

*SOIL SCIENCE
SOCIETY OF
SOUTH AFRICA*



NEWSLETTER

No. 110

November 2020

SSSSA COUNCIL / GVSA RAAD: 2019-21

President	Mr M. du Plessis (NWK, Lichtenburg)
Vice-Pres./Vise-Pres.	Prof J.J.O. Odhiambo (University of Venda)
Past Pres./Oud-Pres.	Dr J.J. Botha (McCain, Johannesburg)
Secr. Treas./Skr.-Tes.	Mrs N. Nortjé (SAPSSC, Bloemfontein)
Secretariat:	Mrs M. van der Walt (ARC-ISCW, Pretoria)
Members/Lede	Dr J.J. Anderson (ARC-ISCW, Glen)
	Mrs R. Rhodes (Avorcane, KZN)
	Dr A. Rozanov (Stellenbosch University)
	Dr G. Nortjé (UNISA, Pretoria)
	Prof J. van Tol (UFS, Bloemfontein)

ADDRESS/ADRES

**P O Box/Posbus 13429
Noordstad
9302**

TELEPHONE/TELEFOON

**President: 072 285 5414
Sec./Skr.: 083 389 0543**

E-MAIL

admin@soils.co.za

WEB PAGE/-TUISTE

<http://www.soils.org.za>

(Website co-ordinator: Andrei Rozanov; dar@sun.ac.za)

**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



COMBINED CONGRESS 2021 / GESAMENTLIKE KONGRES 2021

Covid-19 has changed many things in the world, and also in South Africa. The SAPSSC steering committee had to decide on whether it would be advisable to carry on organising a Congress for January 2021. So many uncertainties were raised, such as the status of the lockdown and possible restrictions on travel and lodging at that time, the level of Covid-19 infections, the number of people allowed in a room, exposure of attendees to the virus during sessions and social events, etc. Another concern was the availability of research results to be presented at the Congress, because so many research projects were placed on hold or delayed due to Covid-19. The question was also raised on the willingness of people to attend a Congress under such conditions? The option of postponing the congress for six months was also considered. The SAPSSC Steering Committee decided that the stakes of organising an event for January 2021 and having to cancel it days before commencement, were too high. The tough decision was made to cancel the 2021 Congress and to move it on to January 2022, still at Cedara (KZN). Researchers are therefore encouraged to prepare their research projects for presenting at the 2022 Congress. Members are welcome to nominate the guest speaker for the January 2022 congress to Prof Jude Odhiambo at Jude.Odhiambo@univen.ac.za.

Covid-19 het baie dinge in die wêreld verander, en so ook in Suid-Afrika. Die SAPSSC stuurkomitee moes 'n besluit neem of dit raadsaam sou wees om 'n kongres vir Januarie 2021 te reël. Daar was verskeie onsekerhede, soos die status van die inperking en moontlike beperkings op reis en verblyf, die aantal toegelate persone in 'n lokaal, blootstelling van kongresgangers aan Covid-19 infeksies gedurende sessies en sosiale geleenthede, ensovoorts. 'n Ander onsekerheid was die beskikbaarheid van navorsingsresultate om tydens die kongres voor te lê, aangesien verskeie navorsingsprojekte deur die inperkings weens Covid-19 vertraag is. Die vraag is ook geopper of mense die kongres al wil bywoon, gegewe die Covid-19 omstandighede. Die moontlikheid om die kongres met ses maande uit te stel, is ook oorweeg. Die SAPSSC stuurkomitee het gevoel dat die risiko om 'n kongres vir Januarie 2021 te reël en dit dalk

enkele dae voor die kongres af te stel, was te hoog en is die moeilike besluit geneem om die Januarie 2021 kongres na Januarie 2022 uit te stel, nog steeds te Cedara, KZN. Navorsers word dus aangemoedig om hul navorsingsprojekte voor te berei om dit tydens die Januarie 2022 Kongres aan te bied. Lede is welkom om voorstelle vir die gasspreker by die Januarie 2022 kongres aan Prof Jude Odhiambo by Jude.Odhiambo@univen.ac.za te stuur.

