ISPP INTERNATIONAL SOCIETY FOR PLANT PATHOLOGY

PROMOTING WORLD-WIDE PLANT HEALTH AND FOOD SECURITY

INTERNATIONAL SOCIETY FOR PLANT PATHOLOGY

ISPP NEWSLETTER

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IN THIS ISSUE:

ISPP NEWSLETTER: A DECADE OF PROGRESS AND COLLABORATION

DANIEL HUBERLI, ISPP NEWSLETTER EDITOR, 1 DECEMBER 2024

As December marks my 10th anniversary as the ISPP Newsletter Editor, I want to take this opportunity to reflect on the incredible milestones and key moments that have shaped our journey together. Over the past decade, this newsletter has become a vital communication platform, promoting knowledge sharing and fostering collaboration across the global plant pathology community. Below, I highlight some of the significant stories and themes that have defined our shared achievements.

1. Fostering Global Collaboration

One of the core missions of our newsletter has been to emphasise the importance of international cooperation in addressing plant diseases. A standout example was the CONNECTED virus and vector diagnostics training, which united delegates from ten African nations. This initiative focused on improving virus and vector diagnostics to enhance food security and agricultural productivity across Sub-Saharan Africa.

A key achievement in fostering global collaboration came in 2016, when the ISPP, under the leadership of Serge Savary, launched a **survey on crop losses**. This survey provided a critical first step toward understanding the global impact of crop diseases and pests. It culminated in a comprehensive overview of results in 2017. Building on this work, the **Global Plant Health Assessment** was introduced, and regular updates continue to be shared through our newsletter. These initiatives reflect the ISPP's dedication to advancing plant health on a global scale.

Moreover, the **code of ethics for plant pathology health emergencies** introduced in the December 2018 issue, has become increasingly relevant as plant disease outbreaks grow more frequent. This code encourages ethical conduct, supports communication, and advocates for decisions based on the best available scientific evidence.

2. Showcasing Groundbreaking Research

Our commitment to highlighting cutting-edge research has remained strong. Over the years, we've featured cutting-edge developments such as the application of **CRISPR** technology to create disease-resistant crops. In particular, researchers from the University of California shared their findings on gene editing in rice to enhance resistance against rice blast, illustrating how innovative techniques can revolutionise crop protection and food security.

We've also covered significant research on **myrtle rust in Australian forests**, an issue that has drawn global attention. This ongoing work, led by a consortium of Australian scientists, has provided valuable insights for better policy and management strategies. These articles highlight our role in disseminating crucial research that drives the advancement of plant pathology worldwide.

3. Engaging with the Community

One of our primary goals has been to engage and educate the broader community about plant pathology. We have regularly featured outreach programs and workshops designed to connect scientists with local farmers and agricultural stakeholders. For instance, the **"Train the Trainer workshop"** on integrated disease management for vegetables was hosted Kylie Ireland and Prof. Lester Burgess in Lao PDR in 2015. This workshop focused on equipping educators with practical tools necessary to teach sustainable practices in plant health management with trainees passing knowledge to new group of farmers.

4. Annual Conferences and Knowledge Exchange

Our annual International Congress of Plath Pathology (ICPP) and associated workshops and meetings, and other plant pathology conferences have provided a vibrant forum for knowledge exchange, and the newsletter has documented these gatherings extensively. The **2023 ISPP Congress** in Lyon France was a notable event, featuring over 1,000 participants from around the globe. Keynote addresses, such as Prof. Jan Leach's talk on "One Health for All Plants, Crops, and Trees," "One Health for all plants, crops and trees" set the stage for stimulating discussions on the interconnectedness of plant health and human well-being.

The newsletter's coverage of these events not only celebrates the scientific advancements presented but also captures the spirit of collaboration and camaraderie among members, reinforcing the strength of our network.

5. Highlighting Member Achievements

A central theme of the newsletter has been celebrating the outstanding accomplishments of our members. Over the years, we have featured numerous **Member Spotlights**, showcasing their groundbreaking research, leadership roles, and contributions to policy. In 2022, we introduced the "ISPP Resilience Bursary for Plant Pathologist's", which supports plant pathologists in emergency or refugee situations. This bursary aims to ensure that research continues even in the face of adversity, highlighting the personal and professional impact of conflicts.

