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Editorial

I recently participated in the editorial board meetings of two plant pathology journals with which I have the privilege of being associated. And yes, it is indeed a privilege and honour! As a member of the board, you are offering a service to the scientific community. Your involvement is important as it contributes to the quality and integrity of published research thus maintaining high scientific standards. Finding editors is challenging – they need to be experts in their field and, have the time and commitment to take on this role. As an incentive to attract early career scientists, some journals, such as the Journal of Plant Pathology, has appointed a “Young Editorial Board”. Members of this board assist editors with reviewing and evaluation manuscripts. Other journals such as the South African Journal of Science has a mentorship programme which allows early career scientists to assist associate editors with their tasks. Perhaps some of you should explore these opportunities...

As I mention above, being an editor is a privilege. Finding reviewers is, to put it simply and without the addition of inappropriate words, a challenge. In my own experience, I have asked as many as 30 scientists to review a single manuscript and all declined. It is understandable that people are busy and many of the experts suffer from reviewer fatigue feeling overburdened with numerous requests. Others may feel that their efforts as reviewers go unnoticed or unappreciated or are discouraged from accepting review invitations due to the pressure of trying to publish one’s own research. Despite these drawbacks, there are key benefits to reviewing manuscripts, i.e. professional development, early access to research, networking opportunities, career advancement and improving one’s objectivity and fairness. Next time you are asked to review a manuscript which is in your research field, please consider the opportunity and do not immediately decline!

The publication of one’s own research is a long and tedious process in some cases taking months before feedback is given. After the review process, you get your manuscript back either rejected or accepted. The latter decision rarely comes without you having to undertake either minor or major revision. This whole process can take a couple of weeks to months. The main reason for this delay is finding reviewers and then another challenge is getting them to submit the review. Sometimes the reviewer will accept the invitation but never submit the review (never be one of those). I have not even got on to the topic of how one goes about choosing a journal, but interestingly one factor authors are now considering is the length of time of the review process. The shorter it is the more likely an author is to choose that journal. I am unsure if this is a wise decision or not. Other issues such as the topic of your manuscript and impact factor of the journal should receive equal consideration. And, of course, the cost involved in publishing open access. The bottom line is publishing is a challenging process....

Teresa Coutinho, University of Pretoria

teresa.coutinho@up.ac.za

Message from the President

Does the discipline of Plant Pathology impact on achieving the UN Sustainable Development Goals?

Anyone listening to or reading local and international news will often hear reference made to the UN Sustainable Development Goals. My question is whether we as Plant Pathologists can have an impact on achieving these goals?



Maybe to start this conversation a brief overview of the UN SDGs is needed. In 2015 member countries of the United Nations adopted a set of 17 interlinked global goals designed to achieve a better and more sustainable future for all. These goals form part of the larger 2030 Agenda for Sustainable Development, and address a broad range of social, environmental and economic issues, with the aim of ending poverty, protecting the planet, and ensuring prosperity for all. What this means is that there is a strategic push to work towards achieving these SDG goals by 2030.

For all 17 of the SDGs go to the attached link: <https://sdgs.un.org/goals>

I believe that Plant Pathologists play a crucial role in meeting a number of the SD Goals, however our most significant impact is, and will be on SDG Goal 2. ZERO HUNGER. This goal aims to end hunger, achieve food security, improve nutrition, and promote sustainable agriculture....by 2030. This of course is a huge challenge, but one I believe we all need to strive towards. Towards this end, Plant Pathologists are working to ensure food security and improving agricultural productivity through:

- ☑ Developing disease-resistant crops thus helping to secure reliable food supplies;
- ☑ Early detection and diagnosis of plant pathogens to prevent outbreaks leading to food shortages;
- ☑ Implementing IPM strategies to reduce the impact of diseases on staple food crops;
- ☑ Reducing the risk of emerging plant diseases made worse by climate change.

These are only a very few of the ways Plant Pathologists make a significant contribution towards the goal of ZERO HUNGER by 2030.

I am sure if you consider all 17 of the UN SD Goals, you will identify one or more where you have a significant role to play in meeting the goals. My challenge to all of us Plant Pathologists is to take the time to reflect on what we do, and the impact it has globally.

Dr Cheryl Lennox, June 2024

Obituary: Brad Flett

It is with profound sadness that we announce the passing of Prof Bradley Charles Flett (Brad, as most of us called him), on Wednesday, 18 September 2024.

Anyone who had the privilege to know and work with Brad knows that he enjoyed life fully, was a deep thinker, and an incredible intellectual who shared his knowledge easily and in a very simple manner with anyone.