JOURNAL / JOERNAAL

All paid-up members of the SSSSA have free access to the SA Journal for Plant & Soil. The Journal is hosted by Taylor & Francis, who do an excellent job. All previous issues are available electronically on the Taylor & Francis web site.

Important:

- Cite articles in our Journal
- Download articles from our Journal
- Publish in our own Journal
- Assist in uplifting the status of our Journal

Alle opbetaalde lede van die GVSA kry gratis toegang tot die SA Joernaal vir Plant & Grond. Die Joernaal word deur Taylor & Francis gehuisves, wat hul uitstekend van hul taak kwyf. Alle vorige uitgawes is elektronies op Taylor & Francis se webwerf beskikbaar.

Belangrik:

- *Verwys na artikels in ons Joernaal*
- *Laai artikels in ons Joernaal af*
- *Publiseer in ons eie Joernaal*
- *Help om ons Joernaal se status te verhoog*

SACNASP / SARNAP

The SSSSA encourages its members to register with SACNASP as Natural Scientists in the field of Soil Science. By being a paid-up member of the SSSSA, you earn one CPD point annually, and by performing your job as a scientist, you may earn another 2 points each year.

Die GVSA moedig sy lede aan om by SARNAP as natuurwetenskaplikes in die veld van Grondkunde te registreer. Deurdat u 'n opbetaalde lid van die GVSA is, verdien u jaarliks 'n CPD punt en deur u werk as wetenskaplike uit te voer, kan u nog twee punte per jaar verdien.

MEDIA

Facebook

The SSSSA has an active Facebook page. Please "Like" our Facebook page and be part of the excitement. It is there for our members. Dr Andrei Rozanov (University of Stellenbosch) handles it.

Die GVSA het 'n aktiewe facebook-blad. "Like" asseblief ons facebook-blad en wees deel van die opwinding. Dit is vir ons lede daar. Dr Andrei Rozanov (Universiteit Stellenbosch) sien hierna om.

SSSSA website / GVSA webwerf

The SSSSA, as well as the two sister organisations and SAPSSC, jointly decided to move our web site hosting to Lemon Splice. The SSSSA web site was due for a major revamp, and the bold step was taken to do it during this period. The website was redesigned from scratch and Lemon Splice is already at an advanced stage of development. **It is envisaged that our new website will be launched during our virtual AGM on 20th January 2021.**

*Die GVSA en die twee suster-verenigings asook SAPSSC het gesamentlik besluit om die huishouding van ons webwerwe na Lemon Splice te verskuif. Die vernuwing van die GVSA-webwerf was al 'n geruime tyd nodig en was hierdie die ideale geleentheid om dit te doen. Die webwerf is van nuuts af herontwerp en is Lemon Splice reeds in 'n gevorderde fase van ontwikkeling. **Dit word in die vooruitsig gestel dat ons nuwe webwerf gedurende ons virtuele AJV op 20 Januarie 2021 bekendgestel gaan word.***

NEW MEMBERS / NUWE LEDE

The Society annually welcomes new members. It is encouraging to see so many young members joining, but senior soil scientists must please continue to encourage juniors to join.

Die Vereniging kry jaarliks 'n aantal nuwe lede by. Bemoedigend is soveel jong lede wat aansluit, maar senior grondkundiges moet asseblief voortgaan om hul juniors aanmoedig om aan te sluit.

INTERNATIONAL UNION OF SOIL SCIENCES (IUSS)

The SSSSA is affiliated with the IUSS. Every paid-up member of the SSSSA thereby is entitled to the privileges of the IUSS. SSSSA delegates regularly attend congresses of the IUSS. Remember to celebrate World Soils Day on 5th December 2020!

Die GVSA is by die IUSS geaffilieer. Elke opbetaalde lid van die GVSA kry hierdeur die voorregte van die IUSS. GVSA-afgevaardigdes woon gereeld die IUSS se kongres by. Onthou om World Soils Day op 5 Desember 2020 te vier!

