
a soil focus via  
**SOCIAL MEDIA!**



Companies and individuals can now utilize the SSSSA media to advertise **jobs, products, services, marketing activities** and **upcoming events** to soil science and agriculture professionals.

Services are available at **ridiculously low rates!**

- ❖ **Newsletter** R500 (twice a year; Apr & Dec)
- ❖ **Distribution list** R1000 (any time)
- ❖ **Webpage** R500 per month (anytime)
- ❖ Enquire about our other **social media** options



For more **information** regarding our products and services contact the SSSSA secretariat:  
Ms. Nancy Nortje:  
Mobile phone: **083 389 0543**  
E-mail: [admin@soils.co.za](mailto:admin@soils.co.za)

**MEMBERS: PLEASE NOTE THAT ALTHOUGH THE SSSSA WEB SITE IS [WWW.SOILS.ORG.ZA](http://WWW.SOILS.ORG.ZA), THE CONTACT E-MAIL FOR OUR SECRETARY NANCY NORTJE, IS [ADMIN@SOILS.CO.ZA](mailto:ADMIN@SOILS.CO.ZA)**

**PLEASE MAKE SURE YOU USE THE CORRECT E-MAIL ADDRESS IN ALL CORRESPONDENCE. THANK YOU.**

# AGT Foods Africa Beauty of Soils Photography Competition - 2017

**CONGRATULATIONS** to the prize winners in the 2017 AGT Foods SSSSA ‘Beauty of African Soils’ Photo Competition.

Some beautiful photo entries were received – thank you to all our photographers!

**SSSSA members: keep your cameras handy and capture those stunning soils moments – we hope to run our competition again soon! Watch this space.**

A big thank you to AGT Foods Africa for their sponsorship, which allowed our prize winners to take home some nice cash prizes.

**Prize winners in the different categories were:**

CATEGORY	POSITION IN CATEGORY	PHOTOGRAPHER	PHOTO TITLE
1. Soils Up Close	1 <sup>st</sup>	A Rozanov	Peculiar Duplex
	2 <sup>nd</sup>	A Hardie	Enigmatic Glenrosa
	3 <sup>rd</sup>	R van Antwerpen	Variable Distance
	Highly commended	C Clarke	Petite Placic Pan
	Highly commended	A Rozanov	E Horizon in a Podzol
	Highly commended	E Hoffman	Sulphur Pollution
	Highly commended	A Hardie	Eroded Estcourt
	Highly commended	M van der Laan	Lifelong Learning
2. Soil and People	1 <sup>st</sup>	J van Tol	Early Start
	2 <sup>nd</sup>	M van der Laan	Food and Shelter
3. Soil in Landscape / Agriculture	1 <sup>st</sup>	J Louw	Soils of the Namib
	2 <sup>nd</sup>	J Louw	Dunescape
	3 <sup>rd</sup>	C Clarke	Dangerous Dundee
	Highly commended	C Clarke	The Last Outpost
	Highly commended	A Hardie	Colourful Karoo
	Highly commended	E Hoffman	Fynbos Valley
	Highly commended	L le Roux	Soils of a 1000 Hills
	Highly commended	M van der Laan	Late Afternoon in Madagascar

Some of the winning photos are shown on the next couple of pages.

Photo: J Louw – Sands of the Namib  
855000, Namibia



Photo: Johan van Tol – Early Start KZN



Photo: A Rogerson - Peculiar Duplex,  
Riversdale, SA.





Prof Jude Odhiambo presents Dr Cathy Clarke with her prize at the SSSSA AGM held during the January 2018 Combined Congress



Photo: C Clarke – *The Last Outpost*. Bergville, KZN



Photo: M van der Laan – *Food and Shelter*. Madagascar.



Photo: A Hardie – *Enigmatic Glenrosa*. Overberg, S Cape.

Competition sponsored by:



## APPOINTMENTS/AANSTELLINGS

**Dr Edwin Moshia** has been appointed as a Specialist Researcher in the Soil Science Division at ARC-Institute for Soil, Climate and Water, where he worked some years previously.

