PROMOTING WORLD-WIDE PLANT HEALTH AND FOOD SECURITY

INTERNATIONAL SOCIETY FOR PLANT PATHOLOGY

ISPP NEWSLETTER

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The International Society for Plant Pathology promotes the world-wide development of plant pathology and the dissemination of knowledge about plant diseases and plant health management

IN THIS ISSUE:

"PATHOGENS WHICH THREATEN FOOD SECURITY": A NEW SERIES TO BE PUBLISHED IN ISPP'S JOURNAL, FOOD SECURITY

SERGE SAVARY, EDITOR-IN-CHIEF, FOOD SECURITY

The International Year of Plant Health 2020 (IYPH2020) will see a number of activities co-ordinated or sponsored by the ISPP. For its part, *Food Security* will consider the impacts of plant pathogens on the various components of food security – food production, access to food, and the nutritional value of food.

The landscape of plant pathology is made up of "stars": potato late blight, rice blast, wheat stripe rust. And therefore, it consists also of neglected diseases, including many cereal and legume diseases, as well as diseases of other crops – one might think of rice brown spot, of wheat spot blotch, of the virus diseases of cassava, and many others. Each of these plant-disease systems have their own story to tell: of the progress of disease through landscapes of agrosystems; of the role of the social fabrics and the networks of human exchanges in spreading disease; of the disruption of whole system performances – of the loss of production, as well as of overall resilience; and also of the accumulation of mycotoxins in the diet of the most fragile part, and yet the future, of societies: mothers and young children. These systems can also tell us stories of diseases becoming plant-pathogen models for the plant sciences, of progress in better understanding the molecular genetics of host-plant interactions and the resistances of plants to pathogens. They also tell us stories about the persistent, continuous and hard work that it takes to quantify, monitor, and manage diseases in the field, all over the world.

Cassava brown streak disease foliage and root symptoms caused by cassava brown streak virus. Mkuranga, Tanzania. Photo: James P. Legg, IITA

Little is known, among the wider scientific community, of the critical role of seeds (stem cuttings) in spreading devastating cassava diseases very locally, and at great distances too; of the consequences of climate change and climate variability on stripe rust of wheat worldwide; of the permanent threat that late blight still constitutes for potato worldwide, in the temperate but also tropical world; and of the continuous exposure of children and parents to mycotoxins in the developing world, while the developed world fears them so much. Plant diseases matter, and *Food Security* is the right platform to convey both the science and the messages that go with it.

The Year of Plant Health will certainly bring about critical, over-arching questions: on the effects of climate change on plant health, on the disruption of value-chains and trade at various scales, and on the impacts of plant diseases on environmental sustainability. Looking at this diversity of plant-pathogen systems can provide new ideas on these questions, which ultimately impact food security in both the developed and developing world.

With the upcoming Year of Plant Health, the Editorial Board of *Food Security* has therefore decided to launch a new series of articles: "Pathogens which Threaten Food Security". With the assistance of the Food Security Commission of the ISPP Chaired by Prof. Lise Korsten, a series of plant-pathogen systems has been defined, and a set of experts, quite a few of them science leaders, has been commissioned to write articles for the series. I am very pleased to provide below a list of potential articles to hopefully appear in 2020 in *Food Security*.