BULLETS FROM THE COUNCIL / KOEËLS VANUIT DIE RAAD

- According to the SSSSA Constitution, the SSSSA Council has to re-organise every 24 months. The incumbent President (**Mr Martiens du Plessis**) becomes the Past President, the Vice President (**Prof Jude Odhiambo**) becomes the new President and a new Vice President (President-elect) has to be elected from the four ordinary council members. Therefore, 2 or 3 vacancies (depending on who will be elected as Vice President) have to be filled on Council. Nominations opened on 2nd November 2020 and will close on Friday 20th November 2020. Voting

will open on 1st December 2020 and will close on Friday 8th January 2021. The new Council will be announced during the virtual AGM on 20th January 2021 at 14:00. Paid-up members are encouraged to nominate members to serve on the 2021 – 2023 Council. Nominations can be forwarded to **Dr Garry Paterson** at Garry@arc.agric.za. Nomination forms were sent out to all paid-up members on 2nd November 2020.

*Volgens die GVSA Grondwet moet die GVSA Raad na 24 maande herorganiseer. Die dienende President (mnr Martiens du Plessis) word Uittredende President, die dienende Visie-President (Prof Jude Odhiambo) word die nuwe President en 'n nuwe Visie-President (verkose President) moet vanuit die vier gewone raadslede verkies word. Hierdeur moet 2 of 3 vakante posisies (afhangende van wie as Visie-President verkies word) op die Raad gevul word. Nominasies het op 2 November 2020 geopen en sluit Vrydag 20 November 2020. Die stemproses open op 1 Desember 2020 en sal op 8 Januarie 2021 sluit. Die nuwe Raad sal tydens die virtuele AJV op 20 Januarie 2021 aangekondig word. Opbetaalde lede word aangemoedig om lede wat op die 2021-Raad moet dien, te nomineer. Nominasies kan aan **Dr Garry Paterson** by Garry@arc.agric.za gestuur word. Nominasievorms is op 2 November 2020 aan alle opbetaalde lede uitgestuur.*

- It is going well with the SSSSA finances and we enjoy a positive cash flow. We do have sufficient reserves on investment in order to buffer the cash flow, should it be necessary. We are still awaiting registration as Public Benefit Organisation (PBO).
Dit gaan goed met die GVSA se finansies met 'n positiewe kontantvloei. Ons het redelike reserwes op belegging om die kontantvloei te buffer indien nodig. Ons wag nog vir registrasie as Publieke Bevoordeelde Organisasie (PBO).
- The Council is nonetheless concerned about so many members not paying membership fees, and it is a problem to lose so many members in this way. Members who have not yet paid their subs should please contact Nancy Nortje at admin@soils.co.za in this regard.
Die Raad is bekommerd dat soveel lede nie hulle ledegeld betaal nie. Wat baie sleg is, is dat daardie lede lidmaatskap verloor en die GVSA dus lede verloor. Lede wat nog nie hul ledegeld betaal het nie, moet dringend met Nancy Nortje skakel by admin@soils.co.za in verband hiermee.
- Remember that we provide an option to advertise your products / services on our website or Facebook, or even to advertise a vacancy in your organisation, at a reasonable fee.

Onthou dat ons die opsie bied om jou produkte / dienste op ons webtuiste en facebook te adverteer, of om 'n vakature by jou organisasie te adverteer. Natuurlik teen 'n baie bekostigbare fooi.

- Members are most welcome to drop me an e-mail at martiens@nwk.co.za with bright ideas regarding the Society, or anything worrying you, or just to have a conversation.

Lede is baie welkom om vir my 'n e-pos te stuur by martiens@nwk.co.za met 'n goeie idee rakende die Vereniging, of iets wat jou bekommer, of om sommer net kommunikasie te hê.

This is my last President's message, so I would like to take the opportunity to thank all the Council members, and all the SSSSA members in general, for their support. I wish the incoming Council every success and I hope the Society goes from strength to strength.