Edwin's primary fields of specializations are Environmental Soil Sciences, Soil Fertility Management, Pedometrics, and Precision Agriculture. He received a BSc. (Agric.) degree (Soil Sciences) from the University of the North (2002), and a Ph.D. degree in Soil Sciences from Colorado State University (2009) in the USA through a Fulbright Scholarship. Edwin worked for the government as a Soil Scientist, and various Universities from a position of a Lecturer at the University of Pretoria (Tukkies) to Senior Lecturer and later Associate Professor of Soil Sciences at the Tshwane University of Technology (TUT).

## DEGREES AWARDED/GRADE TOEGEKEN

At the autumn graduation of the University of Pretoria, **Corrie Swanepoel**, who works for ARC-Institute for Soil, Climate and Water, was awarded her PhD for the thesis entitled: "*Assessment of the potential of conservation agriculture management practices to sequester organic carbon in South African soils*".

**Nicky Mushia**, formerly of ARC-ISCW and now with Department of Rural Development in Eastern Cape, has been awarded his PhD from the University of Limpopo. Nicky's thesis is entitled: "*Assessment of coal mine stockpiled soil quality and its impact on vegetation using laboratory-based techniques and reflectance spectroscopy*".

## AWARDS/TOEKENNINGS

The following awards were made at the recent Combined Congress, held at Ratanga Junction in Cape Town:

- Best paper presented by a SSSSA member older than 30 years: **D.E. Elephant, N. Miles & P. Muchaonyerwa** (*The estimation of reserve-K and K immobilization using mid infrared spectroscopy and multiple linear regressions*).
- Best paper presented by a SSSSA member younger than 30 years: **A.R. Adams, C.E. Clarke & A.G. Hardie** (*Lipid humification by soil minerals*),
- Best presentation by an MSc student registered at a South African University: **T.K.S Gobozi & A.G. Hardie** (*Evaluation of organic smallholder farmer soil amendment practices on soil fertility, broccoli yields and mineral nutrients*),
- Best poster presentation by a SSSSA member on any soil science subject and author of any age: **J.J. Botha & J.J. Anderson** (*Evaluating various large-scale*

*rainwater harvesting and conservation techniques on the Fort Cox/Valsrivier ecotope).*

At the Congress, SSSSA Honorary Membership was awarded to **Prof Theo van Rooyen** (who was unable to attend at the previous Congress at Bela-Bela), **Dr Koos Eloff**, and **Prof Allan Bennie** (who will receive his award at the next Congress in Bloemfontein).



**Photo** (left to right): *Dr Koos Eloff, Prof Theo van Rooyen and SSSSA Past President Dr Rian van Antwerpen (check out the old and new versions of the SSSSA tie!).*

## IUSS Appointment

Congratulations to **Prof Cornie van Huyssteen**, of the University of the Free State, who has been elected as Vice-Chair of Commission 1.4 (Soil Classification) of the International Union of Soil Sciences (IUSS).

## UFS Award to best student

At the Academic Awards Ceremony that was held on 10<sup>th</sup> April 2018 at the Odeion Auditorium on the main campus of the University of the Free State, SSSSA President Dr Cobus Botha awarded the SSSSA medal to Ms. Lethabo Sindy Thomatsana. She was the final-year student in Soil Science in 2017 at UFS with the best sustainable performance over all the years of study with an average above 75%.



**Photo:** Ms Thomatsana receiving her award from Dr Cobus Botha.

## CONGRESSES/KONGRESSE

### COMBINED CONGRESS

The next Combined Congress will be held in Bloemfontein in January 2019. As soon as the arrangements are in place and final dates confirmed, information and a first announcement will appear on the Combined Congress website, so keep an eye on [www.combinedcongress.org.za](http://www.combinedcongress.org.za)

## MISCELLANEOUS/ALGEMEEN

### News from Stellenbosch University

The academic year at Stellenbosch University got off to a good start, with two of our postgraduate students winning awards for the best masters presentation (Sikho Gabozi) and best paper for a researcher under the age of 30 (Adrian Adams) at the 2018 Combined Congress in Cape Town. We also produced a crop of graduates at the March 2018 graduation with four MSc degrees and one PhD awarded.