Crop	Disease/pathogen	Tentative sub title
Cassava	Cassava mosaic and cassava brown streak viruses	The cassava mosaic and cassava brown streak viruses in Sub-Saharan Africa
Chickpea	Several	The viruses of annual legumes in the West Asia – North Africa Region
Maize	*Aspergillus* spp. and *Fusarium verticillioides*	*Aspergillus* spp. and *Fusarium verticillioides*, the mycotoxin-producing pathogen of maize in Sub-Saharan Africa
Mango	Several pathogens	The mango stem end rot pathogens
Plantain	Fusarium wilt	*Fusarium oxysporum* f. sp. *cubense*, the fusarium wilt of plantains
Potato	Late blight	*Phytophthora infestans*, the potato late blight pathogen
Rice	Bacterial blight	*Xanthomonas oryzae*, the pathogen of rice bacterial blight
Rice	Brown spot	*Cochliobolus miyabeanus*, the pathogen of rice brown spot of South Asia
Rice	Rice blast	*Magnaporthe grisea*, the rice blast pathogen
Wheat	Stripe rust	*Puccinia striiformis*, the wheat stripe rust pathogen
Wheat	Stem rust	*Puccinia graminis*, the wheat stem rust pathogen
Wheat	Spot blotch	*Cochliobolus sativus* and *Pyrenophora tritici-repentis*, the wheat spot blotch pathogens of South Asia

45TH ANNUAL CONFERENCE OF THE NIGERIAN SOCIETY FOR PLANT PROTECTION, 15-19 MARCH 2020, NIGERIA

The 45th Annual Conference of the Nigerian Society for Plant Protection will be held at the Faculty of Agriculture, University of Uyo, Akwa Ibom, Nigeria, during 15-19 March 2020. The theme of the meeting is "Strengthening the nexus between research, industry and policy in plant protection for increase agricultural production." Submission of abstracts for oral and poster presentations are now open under the sub themes: 1) Pest ecology, biosystematics and modelling in relation to climate change, 2) Pesticides, residues and resistance management, 3) Public-Private interface in plant protection, research skills development and extension, 4) Techniques and tools for on-farm diagnosis and management of pests, 5) Mandatory in-country evaluation and release of agrochemicals, and 6) Formation and standardisation of biopesticides. Abstract submission close on 2 March 2020.

Uyo is the most popular city in south Nigeria and the capital of Akwa Ibom state. It is an activity packed destination featuring beautiful culture, outdoor activities, fine museums, excellent hotel facilitates and a beautiful gold course. The University of Uyo is located in the heart of Uyo and is made up of five campuses with the main campus, where the conference will be held, along Nwaniba Road.

For more information and key dates, visit the conference website: nsppnigeria.org

LAUNCH OF INTERNATIONAL YEAR OF PLANT HEALTH 2020 WEBSITE

The new website of the International Year of Plant Health #IYPH2020 was launched on 29 July 2019. It contains suggestions of how you can take action and contains a selection of promotional material to download.

Check out the website and take action: www.ippc.int/en/iyph

INTERNATIONAL YEAR OF
PLANT HEALTH
2020

4TH INTERNATIONAL CONFERENCE ON GLOBAL FOOD SECURITY, 16-19 JUNE 2020, FRANCE

The 4th International Conference on Global Food Security to be held in Montpellier, France, during 16-19 June 2020 will address the topic of food security at all spatial levels from local to global, and from an interdisciplinary and systemic food systems perspective. It aims to better understand environmental, nutritional, agricultural, demographic, socio-economic, political, technological and institutional drivers, costs and outcomes of current and future food security. Interactions with contextual factors including climate change, urbanisation, greening the economy and data-driven technologies will be central. The conference will address the triple burden of malnutrition: hunger, micronutrient deficiencies and obesity. It will explore the state-of-the-art of interdisciplinary insight, addresses the trade-offs that occur – and synergies that can be sought –in transforming food systems. These are aimed at reconciling the competing environmental, economic or social objectives and outcomes towards achieving the Sustainable Development Goals at different levels across spatial and temporal scales.

Contributions which bridge themes or scales, foster interdisciplinarity and integration or address interactions between science and non-academic stakeholders (civil society, private sector and policy makers) are particularly welcome. Single discipline or specific studies are welcome in parallel sessions or as posters.

For more information and key dates, visit the conference website: www.globalfoodsecurityconference.com

8TH ASIAN CONFERENCE ON PLANT PATHOLOGY, 15-18 SEPTEMBER 2020, JAPAN

The 8TH Asian Conference on Plant Pathology 2020 (ACPP 2020) WILL be held in Tsukuba Science City, Japan, from 15-18 September 2020. ACPP has been a forum to foster collaboration among scientists around the world, especially Asia. It is anticipated that over 1,000 participants will attend the conference, providing a unique opportunity to promote scientific collaboration.