Hierdie is my laaste boodskap as GVSA President. Ek wil graag van die geleentheid gebruik maak om my dank uit te spreek aan die Raad, en alle GVSA-lede in die algemeen, vir hulle ondersteuning. Ek wens die inkomende Raad alle sukses toe, en ek hoop die Vereniging gaan van krag tot krag voort.

Kind regards/*Groetnis*

Martiens du Plessis
(072 285 5414; martiens@nwk.co.za)

EDITORIAL / REDAKSIONEEL



We have somewhat of a lack of response from our correspondents and members this month. Either this is because they don't have much to report after the recent lockdown periods, or it's because they are working so hard to make up for lost time that they haven't had the time to respond!

Speaking of the lockdown situation and subsequent restrictions, one thing that has happened is that most people have become much more *au fait* with the on-line meeting, in all its guises. Whether you use Microsoft Teams, Zoom Skype or some other app that has just been developed, we are all getting used to sending out links by e-mail, checking the web connection prior to the meeting, "mute", "raise a hand" and other aspects. I must say that while the facility can sometimes suffer with signal strength problems and band width, when it works well, it is excellent. I attended (virtually) a meeting with over 200 participants from dozens of countries and it worked very well indeed.

Nothing beats face-to-face contact and interaction (especially over a beer at a Congress function), but at least the interaction can continue. Let's hope that our traditional conferences and workshops can resume very soon, so that we can look each other in the eye again!

Please see the notice for the World Soil Day event on 4th December elsewhere in this Newsletter

Regards,

Garry Paterson

(012 310 2601; 083 556 2458; garry@arc.agric.za)

COUNCIL MATTERS / RAADSAANGELEENTHEDE

IMPORTANT - All SSSSA members should note that despite there being no 2021 Congress, there will be an on-line AGM meeting of the SSSSA.

At present, it is planned to be held on **Wednesday 20th January at 14h00**, and a link to connect to the meeting will be sent out to members closer to the time, along with the agenda and previous minutes.

It is hoped that at least, this will give all members the chance to attend, unlike in other years, when normally, only those members attending the Congress can be present at the AGM.

Please diarize the date, and make every effort to attend, as the AGM is important for our Society.



IN MEMORIAM

Dr Christl Bühmann, previously at ARC-SCW in Pretoria, passed away last month.

Originally from Germany and trained in the geological field, Christl was responsible for much of the soil mineralogy data for the Land Type Survey.

She was also the leader of various projects, including the EU-funded Borassus project from 2005 to 2009, when she retired.



Our sympathy also goes to two SSSSA Gold medal winners, whose spouses passed very recently. **Prof Theo van Rooyen** lost his wife Daniel on 30th October and **Prof Allan Bennie** lost his wife Hilda, on 4th November.



Theo and Daniel van Rooyen at the 2016 Congress in Cape Town



Allan and Hilda Bennie at the 2019 Congress in Bloemfontein

CONGRESSES / KONGRESSE

As previously mentioned in the President's Message, the next **Combined Congress** that was due to be held in Cedara (KZN) in January 2021 has been postponed until 2022, due to the Covid-19 situation.

Hopefully the 2022 edition will be a bumper event that everyone will be keen to attend.

An official first Announcement will be sent in the course of 2021, once a final decision has been taken.

DEGREES AWARDED/GRADE TOEGEKEN

Applied MSc (Environmental Sciences) in Digital Soil Mapping

The MSc degree in Environmental Sciences (Soil Science), was recently awarded to **Pierre Fourie** in the Department of Environmental Sciences at UNISA. The title of his dissertation was "*Digital soil mapping as a tool for improved road and game drive management in Phinda Private Game Reserve, Kwazulu-Natal*". Dr Gerhard Nortjé of UNISA was the supervisor of the study, with Dr George van Zijl from the NWU as co-supervisor.

Many studies on the methods of Digital Soil Mapping (DSM) have been done. However, no studies have until now been done on the application of DSM in conservation areas. This study had two main objectives:

- To create a digital soil and soil sensitivity map for Phinda with the use of DSM;
- To use these maps to optimise game drive activities by re-routing/changing the current road networks, and therefore, promoting sustainable eco-tourism in the reserve.