Bradley Flett began his career as a technician in the Plant Pathology section of the Agricultural Research Council (ARC) in Potchefstroom in 1982. He served as a Senior Researcher in Plant Pathology at the ARC for more than 33 years, with his research focussing on diseases of maize, soybeans, groundnuts and sunflowers. Brad had an exceptional understanding of disease epidemiology and integrated pest management. His understanding of mycotoxins, and its management, formed part of his ability to integrate biological and chemical systems and look at solutions in a holistic manner. Bradley was well respected by his peers (national and international) and South African maize producers, who often knocked on his door or called him out to their fields, as an excellent plant pathologist. He shared his knowledge and expertise through student training and research supervision, and often served as mentor to his colleagues. He served as President of the African Society of Mycotoxicology from 2015 to 2018, and on the Steering and Technical Committees of the Partnership for Aflatoxin Control in Africa (PACA).

Brad's passing has left an indelible void in grain research, in South Africa and beyond. He will be dearly remembered as a passionate plant pathologist and loyal friend.

Rest in peace, Brad. We will always remember you.

Lindy Rose, Stellenbosch University

12th CRI Citrus Research Symposium

The biennial CRI Citrus Research Symposium was held from the 18th to the 21st August 2024 at Champagne Sport Resort in the central Drakensberg. There were over 800 attendees, 77 presentations and 45 posters. The session topics ranged from disease management, to IPM and citriculture. The symposium was opened by the Chairman of the CRI board, Piet Smit, with a presentation entitled: "Sustainability challenges from a grower perspective and the value of well-organized industry support structures."

There were a number of international speakers and these included the following presentations:

- Novel adjuvant system for enhanced coverage, canopy penetration and control of Citrus Black Spot (*Phyllosticta citricarpa*) by Todd Cardwell, Land O'Lakes International, USA
- The EU Phytosanitary Regulatory Environment by Inge Ribbens, Fresh Produce Centre, The Netherlands.
- The California HLB programme: lessons to date by Etienne Rabe, Wonderful Citrus Bakersfield, USA.

- Exploring the influence of ethylene-produced degreening on chilling tolerance in Nadorcott mandarin and clementines by J Zacarias, IATA-CSIC, Spain.
- Current situation of Asian Citrus Psyllid (*Diaphoria citri*) management in São Paulo State Brazil by Marcelo Miranda, Fundecitrus, Brazil.
- Breeding superior new citrus rootstocks: USDA success and remaining challenges from diseases and other stresses by Kim Bowman, USDA, USA.
- Combining new and old technologies in an integrated postharvest fruit management system by Arno Erasmus, Wonderful Citrus, USA.
- Volatile profile changes in false codling moth-infested citrus – towards development of postharvest detection strategies by Ma. Cecilia Cardinez, KU Leven, Belgium.

Although I focus on international presenters above, the presentations by the CRI staff and researchers were outstanding – they were insightful and engaging. I particularly enjoyed (if that is the right word) the presentations on HLB and its threat to the industry. The potential invasion of quarantine pests and pathogens is scary and if they occur are going to have significant economic consequences.

Teresa Coutinho, University of Pretoria

***Phytophthora cinnamomi* invasion**

Trudy Paap, a researcher at the Forestry and Agricultural Biotechnology Institute (FABI) at the University of Pretoria, recently presented her research on *Phytophthora cinnamomi* at the 11th Meeting of the International Union of Forest Research Organizations (IUFRO) Working Party 7.02.09: ***Phytophthora* in Forests and Natural Ecosystems**, held from September 8-13 in Paihia, New Zealand. She delivered a keynote address titled "The root rot pathogen *Phytophthora cinnamomi*: A long-overlooked threat to the Cape Floristic Region."



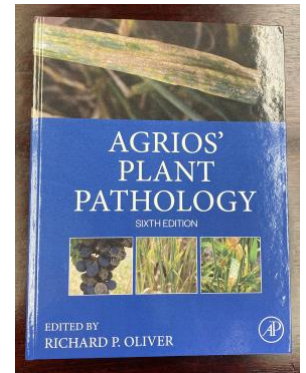
This project focuses on the significant threat posed by *P. cinnamomi* to the biodiversity of South Africa's Cape Floristic Region (CFR), which is recognised as one of the world's biodiversity hotspots. The CFR is home to over 9000 plant species, with near 70% being endemic. However, several threats, including the impacts of the invasive pathogen *P. cinnamomi*, are contributing to alarming declines in native flora, threatening not only individual species but also the overall ecological integrity of this unique region. During her presentation, Trudy emphasised the urgent need for comprehensive research and proactive management strategies to combat the impacts of *P. cinnamomi* across the CFR. Her work aims to fill critical knowledge gaps regarding the pathogen's distribution and effects on endemic species, thereby informing conservation efforts that protect the region's rich biodiversity. Trudy's participation in this international forum underscores the importance of collaborative efforts in addressing invasive species threats and highlights the need for global awareness and action to safeguard the CFR's unique ecosystems.