Tsukuba is a city located in Ibaraki Prefecture, northern part of Tokyo. It is known as the location of the Tsukuba Science City, a planned science park developed in the 1960s by the Japanese government. Tsukuba Science City represents one of the world's largest coordinated attempts to accelerate the rate of and improve the quality of scientific discovery.It is also well known that Tsukuba is a garden city surrounded by nature, with many locations known for their beautiful cherry trees, including Mt. Tsukuba. Visitors climb or hike up Mt. Tsukuba to enjoy the panoramic view. Thus making Tsukuba a leader in both science and education in Japan.

For more information and key dates, visit the conference website: www.globalfoodsecurityconference.com

Shinya Tsuda, Chairperson- Conference Organizing Committee of the ACPP 2020

YasuyukiKubo, President- The Phytopathological Society of Japan

GLOBAL DIMENSIONS OF PLANT VIRUS DISEASES

A review by Roger A.C. Jones and Rayapati A. Naidu titled "Global dimensions of plant virus diseases: Current status and future perspectives" was published in 2019 by *Annual Review of Virology* (vol. 6). The abstract is as follows:-

Viral diseases provide a major challenge to twenty-first century agriculture worldwide. Climate change and human population pressures are driving rapid alterations in agricultural practices and cropping systems that favor destructive viral disease outbreaks. Such outbreaks are strikingly apparent in subsistence agriculture in food-insecure regions. Agricultural globalization and international trade are spreading viruses and their vectors to new geographical regions with unexpected consequences for food production and natural ecosystems. Due to the varying epidemiological characteristics of diverent viral pathosystems, there is no one-size-fits-all approach toward mitigating negative viral disease impacts on diverse agroecological production systems. Advances in scientific understanding of virus pathosystems, rapid technological innovation, innovative communication strategies, and global scientific networks provide opportunities to build epidemiologic intelligence of virus threats to crop production and global food security. A paradigm shift toward deploying integrated, smart, and eco-friendly strategies is required to advance virus disease management in diverse agricultural cropping systems.

Read review.

NEMATODE PHEROMONES PROTECT MAJOR CROPS

A paper by Daniel F. Klessig *et al.* titled "Nematode ascaroside enhances resistance in a broad spectrum of plant–pathogen systems" was published in 2019 by *Journal of Phytopathology* (vol. 167, pp. 265-272). The abstract is as follows:-

Recognition of specific molecule signatures of microbes, including pathogens, induces innate immune responses in plants, as well as in animals. Analogously, a nematode pheromone, the ascaroside ascr#18, induces hallmark plant defences including activation of (a) mitogen-activated protein kinases, (b) salicylic acid- and jasmonic acid-mediated defence signalling pathways and (c) defence gene expression and provides protection to a broad spectrum of pathogens. Ascr#18 is a member of an evolutionarily conserved family of nematode signalling molecules and is the major ascaroside secreted by plant–parasitic nematodes. Here, we report the effects of ascr#18 on resistance in four of the major economically important crops: maize, rice, wheat and soybean to some of their associated pathogens. Treatment with low nanomolar to low micromolar concentrations of ascr#18 provided from partial to strong protection in seven of eight plant–pathogen systems tested with viruses, bacteria, fungi, oomycetes and nematodes. This research may have potential to improve agricultural sustainability by reducing use of potentially harmful agrochemicals and enhance food security worldwide.

Read paper.

CAN 'SUPERCHARGED' PLANTS SOLVE THE CLIMATE CRISIS?

RAVI AGRAWAL, FOREIGN POLICY, 20 JULY 2019

The fight against climate change may seem hopeless, but humanity has a simple and powerful ally in plain sight: plants. At least that's the belief of the botanist Joanne Chory and her team of scientists at the Salk Institute for Biological Studies in San Diego.