In 2023, Prof. Maria Lodovica Gullino was recognised with the Francenia Fisher Award of the ISPP for her exceptional contributions to research, policy development, and sustainable agriculture. Additionally, we shared stories of resilience during the COVID-19 pandemic, featuring plant pathologists who continued their research, teaching, and outreach despite unprecedented challenges.

These profiles not only recognise individual achievements but also inspire others to pursue excellence and innovation in the field of plant pathology.

6. Addressing Emerging Threats

As plant diseases continue to evolve, our newsletter has kept members informed about emerging threats. Notable updates have included timely coverage of ***Xylella fastidiosa*** in Europe, **Panama disease of bananas**, and **coffee rust**. By providing early warnings and disseminating key information, we've helped our community take proactive measures to mitigate these threats in their respective regions.

Looking Ahead

As we embark on the next decade, ISPP's commitment to fostering collaboration, advancing research, and engaging with the community remains strong. As editor, I will continue to provide a platform that amplifies the voices and achievements of our members, ensuring that plant pathology remains a vibrant and essential field.

Thank you for your continued support and contributions to the ISPP newsletter. I would also like to extend a heartfelt thank you to everyone who has helped me grow and succeed in this role, particularly Greg Johnson, Peter Williamson, and Andrea Masino. Together, we will continue to build a dynamic future for plant health worldwide.

Wishing you and your loved ones a joyful and safe Festive Season, filled with peace and happiness. May the year ahead bring you health, success, and fulfillment as we welcome 2025!

KOREAN SOCIETY OF PLANT PATHOLOGY (KSPP) CONFERENCE 2024 – BUSAN, REPUBLIC OF KOREA

KEE HOON SOHN, 2024 KSPP CONFERENCE ORGANISER, CHAIR OF ACADEMIC COMMITTEE

The Korean Society of Plant Pathology (KSPP), under the leadership of Prof. Seon Woo Lee (KSPP President, Dong-A University), hosted its annual international conference from 22–25 October 2024, at Hotel Nongshim, Busan, Republic of Korea. The conference, organised by the KSPP Academic Committee chaired by Prof. Kee Hoon Sohn (Seoul National University), brought together 582 participants, featuring 38 oral and 330 poster presentations under the theme "Fundamental and Translational Plant Pathology for a Greener Tomorrow." This theme underscored the critical integration of basic and applied research in plant pathology to address future challenges.

2024 KSPP conference reinforced the importance of international collaboration and knowledge exchange to advance plant pathology research, inspiring participants to address global agricultural challenges with innovative solutions.

Prof. Seon Woo Lee (Dong-A University), KSPP President, delivering the welcome address (Photo: KSPP).

Prof. Peter Solomon (Australian National University, Australia) presenting his plenary talk, "Exploiting the Dual Functionality of the Tox3 Effector to Dissect Plant Immunity" (Photo: KSPP).

Prof. Hangil Kim (Kangwon National University, Korea) sharing his research on "A Parasitic RNA of Cucumber Mosaic Virus: Short Non-Coding RNA That Promotes Wing Formation in Its Insect Vector" during the Molecular Plant-Microbe Interactions session (Photo: KSPP).

Prof. Armin Djamei (University of Bonn, Germany) presenting "Insights from a Gall-Inducing Fungus" in the Recent Advances in Fungal Pathogenesis Research session (Photo: KSPP).

Postgraduate student Soobin Shin (Seoul National University, Korea) discussing her work on "Understanding Molecular Mechanisms Underlying the Plant Penetration Process in Plant Pathogenic Fungi" during the Student & Postdoc Research Excellence session (Photo: KSPP).

A group photo featuring both international and domestic participants, showcasing the collaborative and global nature of the event. From left to right: (Back row) Eunyoung Chae (National University of Singapore), Wan Asrul (Seoul National University), Yasuhiro Kadota (RIKEN, Japan), Valerie Geffroy (University of Paris-Saclay, France), Jieun Kim (Seoul National University), Ye Jin Ahn (Seoul National University), Sojeong Ahn (Seoul National University), Peter Solomon (Australian National University), Armin Djamei (University of Bonn), Kee Hoon Sohn (Seoul National University), Junhyeong Kim (Seoul National University), (Front row) Simon Williams (Australian National University), Naoyoshi Kumakura (RIKEN, Japan) (Photo: KSPP).