In February, Stellenbosch University took an active part in initiating and organizing the kick-off workshop of the SA-EU dialogue on soil information. Led by the Dean of Agriculture, Prof. Danie Brink, the Stellenbosch delegation included Dr Andrei Rozanov, Liesl Wiese and Dr Cathy Clarke (Soil Science), Prof. Karen Jacobs (soil microbiology) and Gerrit Louw (soil geography and geomorphology). Dr Rozanov will be part of the SA delegation touring Europe on a soil information fact-finding visit in May (see also next page).

### World Bank assessment of human capital in Africa in the field of soil expertise.

All the soil scientists **living and working** in Africa are cordially requested to participate in the survey to create a roster of experts in order to assess the extent and level of the Human Capital available, as well as encourage the local sourcing of expert services by the development agencies and agribusinesses. We particularly encourage the soil scientists currently not working as soil experts to participate in the survey in order to assess the level of employment within this field of expertise.

Kindly take a few minutes to complete the short [questionnaire](https://goo.gl/forms/umlxk7uqtkf7cewt2) (in English) and invite your colleagues to do so. Paste the following link into your browser: <https://goo.gl/forms/umlxk7uqtkf7cewt2>



## **Soil Information Workshop**

Dr. A. Rozanov (Stellenbosch University) together with Dr. G. Paterson (ARC-ISCW) and Mr. K. Mampholo (DAFF) have initiated a dialogue on soil information with the European Union represented by Mr Luca Montanarella (JRC-EU) and Dr Agnieszka Romanowicz, (EU). The initiative was supported by the SA-EU strategic partnership dialogue facility. The kick-off workshop was held in Pretoria on 22 Feb 2018. The main topic is a formulation of a national strategy on soil information collection, update and dissemination in South Africa through Public-Private Partnerships. A South African delegation is embarking on a fact-finding one-week study tour to Italy, Germany and France in May 2018 in order to understand how public-private interaction is established and maintained. The main dialogue event is planned for October 2018.

## **GLOBAL SOIL PAINTING COMPETITION ILLUSTRATES SOIL'S VITAL ROLE**

Soil, it turns out, can be a work of art – as a team of Cornell artists and scientists has proved. A painting created with soil won first prize in the university category of a global soil painting competition sponsored by the Food and Agriculture Organization of the United Nations (FAO). Kirsten Kurtz, manager of the Cornell Soil Health Lab and a graduate student in the field of natural resources, organized the public painting event in the lobby of Mann Library on December 5<sup>th</sup> 2017, in honor of World Soil Day. There, members of the Cornell community created two large canvases from more than 50 paints formulated from soils from around the world.

“It’s amazing the range of colors you can get from soil,” said Kurtz, who started using the technique four years ago. “Of course you have the usual browns and tans, and some tinged with yellow and red. But some yield pigments from jet black to light gray and even, rarely, green. “Soils found around the world come in a range of textures as well, from gritty sand to smoother clay, Kurtz said. “The green on our winning painting is derived from French clay. Green soil is very difficult to find. The green French clays we used are generally found deep below the surface and developed over time from the ashes of ancient volcanoes.” To create the substance used for painting, Kurtz pulverizes dried soil and mixes it with water and gesso as a binder. Kurtz led a similar community painting event at Cornell in 2015 that inspired FAO to take the idea worldwide.

On the main canvas, Kurtz and artists affiliated with the School of Integrative Plant Science used soil paints to honor an agricultural practice used by Native American communities. The scene they painted was based on “Ringelreihen,” a 1910 work by the German artist Franz von Stuck, which shows three women

spinning arm-in-arm. "We added three baskets filled with corn, beans and squash. These are the crops in the traditional 'Three Sisters' polyculture used by the Haudenosaunee communities here in the Finger Lakes for centuries, a technique that is a model of sustainable farming," Kurtz said.