Data used together with the DSM included data on long-term animal movement routes and climate data. All these, together with soil form classification, were used to make recommendations. The study proved that DSM is a cost-effective and accurate way of creating soil maps in protected areas. The study also made clear-cut recommendations regarding the following:

- Closing of certain roads since they are currently degraded and not passable by game drive vehicles, due to their position on highly sensitive soils,
- Certain roads to be managed as different class roads, and
- Opening of new roads in specific areas.

All the above was done in order to optimise game drive activities, limit off-road driving, while still giving the tourists an enjoyable game drive. This study makes a great contribution to sustainable soil management in the eco-tourism and conservation industries.

WORLD SOIL DAY, 2020



PROGRAMME

WORLD SOIL DAY CELEBRATION, FRIDAY 4th DECEMBER 2020

Theme: “Keep Soil Alive, Protect Soil Biodiversity”

Venue: On-Line

Programme facilitator: Dr Garry Paterson



Name of the Presenter	Topic	Time
1. DALRRD / ARC	Opening and welcome	09:00-09:05
2. Mr Ramakgwale Mampholo (DALRRD)	Why world soil day and the action by government for sustainable soil management	09:05-09:15
3. Dr Ashira Roopnarain (ARC)	An introduction to soil microbiology (the life we can't see)	09:15-09:30
Discussion		09:30-09:35
4. Dr Siphosiso Maseko (TUT)	The benefit to soil health and productivity associated with the cultivation of leguminous crops	09:35-09:50
Discussion		09:50-09:55
5. Ms Mmakgabo Matlou (ARC)	CA & soil carbon - How Conservation Agriculture can help	09:55-10:10
Discussion		10:10-10:15
6. Mr Wiam Haddad (ZZZ)	Natuurboerdery	10:15-10:30
Discussion		10:30-10:35
7. Dr Garry Paterson (ARC)	Coal mining rehabilitation – how to restore these damaged soils.	10:35-10:50
Discussion		10:50-10:55
8. Dr Gerhard du Preez (North West University)	The impact of CA on soil biodiversity	10:55-11:10
Discussion		11:10-11:15
9. Ms. Lydia Bosoga (Director: LUSM)	Vote of thanks	11:15-11:25
10. DALRRD / ARC	Closure	11:25-11:30



Please contact Adri Laas at ARC-SCW (e-mail: AdriL@arc.agric.za; 012 310 2518) regarding arrangements to log in and join the event.

MISCELLANEOUS / ALGEMEEN

In the light of the fact that Newsletter contributions are a little scarce this month, here is an article that was published in a golfing magazine a little while ago.

I hope that even SSSSA members who don't know one end of a golf club from the other might find it interesting!

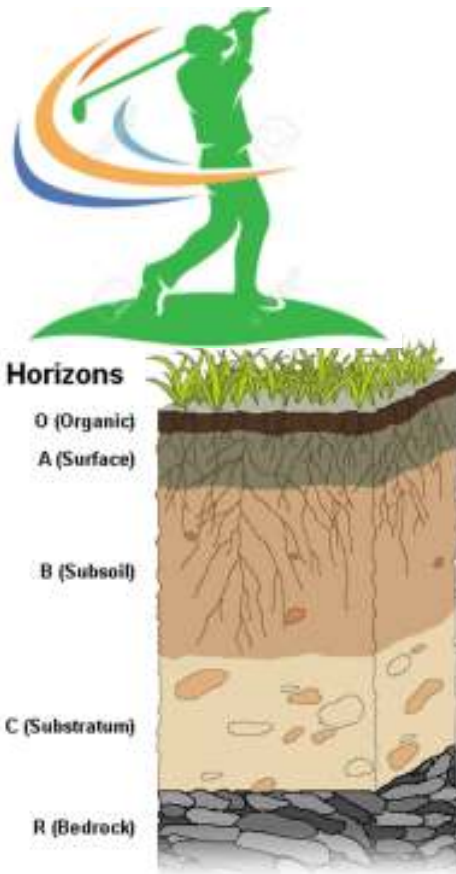
“GOLF AND SOIL”

by Garry Paterson

It seems an obvious fact that without soil, there could be no golf. After all, golf is played on grass, which grows in the soil. But as any greenkeeper will tell you, it's not that simple. Soil is not all the same, and when combined with climatic conditions, produces very different results.

