



NEMATOLOGICAL SOCIETY OF SOUTHERN AFRICA

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NSSA NEWSLETTER

Editorial

Dear Colleagues,

2010 had its “ups” and its “downs”. The “up” being the fact that we will be hosting the 6th International Congress of Nematology and on the “down” side we had to mourn the passing away of our dear friend, colleague and mentor, Prof. Bertus Meyer.

But we are looking forward to an exiting 2011, with the 20th Nematology conference being held at Spier. Something very special will be happening there (can't say any more), so please come and join us in the Cape with its spectacular scenery.

All that is left from my side is to wish you a very happy Festive season and a wonderful New Year

Jeannie van Biljon

Message from the President

With 2011 just lurking around the corner we are facing another year during which mysteries, secrets and new frontiers will be unraveled! The exciting part to me is that as Nematologists we will be part of it. I can't wait to see, hear and read about new discoveries that will be revealed concerning nematodes in particular during the next 365 days! ...

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.... From the President

The year 2010 was a remarkable year for the NSSA and its members since we were awarded the opportunity to host the 6th International Congress of Nematology during 2014 in Cape Town. However, besides that 2011 is going to be another special year for the NSSA, its members and other interested persons. It will be the year during which our society existence reaches the 20 year mark! This achievement is the result of valuable inputs by our members. Everyone of us should be proud that we will have the opportunity to be part of this memorable event. Therefore, make sure that you attend our 20th meeting that will be held from 15 to 19 May in the breathtaking Stellenbosch area at the Spier Estate. It promises to be a very special occasion!

Taking all the abovementioned in mind, I wish to extend a warm word of gratitude to our members for their inputs and contributions during 2010. In terms of personal matters, I express joy to those members whose families expanded, either as a result of marriage or the birth of a young one! Also, I wish to congratulate students who finalized their studies during this year whether it has been a graduate or post-graduate course. And to our retired members, I treasure your inputs and involvement in our society!

I also confer our condolences to beloved-ones, families and friends of NSSA Members who exchanged this life for a better one during the past year. Also to members who are in ill-health, I trust that your progress will be speedy and that you and your loved ones will receive the courage, support and strength to keep you going during difficult times.

I conclude by wishing each and everyone that are in one way or the other involved in the NSSA a peaceful and rewarding 2010 Festive Season. Those who will travel, I also wish you a safe journey wherever you may "roam" the globe.

Looking forward to meet you at the 20th Symposium during 2011.

Driekie Fourie

"A bus station is where a bus stops. A train station is where a train stops. On my desk, I have a work station....."



News from PUK Plant Protection: North-West University (NWU), Potchefstroom

As the year 2010 flew by, Alex Mc Donald and Driekie Fourie got settled as nematologists at the NWU. They crossed the borders to attend the 30th International Symposium of the European Society of Nematologists in Vienna, Austria from 19 to 23 September. Alex presented a poster on the variation of root-knot nematode resistance in tomato, while Driekie gave a talk on Nematology training in South Africa. As a pre-symposium visit, they met with colleagues at Rothamsted (UK) to discuss potential collaboration. During this visit, together with Mieke Daneel from the ARC-ITSC, they also met with the Vice-President of the IFNS, Prof. Rosa-Manzanilla-Lopes to attend to important matters concerning the 6th ICN to be held in Cape Town during 2014. As a post-congress visit, they visited Dirk De Waele who is a professor in Nematology at the Catholic University of Leuven, to discuss potential collaboration in terms of a research project.

Suria Bekker joined Alex and Driekie at the NWU from September 2010. Suria is currently conducting research for a PhD study under the guidance of Alex. She focuses on the role of both plant- and non-parasitic nematodes, particularly in conservation agriculture cropping systems. Alex also acts as study leader and co-study leader for two other PhD students, namely Candy Khosa and Jodie Terblanche.