Provided

The winning painting in the university division of the global soil painting competition, titled "Three Sisters."

Other members of the Cornell community tried their hand at soil painting on the second canvas, completing a mosaic-like design. Plans are to hang the work in the entrance of Bradfield Hall. "My main goal for these events is to inspire people to think about soil," Kurtz said. "It is as an essential natural resource, as important as clean water and air. We depend on healthy soil to provide us

with food and fiber, and we can use soil to help fight climate change. We've got lots of great reasons to celebrate soil."



**Photo:** *A mosaic-like design created by Cornell community members.*

## **SUID-AFRIKAANSE GRONDOPNEMERS ORGANISASIE (SAGO)**

Die Suid-Afrikaanse Grondopnemers Organisasie (SAGO) is 'n nasionale organisasie met grondkundiges, grondkunde-tegnikuste en ander grondgebruikers as lede vanuit al nege provinsies. SAGO lê hom daarop toe om lede en ander belangstellendes (soos studente, versekeringsbedryf, bosbou, mynbou en die breë landboubedryf) se kennis oor grondtipes, die eienskappe daarvan en op die ou end die optimale gebruik daarvan, te verdiep en te verbreed.

SAGO hou jaarliks drie tot vier sulke twee-dag werkswinkels. Die eerste werkswinkel vir 2018 was op 22 en 23 Maart te Lichtenburg met NWK as gasheer. NWK en Grasland het as borge opgetree en daar is op die gebruik van

die hersiene grondklassifikasiesistelsel (Groenboek) vir die klassifikasie en moontlike bestuursaspekte van mieliegronde gefokus. Die sameroeper van die grondklassifikasiewerkgroep, Dr Dave Turner, het 'n lesing oor die samestelling en gebruik van die Groenboek aangebied. Sowat 18 grondkundiges en sowat 35 studente het die werkswinkel bygewoon. Die eerste dag is profielgate in tilliet-, graniet-, andesietgronde ondersoek. Dag twee is profielgate van gronde op Ventersdorplawa (andesiet) en ook kalkgronde bespreek.

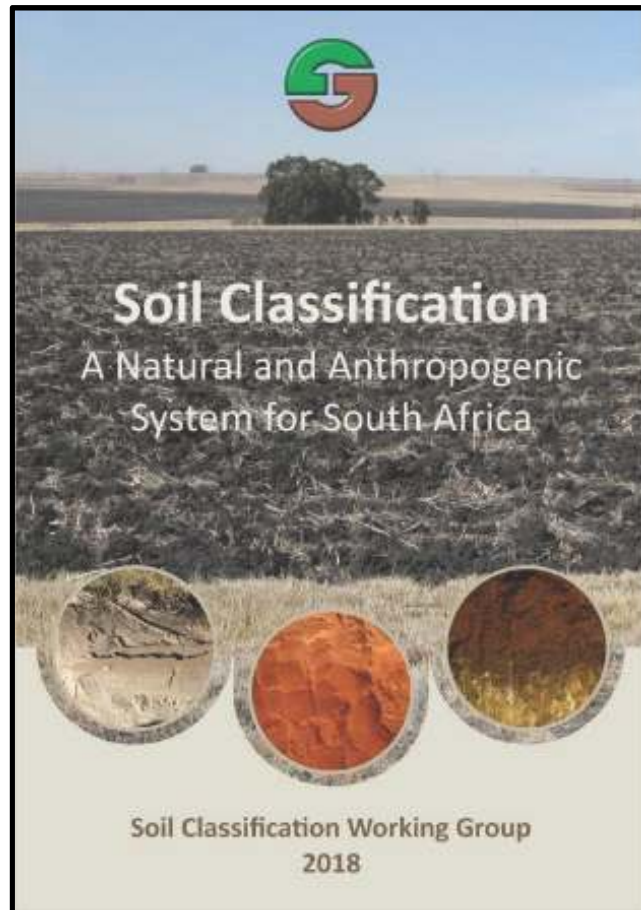
Hierdie werkswinkel is by SARNAP geregistreer en bywoners kon CPD-punte vir bywoning eis. Besoek gerus SAGO se webtuiste by [www.sasso.co.za](http://www.sasso.co.za)



**Foto:** SAGO-lede by 'n profielgat tydens die Lichtenburg-werkswinkel.

## SOIL CLASSIFICATION WORKING GROUP

The big news from the Working Group is that the third edition of the South African Soil Classification System “Soil Classification – A Natural and Anthropogenic System for South Africa” has at last been printed and is available from ARC-ISCW (012 310 2500) for R200 per copy (VAT inclusive).