As a soil scientist who has played golf for around 50 years, starting as a young lad in Scotland, I would like to think I have a decent appreciation of that variation. The classic golf courses in many parts of the world (especially in Scotland) are links courses, which developed on the sandy strip that linked the beach dunes with the more productive farmland. As golf expanded, mainly to inland sites, they had to use whatever soil was present, from rocky gravelly materials, to heavy, structured clays.

Soil is obviously composed of a mixture of three broad size fractions, namely **sand**, which is simply the coarsest grade of soil (0.5 to 2.0 mm particles), **silt**, which is medium-sized (0.002 to 0.5 mm particles), and **clay**, the finest grade (particles less than 0.002 mm). Each has its



advantages and disadvantages. Sand has better drainage, but is naturally infertile and dries out quickly. Clay is better at holding water, but can become waterlogged and very hard when dry. Silt is probably the ideal compromise, but can become compacted.

The ideal area for building a golf course in South Africa would have a topsoil texture of around 15-20% clay, with freely-drained soil profiles. It would have enough rain to optimise the grass growth in the warmest season, as well as to keep the grass playable in the coldest season.

In addition, there should be a source of proper sand for the bunkers. Bunkers need proper sand (generally less than 5% clay with a greyish colour), but this is often scarce, so golf clubs use what they have, often manifesting as reddish loamy materials that can even stain golf shoes when wet. The problem here is that these less sandy materials have a tendency to compact, especially after rain, and while true sand will dry out and remain playable, in loamy materials, that compaction remains, giving the well-known “concrete bunker effect” that is very prevalent in Gauteng.

The solution is to regularly rake the bunkers well (preferably to a depth of 15-20 cm or more), but that is both difficult to do without specialised equipment, as well as being labour-intensive. The upshot is that one has to develop a different sort of shot (a sort of steep-angled scoop) for these compacted bunkers, as opposed to the traditional splash shot that can be played from true sand. The real problem comes when the bunkers feel like soft sand on top, only for the actual shot to reveal a hardpan just below the surface. Woe betide any playing partner standing on the other side of the green and not paying attention!!

I have played over 160 courses across several countries, and the soil (and climate) variation has been great. I have played courses in areas of black clay soils (Rustenburg, Akasia, Standerton to name a few), where a topsoil layer of loamy red sand is often required for the fairways, so that enough grass cover can be maintained. I have played in Gambia, West Africa, where the hot dry conditions and sandy soils mean that players take along a plastic mat to hit off and the “greens” are actually “browns”, where sand is mixed with oil and swept for each player to chip and putt. I have played on small *platteland* courses where the soils have been so shallow that “placing” to find a useable patch of grass can be as much as a metre, and I have played on courses where (despite being an avid golfer), my thought has been that the soils have such high potential for agriculture that a golf course should never have been built there.

What is the conclusion to all of this? Hopefully, the realization that soil is a precious resource that provides the basis for many aspects of our lives, including golf courses. We need to understand the soil variation and to take care of whatever soils we have. Enjoy your golf (wherever you play and whatever you shoot), but “Don’t treat soils like dirt!”