In terms of MSc students, Emil Engelbrecht is conducting research to assess the status of plant- and non-parasitic nematodes in fields of potato producers in the Free State Province under the guidance of Driekie. Emil also presented an oral talk titled "Assessing nematode populations in potato fields" during the 8th Triennial Conference of the African Potato Association that was held from 5 to 9 December in Cape Town. Chanté Venter, who will enroll for a Honours Degree during 2011 presented a paper on the effect of *Meloidogyne incognita* race 2 on peroxidase and lipoxygenase enzyme activity in susceptible and resistant soybean on 1 October in Pretoria during the 2010 Congress of "Die Suid-Afrikaanse Akademie en Kuns". Chanté conducted this research under the guidance of Dr Jacques Berner, a plant physiologist while Driekie guided her in terms of the Nematology part of the study. Three other part-time Honours students who enrolled for Nematology subjects also successfully completed the first year of their studies at NWU during 2010.

Driekie Fourie



Alex travelled with Jody, Jeannie & Lawrence to Zambia where a course was presented to Cargill's field officers

"Wheresoever go go, go with all your heart" - Confucius



ARC-IIC (Rustenburg)

Jeannie van Biljon attended the CORESTA (International Coordinating body for tobacco scientists) Conference in Edinburgh, Scotland in September. The BIG PICTURE regarding the way forward for tobacco was presented in the plenary sessions. It is clear that all new tobacco products will require pre market reviews and investigations into the health risks of the products. It also became clear that the days of the “tobacco wars” have changed and that **science** must now be driving the policy and regulatory decisions rather than emotions and rhetoric.

Important issues such as TSNA, nicotine, nor-nicotine, viruses, breeding, genetics, IPM and GAP were addressed. Jeannie presented a talk on the “Evaluation of host suitability for *Meloidogyne* species of rotational crops used in tobacco cultivation in South Africa”

Jeannie with a fellow South African outside a restaurant in Edinburgh



Martha Pofu apart from studying, running around planting trials and writing articles, also attended the 28th Horticultural Congress in Lisbon. She presented two posters - one on “Compatibility of Watermelon (*Citrullus Lanatus*) Cultivars with Nematode-Resistant Wild Cucumis Seedling Rootstocks” and another on “Alternatives to Methyl Bromide in Suppression of Root-knot nematodes in Watermelon (*Citrullis Lanatus*) Production.

At the moment it is just “Business as usual”.

Jeannie van Biljon

News from our fellow nematologists at the Plant Pests and Diseases Research Institute in Isfahan, Iran

They have sent some recent publications and copies of the publications can be obtained from the Newsletter editor. The titles and authors are:

Field observations on the reaction of medicinal plants to root-knot nematodes in Isfahan, Iran

M.N. Esfahani and A Ahmadi

Distribution and identification of root-knot nematode species in tomato fields

Mehdi Esfahani



Nelspruit are doing well ..

Willem and I from the ARC-ITSC were in Vienna for the 30th European Nematology Symposium.

Before we got to Vienna, Alex, Driekie and I went to visit the people of Rothamsted where we just had a wonderful time. We not only met several researchers, but also the vice-president of the IFNS so that we could briefly discuss the international conference and we also saw our colleague Shaun Berry. How often it is that one meets your colleagues in a foreign country?

The symposium was a great experience. The papers were most interesting, the posters were informing and the city was stunning. For us South Africans, used to jumping in a car, we had to get along on foot or use the busses and underground. What a change of scenery. Because my poster included free living or rather 'non-parasitic nematodes', I focussed on papers and presentations on this topic and I again realized how much information is lying around to help us understand more of the soil environment if we would just look at it.

Afterwards we had some time to have a quick visit in Belgium. I cannot go to Europe and not say hello to my family and we also managed to see Dirk De Waele as well. I did not have time to talk 'nematodes' with him but Driekie and Alex did.

At home, Grace will also include non-parasitic nematodes in her PhD study and hopefully she will gather an enormous amount of info on these very interesting creatures. She is busy to look at organic amendments and growth stimulation and nematode control and how we can manipulate soil health. But she is still a long way away from the end.

Candy is busy with his PhD on bionematicides and at the moment all his time is consumed by bioassays on different fractions of the 2 bionematicides identified as being most effective.

Willem is looking at resistance screening of peppers, spinach and carrots. Time consuming, but rewarding as it seems that some cultivars do seem to have some resistance.

Driekie and I are busy with a study on greens in South Africa. We are looking at plant parasitic and non-parasitic nematodes and the information gathered is really interesting and seems to show that we should include non parasitic nematodes in other studies as well. But more on that will be shown at the symposium in Cape Town.