The latest edition has had an interesting history over the past 20 years, but it should be emphasized that we have not re-invented the wheel and the underlying principles remain more or less the same, just improved.

Some important issues:

- The third edition still has the soil form and family as the basic units of classification.
- The addition of a high-level distinction between Natural Soils and Anthropogenic Materials means that these soils that have been significantly affected by human activities can now be separately addressed and classified accordingly.
- Apart from the Anthrosols, there are only four new horizons (see table below), while the majority of the horizons are unaltered, although in

many cases, the definitions have been sharpened and clarified for more ease of use.

- The requirement that a diagnostic horizon can only occur in a certain position in the profile has been removed, mainly to accommodate soil layers deeper in the profile, which will play an important role in such aspects as water movement.
- The number of soil forms occurring has increased from 78 to 135, but as was consistently requested by the Working Group, the new edition is based on scientific standards, and a variety of databases were consulted to determine which soil combinations occur most regularly.
- There is no longer a photo for each soil form, but a section has been added to illustrate a range of different types of soil forms, as well as all the diagnostic horizons, some important soil features, and all the new Anthrosol classes.

HORIZON	CRITICAL CONCEPT/S FOR IDENTIFICATION
<b>Topsoils</b>	
<b>Peat</b>	<b>New horizon</b> , high carbon content soils
<b>Organic</b>	Virtually unchanged
<b>Vertic</b>	Virtually unchanged (slight decrease in PI)
<b>Melanic</b>	Virtually unchanged
<b>Humic</b>	Virtually unchanged
<b>Orthic</b>	Unchanged, new colour variants
<b>Subsoils</b>	
<b>Gley</b>	Previous G; slight change to structure criterion
<b>Albic</b>	Previous E; bleaching now emphasised
<b>Gleyic</b>	<b>New horizon</b> (Red Book gleycutanic); accommodates structured gleyed materials
<b>Yellow-brown Apedal</b>	Virtually unchanged
<b>Red Apedal</b>	Virtually unchanged
<b>Red Structured</b>	Virtually unchanged
<b>Soft Plinthic</b>	Virtually unchanged
<b>Hard Plinthic</b>	Virtually unchanged
<b>Podzol</b>	Virtually unchanged
<b>Placic Pan</b>	Virtually unchanged
<b>Prismacutanic</b>	Virtually unchanged
<b>Pedocutanic</b>	Virtually unchanged, now includes an erodible dark red/maroon variant from underlying mudstones
<b>Neocutanic</b>	Virtually unchanged, colour variegation criterion defined more clearly
<b>Neocarbonate</b>	Virtually unchanged
<b>Soft Carbonate</b>	Virtually unchanged, emphasizes carbonate dominance
<b>Hard Carbonate</b>	Virtually unchanged, emphasizes carbonate dominance
<b>Gypsic</b>	<b>New horizon</b> ; dry, gypsum-dominated soils
<b>Dorbank</b>	Virtually unchanged
<b>Alluvial</b>	Virtually unchanged, expanded range of criteria