Trudy Paap, University of Pretoria

Contributions to Agrios 6TH Edition

Academics contribute to AGRIOS' Plant Pathology 6th edition text book *Plant Pathology* is underpinned by accurate identification and effective control of plant diseases in farmers' fields. However, the discipline has undergone major advances in the past twenty years.

Genomics and molecular biology have revealed molecular mechanisms of plant immunity as well as pathogen effectors that manipulate host cells. Next generation sequencing allowed researchers to get complete gene catalogues for plant hosts, pathogens, and associated microbiomes. Marker assisted selection has accelerated disease resistance breeding. Gene editing enabled precise modification of plant genes, resulting in pathogen-resistant crops. Monitoring of disease shifts due to global travel and climate change has improved with molecular diagnostics, remote sensing and AI. Integrated pest management and biological control are increasingly popular approaches for disease control.



It was therefore timely to update the textbook AGRIOS' Plant Pathology, which has served as the reference for plant pathologists worldwide from the first edition in 1969 to the 5th edition in 2005. It has even been described as the "bible" of plant pathology, and has been translated into 11 languages. This textbook was the brainchild of Professor George N. Agrios, who had an illustrious career as a plant pathologist at the University of Florida, USA. After his passing in 2010, there was a hiatus until the 6th edition (873 pages) was published this year. This single reference will significantly advance the curriculum for the BSc (Agric) Plant Pathology degree, other plant health-related modules and postgraduate research at the University of Pretoria.

A new feature of the 6th edition are chapters on diseases of a comprehensive range of plant hosts, which include invited contributions from academics at the University of Pretoria. Prof. Mike Wingfield of the Forestry and Agricultural Biotechnology Institute (FABI) and Prof. Irene Barnes of the Department of Biochemistry, Genetics and Microbiology and FABI contributed the chapter entitled "Diseases of plantation trees in the tropics and Southern Hemisphere". This is the first time Forest Pathology has been featured in AGRIOS, with a second chapter covering Forest Trees in the Northern Hemisphere. Prof Dave Berger in the Department of Plant and Soil Sciences and FABI contributed the chapter "Diseases of maize/corn".

Dave Berger, University of Pretoria

Pantoea 2025: The 1st International Scientific Conference for Pantoea Research



July 2025 South Africa

Date: July 20th to July-23rd 2025

Venue: Skukuza Safari Lodge, Kruger National Park

<https://site.caes.uga.edu/kvitkolab/pantoea-2025/>

SASPP/BSPP award:

Grace Waterhouse Fellowship

The Grace Waterhouse Fellowship has been set up to encourage links between the SASPP and the British Society for Plant Pathology (BSPP), with a particular focus on plant pathologists in the early stages of their careers.

The fellowship will be awarded competitively no more than once a year to a junior plant pathologist with high potential.

Members of the SASPP in the early stages of their career, studying in a southern African country, may apply for the Grace Waterhouse Fellowship to support a working visit of between one and three months to a laboratory in the UK. The aim is to encourage collaboration and interdisciplinary research, to enable students to acquire new techniques, and to make new contacts.

Criteria:

- Any applicant must have been a member of SASPP for at least one year and must be registered for an MSc by research or PhD at the time the Fellowship award is taken up.
- No member may be awarded a Grace Waterhouse Fellowship more than once. The host must have been a member of the BSPP for at least two years.
- The Grace Waterhouse fellowship is intended to support
 - (a) travel, accommodation and other personal costs that are not covered by the student's stipend and
 - (b) a contribution to any consumables which are essential for the applicant's proposed research in the host laboratory. In view of the travel costs and the UK being a relatively expensive country to live in, the maximum value of any award would be £5000, although members are encouraged to be economical.

The closing date each year for the fellowship will be the 31st October, and it is expected that the placement will take place during the following year.

Applications cannot be submitted for both the BSPP travel fund and for a fellowship in the same year.

Profile of a Plant Pathologist: Dr Belinda Janse van Rensburg

Current position: I am currently a Plant Pathology Researcher at the Agricultural Research Council – Grain Crops in Potchefstroom.