Otherwise we are involved in litchis, guavas and veggies, not only eating! We do take some nematode samples once in a while and try to find solutions for the nematode problems.

Greetings from the Nelspruit team

Mieke Daneel



Green is the new black

“Don’t blow it – good planets are hard to find”. This was the opening sentence to an article in the latest Time magazine, indicative of the new ‘green view’ currently making waves in both science- and corporate-circles. With diminishing environmental resources, the only way forward and onward, is dependent on a joint- and global SUSTAINABLE approach.

Germany strongly focuses on this ‘joint responsibility’, and the Federal Ministry of Education and Research therefore adopted ‘sustainable development’ as one of their core objectives. As part of this objective, a lot of focus is placed on the next emerging generation through the “GREEN TALENT AWARDS”. This is a distinction for outstanding scientific talents in the field of sustainable research.

A total of 234 young scientists from 57 countries had applied to become one of the “Green Talents”, among them 18 researchers from South Africa. A high-calibre jury of German experts selected a total of 20 award winners who were invited to travel through Germany from 1-12 November 2010 as part of a ten-day science forum, visiting numerous of the leading institutions and companies such as Volkswagen, Osram, biofuel production plants and leading environmental research centres.

Jeanne de Waal, a PhD student from the University of Stellenbosch, Department Conservation Ecology and Entomology, was one of the 2010 Green Talents winners. She swayed the jury with her research in the field of a new approach to sustainable agriculture in the focused field of environmentally friendly pest management practices, using entomopathogenic nematodes as a biological control agent to manage codling moth, a devastating pest of apples and pears in commercial orchards, under the supervision of Dr. Antoinette Malan and Matthew Addison.

“It was an eye opener. Germans are the leaders of the pack in terms of doing things in an environmentally-friendly way, without compromising economic viability. I believe that many of the systems that they have in place in Germany, can be adopted and implemented in South Africa in future”, said Jeanne upon return of her trip.

The purpose of the trip and the competition was to advance international cooperation and to jointly contribute towards sustainable solutions to fighting climate change and protecting the environment. All winners have the option of returning to Germany next year for up to three months, as part of the forum, to collaborate with any of the research centres of choice, to further research in the field of sustainability and intensify international exchange.

Antoinette Malan



Jeanne de Waal, PhD student from the University of Stellenbosch, receiving her “GREEN TALENTS” award from the German Federal Minister of Education and Research, Professor Annette Schavan at the 7th Forum for Sustainability in Berlin, Germany. Photo: FONA.



Nematology workshop at SASRI

A workshop for Nematologists from South Africa was held on 17 and 18 November 2010. The aim of the workshop was to get the Nematologists from different parts of SA to spend time together as well as learn new skills. The workshop was held at the South African Sugarcane Research Institute (SASRI) in Mount Edgecombe, Durban and was attended by 22 Nematologists from 12 different organisations: ARC-Grain Crops Institute, ARC-Institute Tropical and Subtropical Crops, ARC-Institute for Industrial Crops, Department of Agriculture, Forestry and Fisheries, University of Pretoria, University of Stellenbosch, University of North West, Villa Crop Protection, Nemlab, Illovo, Citrus Research International and SASRI. We were also fortunate to also have two French visitors: Patrice Cadet (retired, but formerly employed by IRD) and Jean-Michel (from CIRAD).

The first day of the workshop was spent visiting the facilities at SASRI (e.g. plant breeding glasshouses and BTI- 2nd oldest agricultural trial in the world) and listening to talks about SASRI's research programme. The second day was spent listening to presentations from various researchers on: free-living nematodes in sugarcane, bananas and the fruit industry; work on developing Soil Health Indices for sugarcane and citrus; learning how to analyse datasets with the Faunalyser programme; as well as demonstrations on how to identify different free-living nematodes.

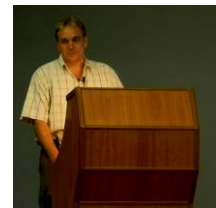
The evenings were spent with old friends, eating good food, drinking good wine and catching up on news.