As part of her Harnessing Plants Initiative, Chory is focused on genetically modifying plants to absorb more carbon dioxide—and then hold on to it for longer—than their wild cousins through a larger and deeper network of carbon-storing roots, creating so-called Ideal Plants. Every year, humanity emits 37 gigatons of carbon dioxide; photosynthetic life can process and capture nearly half of that amount. Chory believes that coaxing a little more productivity out of plants could make a dramatic difference. And she has no shortage of backers: In April, Chory received a more than $35 million Audacious Project prize to drive her team's research.

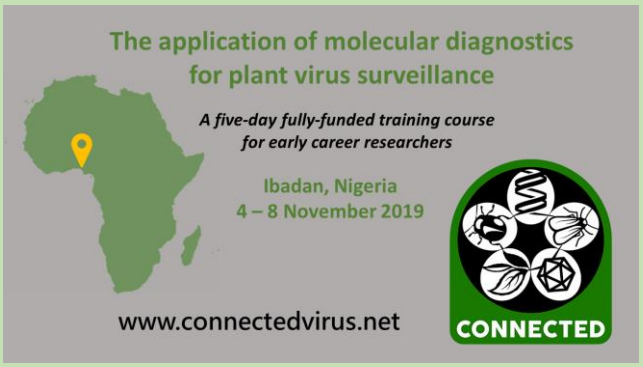
Any project on climate science is a race against time. That's particularly true in Chory's case: Now in her 60s, she has been battling Parkinson's disease for several years.

Read the interview by Ravi Agrawal.

EARLY CAREER RESEARCHER TRAINING OPPORTUNITY

RICHARD WYATT, CONNECTED, 19 JULY 2019

Applications have opened for a new training opportunity aimed at early career researchers. They can apply for full funding to attend a five-day introductory level vector and virus diagnostics course in Ibadan, Nigeria, in November 2019, which is being run by CONNECTED in association with The International Institute of Tropical Agriculture (IITA), Newcastle University, and The Natural Resources Institute, University of Greenwich, UK.



'The application of molecular diagnostics for plant virus surveillance' will run at IITA in Ibadan during 4-8 November 2019. The partnership arrangement will fully fund travel, accommodation, subsistence and all training costs for up to 20 successful applicants. All CONNECTED network members who are early career researchers are eligible to apply, with preference given to those based in countries in the OECD DAC list.

Applications are now open, closing at midnight on 18 August, using the application form which you can download here. To read the full application guidance notes please use this link.

To join the CONNECTED network, which is completely free, use this link: www.connectedvirus.net/join/

GLOBAL UNITY TO AVERT FUTURE HUNGER CRISES

MATT HAYES, CORNELL CHRONICLE, 23 JULY 2019

A global alliance of countries and research institutions, including Cornell University, committed to sharing plant genetic material, has secured food access for billions of people, but a patchwork of legal restrictions threatens humanity's ability to feed a growing global population. That jeopardises decades of hard-won food security gains, according to Ronnie Coffman, international professor of plant breeding and director of International Programs in the College of Agriculture and Life Sciences.

"Global food security depends on the free movement and open sharing of plant genetic resources," Coffman said. "Without a strong commitment to scientific exchange in support of global plant breeding efforts, we risk our ability to respond to current food crises and to protect future generations." Effective plant breeding programs depend on the exchange of seeds and pathogens, as well as plant genetic material (known as germplasm) between and among countries. Coordination among plant pathologists and breeders forms a symbiotic partnership as plant and disease specimens collected in countries around the world are sent to research institutions to be analysed and tested. Those findings in turn inform the breeding of improved, location-specific crop varieties that are resistant to disease and adapted to increasingly unpredictable environmental conditions.