<b>Unconsolidated with wetness</b>	Virtually unchanged, expanded range of criteria
<b>Regic Sand</b>	Virtually unchanged
<b>Lithic</b>	<b>New horizon</b> ; combination of previous lithocutanic and saprolite (three new variants)
<b>Hard Rock</b>	Virtually unchanged (now includes solid and fractured variants)
<b>Anthropogenic (man-made) materials</b>	
<b>Anthrosols</b>	
<b>Physically disturbed</b>	Disturbance <i>in situ</i> ; no significant transportation
<b>Technosols</b>	
<b>Transported</b>	Moved from one location to another, major disturbance
<b>Chemically polluted</b>	Polluted by chemical additions or alterations
<b>Hydric</b>	Physically disrupted due to water flows caused by human activity
<b>Anthropogenic open excavation</b>	Removal of soil to leave holes or voids
<b>Archaeological</b>	Evidence of historical human habitation
<b>Urban</b>	Recent disturbance (urban environments), including waste dumps

## HUMOUR

### The Notorious al-Gebra Movement

At New York Kennedy airport today, an individual claiming to be a public school teacher was arrested trying to board a flight while in possession of a ruler, a protractor, a setsquare, a slide rule, and a calculator. The US Attorney general believes the man is a member of the notorious al-Gebra movement. He is being charged with carrying weapons of math instruction. "Al-Gebra is a very fearsome cult, indeed", he said. "They desire average solutions by means and extremes, and sometimes go off on a tangent in a search of absolute value. They consist of quite shadowy figures, with names like "x" and "y," and, although they are frequently referred to as "unknowns", we know they really belong to a common denominator and are part of the axis of medieval with co-ordinates in every country. As the great Greek philanderer Isosceles used to say, 'There are 3 sides to every triangle.'"

When asked to comment on the arrest, President Trump tweeted, "If God had wanted us to have better weapons of math instruction, He would have given us more fingers and toes." A member of the Presidential group, who spoke without attribution, said, "I'm extremely grateful that our government has given us a sine that it is intent on protracting us from these math-dogs who are so willing to disintegrate us with calculus disregard. These statistic scoundrels love to inflict plane on every sphere of influence. Under the circumferences, it's time we differentiated their root, made our point, and drew the line."

President Trump said, "These weapons of math instruction have the potential to decimal everything in their math on a scalene never before seen unless we become exponents of a Higher Power and begin to factor-in random facts of vertex." The Attorney General said, "As our Great Leader would say, read my ellipse. Here is one principle he is uncertainty of - though they continue to multiply, their days are numbered, and the hypotenuse will tighten around their necks."



## **SOIL SCIENCE SOCIETY OF SOUTH AFRICA: MISSION**

The SSSSA is a scientific society, which, in the interest of its members, promotes the advancement of soil science and soil technology as well as the responsible practising thereof by its members with the view to the long-term sustainable utilization of the environment in the interest of the community.

### **Aims**

1. Promotion and protection of the professional status and prestige of soil science as a science and career.
2. Promotion and extension of the society.
3. Promotion of the standard of training of soil scientists and technologists.
4. Creation of opportunities for the free exchange of ideas on soil science and technology.
5. The obtaining and dissemination of knowledge, information and ideas having relevance to soil science by means of discussion and publication.
6. Promotion of contact between the society and other bodies with common or similar interests, both within South Africa and overseas.

## **GRONDKUNDEVERENIGING VAN SUID-AFRIKA: MISSIE**

Die GVSA is 'n wetenskaplike vereniging wat in belang van sy lede verbind is tot die bevordering van grondkundige wetenskap en tegnologie, en die verantwoordelike beoefening daarvan deur sy lede met die oog op die lang termyn volhoubare benutting van die omgewing in belang van die gemeenskap.

### **Doelstellings**

1. Bevordering en beskerming van die professionele status en aansien van grondkunde as 'n wetenskaplike beroep.
2. Bevordering en uitbouing van die vereniging.
3. Bevordering van die standaard van opleiding van grondkundige wetenskaplikes en -tegnoloë.
4. Skepping van geleenthede vir vrye gedagtewisseling oor grondkundige wetenskap en tegnologie.
5. Die verkryging en verspreiding van kennis, inligting en idees wat op grondkunde betrekking het by wyse van samesprekings en publikasies.
6. Bevordering van skakeling tussen die vereniging en ander liggame met gemeenskaplike of soortgelyke belange, beide in Suid-Afrika en in die buiteland.