Shaun Berry

At the Cargo Hold restaurant (at UShaka) - some of us were in a pensive mood while others were watching



At the workshop





News from Nemlab

After a shaky 2009 (both literally and figuratively!) we have been kept on our toes in 2010. The lab has been inundated with samples throughout the year which keeps us all happy! At least the wine industry must be doing well...

There has been a significant increase in the interest regarding soil health issues this year. Caro Kapp, who is enrolled at the University of Stellenbosch for an MSc degree in Nematology, continues her work on "The role of nematodes and their use as bioindicators of soil health in local fruit orchards". Many presentations were given at informal producer meetings and the importance of nematodes in soil health was addressed at the annual meeting of the Cape Pomological Association.

Sheila attended the nematode mini-workshop in Durban with her student Caro. After the hard work, a royal time was spent with fellow nematologists at the 'shark tank'. It was lovely to mingle with 'old' friends again. Sheila and Caro also attended the annual Soil-borne Disease Interest group meeting in September in Stellenbosch. The theme this year was 'compost' with extremely interesting presentations on the advantages and disadvantages of using compost.

Sheila was privileged to visit MC Pretorius at CRI where he initiated a workshop on soil health in the citrus industry. This trip was concluded with a visit to tomato growers in the Mooketsi region.

It became evident that the lack of information available to vegetable growers (particularly potato and carrot growers) in South Africa is a serious concern. To assist these growers Sheila has been on a number of visits to them in the Gauteng, Free State and Limpopo regions.



Nemlab breakfast



.... Nemlab

Hans Hugo (ARC Nietvoorbij-Infruitec) and Sheila had the opportunity to learn more from two esteemed friends Richard Sikora and Dr Greg Reighard. Richard Sikora visited us in April and we spent quite a few hours looking at plum orchards. The stonefruit rootstock specialist, Dr Greg Reighard, visited us in October. The purpose of his visit was to establish if there are any similarities between PTSL (Peach Tree Short Life) in Georgia and South Carolina and the so-called plum deaths experienced in South Africa. This disease is prevalent in some years and closely associated with ring nematode (*C. xenoplax*).

In the continued effort to find alternate measures for the control of nematodes, Nemlab is conducting a number of glasshouse and field trials. Sheila was able to attend the Biopesticide Workshop organized by the Dept of Plant Pathology at the University of Pretoria. This was a wonderful initiative to address trends, developments, products and registration. We look forward to some interesting results from this workshop.

Please join us in the Western Cape next year for the 20th NSSA symposium at Spier. **Bubbles! is all I can say...**



On a personal note: the stork will arrive shortly and probably by the time you read this our laboratory technician, Mario will be a proud father... In the meantime the work has to go on and here is Mario busy in the greenhouse ...



Sheila Storey



Visit from Professor Greg Reighard from the USA



Well known USA Pomology Professor Greg Reighard [Photo above] visited ARC Infruitec and presented a lecture on the peach industry and research in the USA to about 50 ARC researchers and industry members. Prof Reighard is chair of the peach sub-committee of the NC-140-rootstock project as funded by several state sources in the USA.

Apart from giving a lecture at Infruitec, he also visited some peach and plum rootstock trials in South Africa with Dr Piet Stassen, visited SAPO and is attending the 5th International Rosaceae Genomics Conference at the Wallenberg Centre, University of Stellen-

Prof Greg from Clemson University, in South Carolina, the largest peach production state after California is involved with research programs to improve the productivity and profitability of the peach industry and is similar, but on a far larger scale, to the ARC's horticultural research projects. Prof Reighard's research includes developing and improving pome and stone fruit rootstocks through breeding and genetic engineering, focusing on resistant gene candidates. They have 19 peach rootstock trials in several states.



Researchers and industry members listen to the fascinating talk by Prof Greg Reighard.



From ltr: Dr J van Zyl, Research Institute Manager; and Dr Piet Stassen, Stone fruit rootstock researcher, both from ARC Infruitec-Nietvoorbij and Prof Greg Reighard from Clemson University, USA.



Nematological Society of Southern Africa George Martin Memorial Scholarship

Applications are invited for the “GEORGE MARTIN MEMORIAL SCHOLARSHIP” tenable for the year 2011. The award, to the value of R 4000.00 is open to persons from countries of southern Africa: South Africa, Botswana, Lesotho, Swaziland, Mozambique, Malawi, Zimbabwe and Namibia.