"The Convention on Biological Diversity gives countries sovereign rights over their own biological resources. The multilateral treaty, signed in 1993, allows each state to draw up its own regulations. An update known as the Nagoya Protocol, ratified in 2014, has subjected plant breeders and the seed industry to increased legal wrangling. Some countries are particularly draconian in their enforcement, and without a universal legal framework, the uneven standards threaten to undermine scientific exchange," Coffman said.

Coffman called for an overhaul of international laws that regulate the sharing of plant genetic resources, and for plant scientists to advocate to protect the unimpeded exchange of material and knowledge. "It takes an international community of scientists and genetic resources to fight pathogens like stem rust that do not respect international boundaries," he said.

The CGIAR international research system – and especially the International Maize and Wheat Improvement Center (CIMMYT) and the International Center for Agricultural Research in the Dry Areas – are the conservators of enormous gene banks of germplasm. Those resources have been essential in improving many crops to fight biotic and abiotic stresses.

Ronnie Coffman, right, plant breeder and vice chair of the Borlaug Global Rust Initiative based at Cornell, and Maricelis Acevedo, plant pathologist and associate director for science for the Delivering Genetic Gain in Wheat project, examine wheat varieties in Ethiopia for stem and yellow rust.

As one part of its efforts to reduce the world's vulnerability to wheat diseases, the Cornell-led Delivering Genetic Gain in Wheat project – funded by the Bill & Melinda Gates Foundation and the United Kingdom's Department for International Development – collects samples of plant pathogens such as stem rust and yellow rust from 40 countries and analyses them in biosafety testing labs in Minnesota, Denmark, Canada, Turkey, Ethiopia, Kenya and India.

BIOSECURITY CHAMPIONS' COMMUNICATION BOOTCAMP

CRAWFORD FUND NEWS, 14 JUNE 2019

The Crawford Fund delivered another Communication Master Class from 26-31 May in Brisbane, Australia, with 21 biosecurity professionals from nine Pacific countries. The participants are part of the Pacific Plant Biosecurity Partnership supported by Australian Centre for International Agricultural Research (ACIAR), a three year project being delivered by Kalang Consultancy Services.

The Fund partnered with Econnect Communication to present the training, ably managed by Jenni Metcalfe and Toss Gascoigne, arguably Australia's most experienced science communication trainers.

"A significant element to this 'boot camp on communicating' has the participants develop a communication strategy and action plan so that they can hit the ground running when they return to their home countries," said Cathy Reade, the Fund's Director of Outreach.

Ms Reade developed the Master Class in 2011, having identified an obvious need for middle managers in international agricultural research centers and national agricultural research institutes. Since the first class in 2011, seven programs have been run in Thailand, India, Ethiopia, Kenya, Fiji, and Australia.

"We ran a Master Class for Pacific agricultural researchers in 2015 and one for African biosecurity specialists in 2016, so it was great to bring our experience from both these programs for our Communication Master Class for Pacific Biosecurity Champions," said Ms Reade.

The stakeholder panel included Dr Denis Persley, Senior Principal Plant Pathologist with the Department of Agriculture and Fisheries in Queensland, representing a partner organisation that the Pacific specialists may want to contact for assistance; Dr Bosibori Bett from ACIAR representing a funding agency that they may need to report to or approach; Dr Bill Magee, who has been a project leader and consultant for both the Africa and Pacific biosecurity champions, who represented a bureaucrat to whom the participants may need to advise of a serious outbreak; and Cathy from the Fund to represent an NGO with whom the participants may want to partner.

"THE ABILITY TO CLEARLY AND STRATEGICALLY COMMUNICATE THE IMPORTANCE OF BIOSECURITY AND ITS IMPACTS ON MARKET ACCESS AND PLANT HEALTH IN SAMOA TO POLITICAL LEADERS, POLICY MAKERS, REGULATORY BODIES, RESEARCHERS, FARMERS AND THE GENERAL PUBLIC WILL BE A CHALLENGE. IT IS A CHALLENGE WHICH I BELIEVE IS WORTH ATTEMPTING TO OVERCOME."

