

INTERNATIONAL NEWSLETTER ON PLANT PATHOLOGY

ISPP Newsletter 44 (2) February 2014

News and announcements from all on any aspect of Plant Pathology are invited for the Newsletter. Contributions from the ISPP Executive, Council and Subject Matter Committees, Associated Societies and Supporting Organisations are requested.

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Dave Sands

David Sands is a Professor in the Department of Plant Sciences and Plant Pathology at Montana State University. He is also a recipient of a Grand Challenges Explorations Grant from the The Gates Foundation.

Fifty-five women from the village of Ekwanda, which is a small rural village north of Kisumu, the principal city in western Kenya. The women – most of them widows whose husbands have died from HIV, malaria, dengue fever or other causes -- are responsible for growing food and providing an income for their families. However, a parasitic weed called Striga kills 30 to 80 percent of their corn, millet and sorghum before the crops break the surface of the ground. The women spent 80 percent of their waking hours during three to five months a year weeding.

David Sands headed into the cornfields of Kenya. Perhaps he could find unhealthy Striga that would indicate the presence of a natural enemy or a weakness he might exploit. The search paid off when Sands discovered four strains of fungus among the weeds. After testing them in his MSU lab, he focused on improving one fungus to make it even more effective against Striga. Sands also developed a simple, inexpensive way to grow and plant the fungus.

It involved growing the fungus in a petri dish. "After three days, it's a fungal paradise," Sands said. Then he placed about 50 wooden toothpicks in the petri dish so they were coated by fungus. After three days, he removed the toothpicks and set them aside to dry. The coated toothpicks will last five years if they stay wrapped.

When the time came to plant corn, he placed one coated toothpick into a batch of boiled, cooled rice or sorghum, Sands said. After three days in a covered container, the rice turned pink and he had enough fungus to fight Striga. The women of Ekwanda placed the rice into a hole on top of compost. Then they planted three kernels of corn on top of it.

The women of Ekwanda helped prove that the fungus kills Striga without harming the environment, Sands said. They also demonstrated that the Striga biocontrol would save labour, increase crop yields and create more room to grow crops.

Sands shared his technique with Kenyan plant pathologist Sila Nzioka who came to MSU in 2011 to learn it from Sands. Nzioka works in the Kenya Agricultural Research Institute, the equivalent of the U.S. Department of Agriculture. Sands also described his discovery to the Gates foundation when he applied for a grant earlier this year.

In addition to the grant from the Bill & Melinda Gates Foundation, Sands has received funding for his Striga research from other foundations, including the Charles A. and Anne Morrow Lindbergh Foundation. The Starfish Foundation paid for supplies, as well as the salary of Lydia Anderson of Missoula, who worked on the Striga project as an undergraduate student. Anderson graduated in 2012 with a bachelor's degree in biology.

Xanthomonas infection in tomato

In order to see the sequence of events during the infection of tomato plants by *Xanthomonas campestris* pathovar *vesicatoria* in susceptible and resistant hosts, please click here: <http://vimeo.com/34378870>.

Annual Review Of Statistics And Its Application

The [Annual Review of Statistics and Its Application](#) aims to inform statisticians, quantitative methodologists, and users of statistics more broadly about major methodological advances and the computational tools that allow for their implementation. It will include developments in the field of statistics, including theoretical statistical underpinnings of new methodology, as well as the developments in specific application domains such as biostatistics and bioinformatics, economics, machine learning, psychology, sociology, and aspects of the physical sciences.

Editorial Committee: Stephen E Fienberg, Editor, *Carnegie Mellon University*; Nancy Reid, Associate Editor, *University of Toronto*; Stephen M Stigler, Associate Editor, *University of Chicago*; Lawrence D Brown, *The Wharton School, University of Pennsylvania*; Ursula Gather, *Technische Universität*; Xihong Lin, *Harvard University*; Thomas A Louis, *Johns Hopkins Bloomberg School of Public Health*, Sylvia Richardson, *MRC Biostatistics Unit, Institute of Public Health*; Bernard W Silverman; Chief Scientific Advisor.

Advocacy of Social Media for Publishing in Science

By Anne Osterrieder < a.osterrieder@brookes.ac.uk >, Department of Biological and Medical Sciences, Faculty of Health and Life Sciences, Oxford Brookes University, Gipsy Lane, Headington, Oxford OX3 0BP, UK. See: < <http://www.plantmethods.com/content/9/1/26> >

Social media now complements many parts of our lives. Facebook, Twitter, YouTube and many other social networking sites allow users to share and interact with online content and to connect with like-minded people. Its strengths – rapid dissemination and amplification of content and the ability to lead informal conversations –

make it a powerful tool to use in a professional context. This commentary explains the overall concept of social media and offers suggestions on usage and possible types of scientific content. It advises researchers on the potential benefits and how to take a strategic approach towards building a social media presence. It also presents examples of effective social media use within the plant science community. Common reasons for scientists to not engage with social media include the fear of appearing unprofessional, posting something wrong or being misunderstood, or a lack of confidence in their computer skills. With the rapid changes in academic publishing, dissemination and science communication, as well as the rise of 'altmetrics' to track online engagement with scientific content, digital literacy will become an essential skill in a scientist's tool kit.

Anne Osterrieder holds a Research and Science Communication Fellowship at Oxford Brookes University, which allows her to combine her research in plant cell biology with her passion for facilitating science communication and public engagement

Learned Societies – Past, Present and Future

This was the theme of a Presidential Address of the Botanical Society of America in 2013 published in the Plant Science Bulletin. It was given by Pam Diggle of the University of Colorado and her address has been recorded as < <http://www.youtube.com/watch?v=f-zJmTX9Zp0> >.

Many of the questions remain today and apply to all societies and are worthy of reflection.

5th Asian Conference for Plant Pathology

This conference will be held at the Empress Hotel in Chiang Mai, Thailand on 3-6 November 2014. It is being organised by Professor Somsiri Sangchote and the Thai Phytopathological Society. It coincides with the Loi Krathong Festival. Watch < www.isppweb.org > for details, the web-site for the conference not yet being available.

Chronica Horticulturae

The latest issue 53 (4) 2013 is now out. See: < www.ishs.org >. Included are reports on the 13th International Workshop on Fire Blight, the 6th International Symposium on Taxonomy of Cultivated Plants, the 8th International Symposium on In Vitro Culture and Horticultural Breeding, the 4th International Symposium on Tomato Diseases, the 8th International Peach Symposium, the 6th International Symposium on Rose Research and Cultivation and the 7th International Walnut Symposium.

Pakistan – Climate Change and Plant Diseases

The ISPP President Greg Johnson attended the 3rd International Conference of the Phytopathological Society of Pakistan held at Karachi University in January 2014.

See: < www.3rdicpps.org >. A major theme of the conference was "Climate Change and Plant Diseases".

Acknowledgements

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