The purpose of the scholarship is to promote nematology in southern Africa, preferably by assisting the successful candidate to attend a recognized course in nematology.

Applicants must be serious about pursuing a career in nematology and about furthering the science of nematology. The successful candidate will be expected to give a paper at the next NSSA symposium and/or report in the Society's newsletter how the funds were used.

A letter of application and a curriculum vitae should be sent before 28 February 2011 to:

Dr Sonia Steenkamp
ARC-Grain Crops Institute
Private Bag X 1251
Potchefstroom
2520
South Africa
Tel: 018 299 6379
Cell: 083 452 5926
Fax: 018 299 6404
E-mail: SteenkampS@arc.agric.za

“As is our confidence, so is our capacity” - William Hazlitt



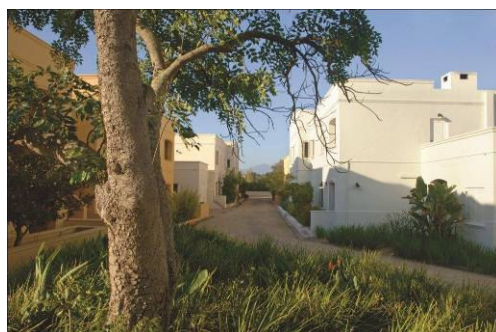
News from the Lowveld

It is with regret that I have to inform you that Wilma van der Westhuizen will be leaving Citrus Research International at the end of December 2010 after two years of service. Wilma did outstanding work at the Diagnostic Centre in Nelspruit. She had no nematology background but after some exposure and attending the short course she regarded “the little worms” as her own, She was a huge asset and really filled Laura’s shoes after she left. She will be joining her husband in Secunda. The past year he travelled between Nelspruit and Secunda. Everybody tried their best to find him work in the Lowveld but to no avail and with tears and regret we had to let her go. Wilma will now organize her new house in Secunda and will be preparing nice meals for her hubby.

I just want to wish Wilma and her husband everything of the best and if anybody needs the services of a nematologist in the Secunda area they can make use of her services. Please contact MC Pretorius.

Second announcement and call for abstracts

The second announcement and call for abstracts are on the website. Just “click” on “symposia” and you will find it there.

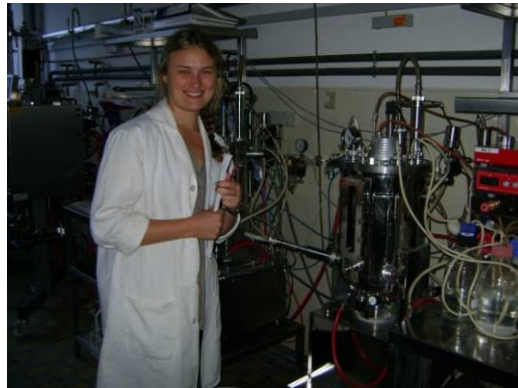




Stellenbosch nematology student visiting E-nema in Germany

Tiarin Ferreira (MScAgric), currently busy with her doctoral degree at Stellenbosch University, are visiting one of the leaders in the field of *in vitro* culturing of entomopathogenic nematodes. E-nema is one of the few companies worldwide that produce entomopathogenic nematodes commercially. E-nema successfully produced nematodes in liquid culture in 1989 in a joint venture with the department of Biotechnology and Biological Control headed by Dr. Ralf-Udo Ehlers, at the Christian-Albrechts-University Kiel, University of Kiel.

The difficulty with the commercialization of these nematodes are that the protocols are kept confidential and therefore research is desperately needed in South Africa on this subject. Entomopathogenic nematodes are not commercially available in South Africa yet and thus Tiarin is currently gaining knowledge on techniques and protocols to mass produce local South African nematode isolates. This is needed for the inevitable commercialization of entomopathogenic nematodes in South Africa and to make them available for the growers.



Tiarin Ferreira working at E-nema in Germany



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To contact us:

Driekie.Fourie@nwu.ac.za
SteenkampS@arc.agric.za
Jeannievb@arc.agric.za



**Nematological Society
of Southern Africa**

**We're on the web:
www.sanematodes.com**

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