LIVING DEFENSES COULD PROTECT POTATOES FROM VIRUS AND NEMATODE THREATS

SETH TRUSCOTT, WASHINGTON STATE UNIVERSITY INSIDER, 22 JULY 2019

Helping safeguard the Northwest's valuable potato crop from emerging threats— root-knot nematodes and a fungus-like pathogen that spreads a devastating virus—two scientists at Washington State University (WSU) are launching new research into better plant defenses based on genes and vaccines. Washington state grows the most U.S. potatoes per acre, producing nearly $700 million per year. But the Northwest's fourth most valuable crop is threatened by powdery scab, a disease caused by a fungus-like pathogen that also carries a harmful virus. Potatoes are also under attack from Columbia root-knot nematodes found in Washington soils. Funded by the U.S. Department of Agriculture's Agriculture and Food Research Initiative (AFRI) and the Northwest Potato Research Consortium, plant pathologists Kiwamu Tanaka and Cynthia Gleason are exploring new molecular and living defenses against these pests.

Fighting powdery scab, Tanaka leads a three-year project, and is assisted by Gleason in developing a biodegradable vaccine that can be delivered to the rhizosphere. Building on Gleason's research into immunostimulants—special peptide compounds that spur a strong defense response in host plants—the two scientists will focus on a rod-shaped bacterium, or *Bacillus*, that colonises the rhizosphere and secretes a compound that deters powdery scab. "We can use bacteria as a courier and defender to vaccinate the plant against both the protist and the virus," Tanaka said. "The bacteria occupies the space and changes the microbiome, so the pathogen can't take hold. At the same time, the plant is protected by immunisation." Once perfected, this living defense could protect yields and keep fields in production,

WSU plant pathologists Kiwamu Tanaka and Cynthia Gleason are exploring novel defenses against pest and diseases that harm valuable potato crops.

while helping farmers cut down on costly, often ineffective fungicides.

Targeting another pest, Gleason is studying the molecular mechanisms of the root-knot nematode, a microscopic, parasitic worm that attacks plant roots and tubers. Nematodes secrete proteins into plant cells that trick their hosts into providing them with a safe feeding site and plentiful nutrients, starving the plant. Above ground, infected plants sport wilted, discolored leaves. When farmers dig for potatoes, they discover lumpy, misshapen tubers. Once she identifies how plants respond to nematode's chemical secretions, she'll have a starting point for new, gene-based defenses, such as new potato varieties that can resist the parasite. "I'm trying to unravel how it works and find a way to block it," Gleason said. "Stop the molecular mechanism, and the root-knot nematode can't create its feeding site. If it can't feed, it starves, and the plant thrives."

CURRENT VACANCIES

Assistant Professor of Teaching in Disease Biology, University of California, Davis, USA

The Department of Plant Pathology invites applications for a full-time Assistant Professor of Teaching in the field of disease biology, with a focus on epidemiology and disease ecology. Expertise in plant pathology or a related discipline is required. The successful applicant will play a key role in the Global Disease Biology major (http://gdb.ucdavis.edu/) through instruction in the core classes GDB 101, Epidemiology, and GDB/VME 158, Disease Ecology, as well as the elective course PLP 120, Introduction to Plant Pathology. The position will remain open until filled, but application materials should be received by 30 September 2019 to be assured full consideration. Further details about the position and how to apply are available in the PDF.

Assistant Professor Plant Nematology, Clemson University, USA

The Department of Plant and Environmental Sciences in the College of Agriculture, Forestry and Life Sciences at Clemson University is seeking to fill a 9-month, tenure-track position at the Assistant Professor level (70% research and 30% teaching) to work on nematode diseases of plants. The successful candidate is expected to develop a vigorous, innovative, and extramurally-supported research program in fundamental and applied Plant Nematology, focused on nematodes affecting economically important plants in South Carolina and the southeastern United States. Review of applications will begin on or around 21 June 2019 and will remain open until filled. Further details about the position and how to apply are available in the PDF.