Tell me about your research

My main focus is plant pathology, investigating various diseases of grains such as soybean, sunflower, sorghum and drybeans. My expertise area is mainly focused on maize diseases with emphasis on ear rots and mycotoxin research. Research includes all factors present in the disease tetrahedron. I am currently the lead researcher of 5 projects funded by the Maize Trust, OPOT and DALRRD. Two projects focus on the sunflower diseases *Sclerotinia sclerotiorum* and *Alternaria* spp. In the one sunflower project, we investigate an integrated *S. sclerotiorum* management control system and in the other project we focus on the presence of *Alternaria* spp. and resultant mycotoxins. Research conducted from the remaining three maize projects includes an extensive sampling of maize grain from all South African maize production areas (subsistence, smallholder and commercial) to determine the incidence and severity of maize ear and stalk rot fungi and the resultant mycotoxins produced. Data gathered from these sites will enable us to work on epidemiological models that will assist farmers with control measures suited to their unique environment and crop production practices. Our group started to give training to smallholder farmers regarding maize ear rots and mycotoxins. This component is often overlooked in any research programme. Our understanding of *Stenocarpella maydis* (*Diplodia*) infections of maize have advanced over the years, however there is still a paucity regarding the mycotoxins that this pathogen produces and the effect thereof on animal and human health. Therefore, the late Dr. Bradley Flett initiated a project to determine the variation in *Stenocarpella*

maydis isolates, from maize stalks and kernels, in production of Diplodiatoxin and toxicity reactions on ducklings. As co-researcher, being involved in this project from the start, I have taken over the project and it is a privilege to carry on with *Diplodia* research that Brad used in his MSc and PhD. Lastly, we are looking at *Macrophomina phaseolina* (Charcoal rot) infections of maize. We were requested by Grain SA to conduct a survey regarding the incidence of Charcoal rot on maize and interestingly, I had a few enquiries on Dolichos infected with the pathogen. This will have implications when rotating or intercropping with maize and will be investigated further. We aim to look for sources of resistance against Charcoal rot in our ARC germplasm (including WEMA drought tolerant cultivars) as well as market available cultivars.

Why is your research important?

Plant pathogens can affect all plant parts during a season, thereby leading to losses (direct and indirect). It is therefore so important to be a field pathologist with an understanding of the disease tetrahedron as well as epidemiology. If I can look at a disease problem holistically, I can ask important research questions and develop integrated disease management systems for producers that will enable them to produce good quality, safe food, while also making a profit. It is well known that certain mycotoxins can be harmful to animals and humans when ingested by means of contaminated grain. Mycotoxin research is of the utmost importance to reduce the mycotoxigenic fungi and resultant mycotoxins they produce in grain that is in the end consumed by animals and humans. By reducing mycotoxin intake, we improve the health of animals and humans. Furthermore, we prevent massive monetary losses occurred due to consignments being rejected due to exceeding mycotoxin legal limits. Another example is the costs that occurs when animals have problems with a decline in fertility and productivity due to mycotoxicosis. Products containing aflatoxins were recently recalled from supermarket shelves causing monetary losses and people were unsettled with the information not fully understanding the possible implications. Legal limits are in place in South Africa for aflatoxins, fumonisins and patulin. Currently, we have limited information regarding *S. maydis* mycotoxins and how it affects animal and humans, therefore our research is of great importance in future decision making (health, legislation and management).

What is your favourite aspect of your research?

To be honest, I am not too keen doing the administrative duties, but give me a problem that need to be solved and I am sold. I enjoy formulating research questions and then developing and managing a project that will have meaning for producers. I like to be actively involved in all the research processes (planning, planting, processing, interpretation and dissemination of information). The ultimate satisfaction is when you can answer a research question that you know will have an impact on grain production.

What excites you about your research?

The impact that I make in the Agricultural sector gives me a sense of purpose and satisfaction. I am often amazed by my observations of diseases in the field and have to remind myself not to be too excited when a producer is also present (fellow plant pathologists, you know what I mean). I am often excited about my data and analyses and Bradley told me in the past not to be attached to my data because I wanted to include everything! I like the sense of responsibility and know that I have a network of researchers in South Africa with whom I often collaborate or just consult. I love the fact that I am not in an office for eight hours per day. I like the freedom of nature and are blessed to be able to travel locally and abroad. I enjoy expanding my network as this will improve my future collaborations.

Tell me about what you like to do when you aren't working

I am quite artistic, trying my hand at candle making, mosaic, small paintings and my latest interest is to restore old furniture. Chalk paint allow me to be very creative and I love the use of colours. I can appreciate antiques and rest assured I will not paint over valuable wood. Nature attracts me and I will often collect seeds from various trees or plants and germinate it. My friends and family are often on the receiving end of my art projects and thus far no one complained.