Photo 1. *Typical surface cracking in winter on the fairway of a golf course laid out on black swelling clay soils (Akasia, near Pretoria).*



Photo 2. *Golf in a dry climate; sandy soils, “browns” where a sweeper accompanies every group and drags a mat to smooth out the line of your putt or chip (Fajara Golf Club, Gambia, West Africa)*

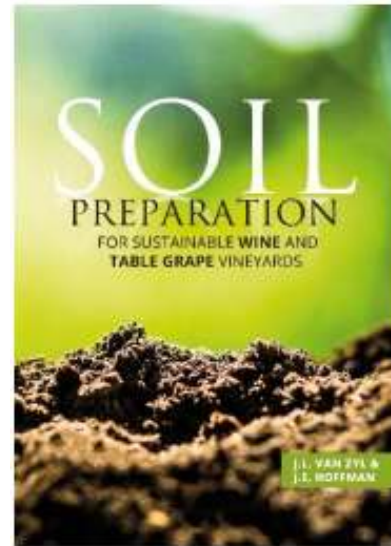


Photo 3 & 4. (Top) – reddish loamy material in bunkers, has a tendency to compact over time. (Bottom) – grey sandy material, better drainage, usually remains soft.

NEWS FROM STELLENBOSCH UNIVERSITY

A new book by two soil scientists at Stellenbosch University, **Johan van Zyl** and **Eduard Hoffman**, has been extremely well-received internationally. The book "***Soil preparation for sustainable wine and table grape production***", was a category winner at the 2020 awards of the International Organization for Vineyards and Wine.

The book was produced in association with Winetech, the SA Table Grape Industry and Villa. It contains practical information, experimental results and is specifically aimed at the South African wine-producing soil environment, taking soil characteristics into account.



Contact lucinda@winetach.co.za for more information about the book.

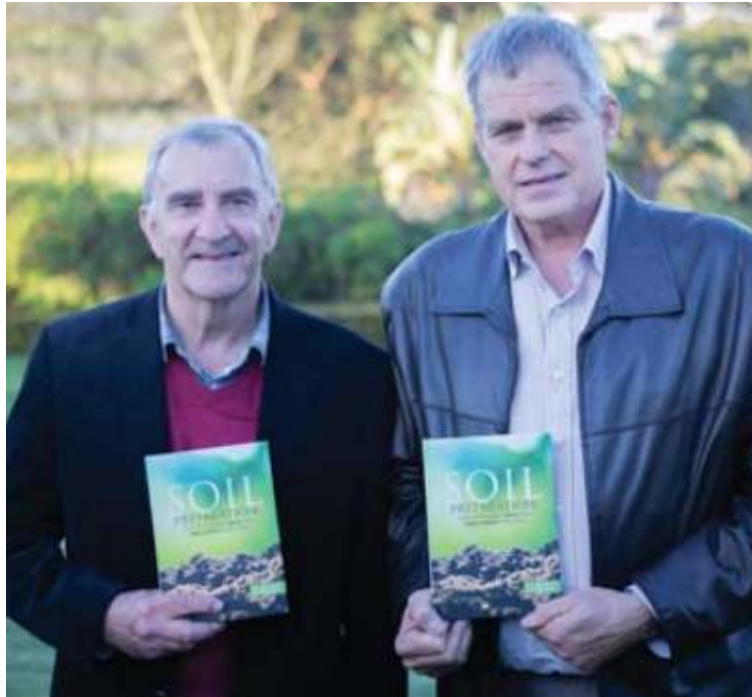


Photo: *The authors, Johan van Zyl (l) and Eduard Hoffman (r)*

From the WRB:

Dear colleagues,

I hope this email finds you and your families and friends healthy and unaffected by Covid-19.

Due to the pandemics, field courses with students were only possible in a very reduced way. For our students, we made a video explaining soil description according to the FAO Guidelines and classification according to WRB.

I would like to share this video with you:

<https://www.boku.wzw.tum.de/index.php?id=wrb-teaching-material&L=0>. (A Spanish video is in preparation.)

We still did not give up our plans for 2021:

WRB Excursion to Iceland:

arrival: June 9

excursion: June 10 - 17

departure: June 18

International Soil Classification Congress (Commission Soil Classification) in Mexico:

arrival: October 14

field workshop: October 15 - 19

conference: October 20 - 22

Go to: <https://iscc2020.org/>

NOTE: These events will only be possible if Covid-19 is over. Please wait for further announcements.