Assistant/Associate Professor (Plant Nematologist), Louisiana State University, USA

Department of Plant Pathology and Crop Physiology at the Louisiana State University, Baton Rouge, LA seeks to fill a position of Assistant/Associate Professor (Plant Nematologist). This position is a tenure-track 12-month appointment with 60% research, 30% extension (LSU AgCenter) and 10% teaching responsibilities (LSU College of Agriculture). The responsibilities for this position will be to address knowledge gaps in the epidemiology of plant-parasitic nematodes in agricultural systems, implementing contemporary diagnostic technologies and developing integrated management strategies for established and emerging plant parasitic nematodes in Louisiana while supervising the Nematode Advisory Service Laboratory. Application screening will begin 15 August 2019 and will remain open until filled. Further details about the position and how to apply are available at this link: https://lsu.wd1.myworkdayjobs.com/en-US/LSU/job/LSU---AG-Center/Assistant-Associate-Professor--Plant-Nematologist-_R00034627

Assistant Professor of Plant Pathology, Washington State University, USA

The Department of Plant Pathology at the Washington State University seeks to fill a 12-month, permanent, full time tenure-track position at the rank of Assistant Professor of Plant Pathology. The position has research and extension responsibilities in potato pathology and teaching responsibilities at the undergraduate and graduate levels. Application screening will begin on 30 April 2019 and remain open until filled. Further details about the position and how to apply are available in the PDF.

ACKNOWLEDGEMENTS

Thanks to Greg Johnson, Lise Korsten, Serge Savary, and Andrea Masino for contributions.

COMING EVENTS

American Phytopathological Society Annual Meeting – Plant Health 2019
3 August - 7 August, 2019
Cleveland, Ohio, USA
Website:
www.apsnet.org/meetings/2019/Pages/default.aspx

6th International Conference on Bacterial Blight and Bacterial Leaf Streak of Rice
18 August - 22 August, 2019
Cantho City, Vietnam
Website: icbb6.org/

BSPP Annual Meeting: Arms Race – evolution of plant pathogens and their hosts
2 September - 3 September, 2019
Bristol, UK
Website: www.bspp.org.uk/conferences/arms-race-evolution-of-plant-pathogens-and-their-hosts/

International Workshop on the Fruit Microbiome: A New Frontier
3 September - 6 September, 2019
National Conservation Training Center, Shepherdstown, West Virginia, USA
Website: www.bard-isus.com/fruitmicrobiome.html

Working Party Meeting of IUFRO WP 7.03.10 Methodology of forest insect and disease survey in Central Europe - "Recent Changes in Forest Insects and Pathogens Significance"
16 September - 20 September, 2019
Suceava, Romania
Website: www.silvic.usv.ro/iufroromania2019/

22nd Biennial Conference of the Australasian Plant Pathology Society
25 November - 28 November, 2019
Melbourne, Australia
Website: www.apps2019.org

International Symposium on Microbe-Assisted Crop Production – Opportunities, Challenges and Needs
2 December - 5 December, 2019
Vienna, Austria
Website: microp e.org/

Indian Phytopathological Society 7th International Conference on "Phytopathology in Achieving UN Sustainable Development Goals"
16 January - 20 January, 2020
New Delhi, India
Website: ipsdis.org

45th Annual Conference of the Nigerian Society for Plant Protection
15 March - 19 March, 2020
University of Uyo, Main campus, Akwa Ibom, Nigeria
Website: nsppnigeria.org

16th Congress of the Mediterranean Phytopathological Union
23 March - 27 March, 2020
Limassol, Cyprus
Website: cyprusconferences.org/mpu2020

14th International Conference on Plant Pathogenic Bacteria
7 June - 12 June, 2020
Assisi, Italy
Website: www.icppb2020.com

Joint 18th International *Botrytis* Symposium & 17th International *Sclerotinia* Workshop
8 June - 12 June, 2020
Avignon, France
Website: colloque.inra.fr/botrytis-sclerotinia-2020

4th International Conference on Global Food Security
16 June - 19 June, 2020
Montpellier, France
Website: www.globalfoodsecurityconference.com

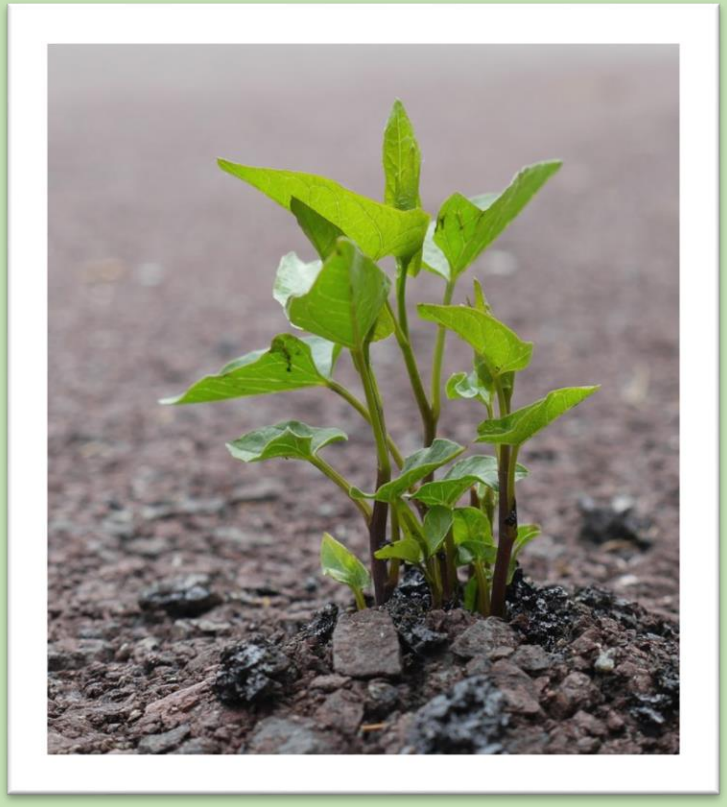
Asian Conference on Plant Pathology: Importance and Impact of Global Plant Health
15 September - 18 September, 2020
Tsukuba International Congress Center, Ibaraki, Japan
Website: iapps2010.me/2019/02/05/asian-conference-on-plant-pathology-2020/

13th Arab Congress of Plant Protection
1 November - 6 November, 2020
Le Royal Hotel, Hammamat, Tunisia
Contact: Dr. Asma Jajar, Chairperson of Organising Committee info@acpp-aspp.com
Website: acpp-aspp.com

IX International Postharvest Symposium
9 November - 13 November, 2020
Rotorua, New Zealand
Website: scienceevents.co.nz/postharvest2020

12th International Congress of Plant Pathology (ICPP2023)
20 August - 25 August, 2023
Lyon, France
Website: www.icpp2023.org

INTERNATIONAL SOCIETY FOR PLANT PATHOLOGY (ISPP)



WWW.ISPPWEB.ORG

The ISPP List is an e-mail list server which broadcasts messages and announcements to its subscribers. Its goal is to facilitate communication among members of the International Society for Plant Pathology and its Associated Societies. Advertised vacancies in plant pathology and ISPP Newsletter alerts are also sent to members of the ISPP List.

In accordance with the guidelines and recommendations established by the new EU General Data Protection Regulation 679/2016 (GDPR), the International Society for Plant Pathology has created a Privacy Information Notice containing all the information you need to know about how we collect, use and protect your personal data.

This policy explains when and why we collect personal information about our users, how we use it, the conditions under which we may disclose it to third parties, how we keep it safe and secure and your rights and choices in relation to your personal information.

Should you need further information please contact business.manager@issppweb.org

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