Kind regards and stay healthy,

Peter Schad (Chair of IUSS Working Group, WRB)



We're taking back 2021!

Get snapping - capture the Beauty of African Soils with your cameras and be ready to enter our 2021 SSSA Soils Photo Competition!



Photo: Bruno Herrmann – Lucky Observer

Watch this space – entry details to follow in the next SSSA newsletter

Enquiries: ruth@avorcane.co.za

Most of us are used to various types of soil-based research, but here is a new one:

“Songs for our soils. How soil themes have been represented in popular song.”

August 2017, *Soil Science and Plant Nutrition* 63(5):1-9

DOI: 10.1080/00380768.2017.1369860

Authors: Gian Franco Capra, Antonio Ganga, Allan Moore

Abstract

The soil–culture relationship has been investigated from various points of view. Surprisingly, however, there is a marked absence of papers investigating the way such a fragile resource has been represented in popular song. Many lyrics disclose how such a resource is lived, perceived, represented, and objectified in everyday human life by ordinary people. This paper observes that many of the greatest songwriters and interpreters on the international scene, from all musical genres, have dealt with soil, often from innovative and audacious perspectives. From the prosaic metaphor of the life cycle or as a medium for crops, the soil resource has also been cast as a means of pain, sacrifice, or even redemption. Sometimes seen as a secret world, a helpless creature, treated with a visionary or yet psychedelic approach, the soil has been represented in myriad ways.

During the 1970s, several protest songs, which had the ability to raise awareness and mobilize millions of people in favor of the environmentalists cause, were based on ideological positions closely connected to soil issues, such as soil sealing and erosion. These (soil) songs are now considered the first environmentalist songs in the history of music. As soil scientists, we have often serious problems in communicating soil issues for a global audience, and, consequently, the worldwide political agenda often shows a dramatic lack of interest in such concerns. It is perhaps surprising that popular songs have still not become more common methods for sharing, educating, and sensitizing ordinary people, students, and scholars from every field of study, about soil concerns. Without trying to claim it as some sort of panacea, popular song (as already understood by ecologists and climatologists) can represent a powerful means of increasing public visibility and awareness about soil resource.

(All I know is “Old MacDonald had a farm”!!! Ed.)

HUMOUR

MIDDLE-EARTH AGOG BEFORE THE BIG MATCH!

Well, hello sports fans and welcome to the big match here in Middle-Earth, where the favourites, Mordor F.C. (playing in their usual black strip) come up against underdogs Fellowship United in today's Cup Final. One oddity of today's game is that the winners receive a ring, and not a cup!

While all-conquering Mordor have enjoyed an easy path to the final and have a full squad to choose from, Fellowship have only managed to come up with ten fit players, mainly due to the retirement of their stalwart former captain, Bilbo. However, their front two are that promising partnership of Frodo and Sam, who know each other's game inside out, even if Frodo is sometimes reluctant to pass. In midfield are the energetic combination of Merry and Pippin, who make up in spirit what they lack in stature. In the centre of defence we find the two biggest members of the team, namely Boromir and the captain, Strider, who make a formidable pair. There was talk of a mysterious late signing called Aragorn, but this could not be confirmed prior to kick-off.

The full-backs are a contrasting pair, namely the stout Gimli, who, despite being somewhat one-paced, is well-known for chopping opponents down to size, and the fleet-footed Legolas, who many feel should play up front, as he possesses a great shot. Between the posts is the goalie, Gandalf, who has been known to pull off some magical saves in previous matches.

A late addition to the team is a mysterious free transfer, known as Gollum, who apparently is a very slippery customer that opponents find difficult to pin down.

Fellowship United don't seem too confident of their chances, but they will give it a full go nonetheless, even if the match has to go to sudden-death. The Mordor manager, Sauron (who usually keeps an eye on the match from a distance), could not be reached for comment, but his assistant, Saruman says "It should be a massacre!"

Well, we shall see. Let battle commence!

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 practicing 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.