GIFT IN WILL ENCOURAGES LIFETIME LOVE OF PLANTS

DEVELOPMENT & ALUMNI RELATIONS, UNIVERSITY OF ABERDEEN, 29 OCTOBER 2024

A transformational gift in the will of Anthony Johnston in 2019 enabled the University to establish the Anthony & Margaret Johnston Centre for Doctoral Training in Plant Sciences which provides fully funded PhD studentships in this globally important field. Anthony and his wife Margaret met while at Aberdeen, both graduating in 1943. They maintained a lifelong relationship with the University through the Development & Alumni Relations team, funding scholarships for many years.

Anthony was a passionate mycologist and botanist and had an eminent international career in plant pathology, plant disease and plant protection, working for both the United Nations and as Director of the Commonwealth Mycology Institute. The couple had informed of their intention to leave a gift in their will to the University and when Anthony died in 2019 aged 98, following Margaret's death in in 2005, their generosity enabled the establishment of a long-term PhD research and training programme for some of the brightest student minds in Plant Sciences within the Centre.

Vivek Kumar Awon is one such student, with Anthony and Margaret providing him with opportunities he could only have dreamt of when he started growing his own plants as a little boy.

Vivek was born and raised in Kolkata, India and, from a young age, was fascinated by plants. When growing his own, he noticed that some thrived while others didn't and was already curious about why some failed and how he could change the outcome.

At secondary school Vivek had the opportunity to study Botany. This led him to apply to the University of Calcutta, India where he completed his Bachelor and Masters in Botany. During his Masters, he specialised in fungi to investigate their interaction with plants and was mentored by two professors who nurtured his talent and advised him that his curious mind should be used for research. Later he secured funding to continue his research.

Covid-19 then impacted on his next steps, preventing him from moving abroad. However, he was determined to continue with his own research and, once travel started to open up again, he found out that the University of Aberdeen's Anthony & Margaret Johnston Centre for Doctoral Training in Plant Sciences provided funded PhD research opportunities in his area of expertise and applied and accepted a place. Vivek clearly states that, without this funding, his PhD research would have been impossible.

Vivek went on to say "Funding for research is critical. Someone can be extremely talented, with experience and knowledge, but without funding for their research, it's not possible to progress. Philanthropic support, such as that gifted generously by Anthony and Margaret Johnston, can enable research with the potential for real impact and allows more flexibility without restrictive conditions being attached and without target-based outcomes that must be achieved. The Johnstons' generosity has allowed my research to continue without constraints which is truly amazing and has provided me with the opportunity to follow my passion and pave the way for my future career.

"I've had access to essential resources, databases, and tools that have been indispensable to my research and have been able to attend conferences and workshops where I've had the chance to collaborate with fellow researchers and present my findings. On a personal note, the financial support has also significantly reduced the weight of financial stress, allowing me to focus wholeheartedly on my studies without constantly worrying about managing my finances.

"My PhD programme involves collaboration with MycoNourish Ltd based in Dundee, which provides the mycorrhizal fungi for my experiments. My research involves finding their influence on plants by enhancing the absorption of phosphates by selecting microbial community in soil. The company already provides mycorrhizal fungi to the farming community and my research could have further positive impact on methods going forward and contribute to sustainable farming both locally and globally.

"To me, this research and funding represents a quest for knowledge and a desire to contribute to the betterment of our communities and the sustainable future of agriculture. This year has been an enlightening and challenging journey. As with any scholarly endeavour, I've faced my fair share of challenges, but this has strengthened my resolve and broadened my perspective. I have developed many skills and have successfully passed my nine-month viva, which is crucial for proceeding into the second year of my PhD, and I am extremely grateful."

A NEW METHOD TO STUDY PLANT DEFENSE AGAINST VIRUSES

ASHLEY VARGO, AGRILIFE TODAY, TEXAS A&M, 24 OCTOBER 2024

A group of plant pathologists within Texas A&M AgriLife Research have created a new, surprisingly simple approach to studying the complex interactions between plants and viruses. They hope the breakthrough will make improving plant resilience quicker and easier, as well as shed light on the evolutionary arms race between plants and their viruses.

Viral infections make up almost half of the known plant pathogens and cost producers about $30 billion globally each year. For decades, scientists have explored the ways plants defend themselves against viruses and how to enhance the plant's defense system.

To clarify key components in this system, Texas A&M AgriLife researchers developed an innovative approach that uses a modified plant virus to simulate an infection and simultaneously act as a sensor for the plant's resistance response.

Herman Scholthof, Ph.D., professor emeritus of the Texas A&M College of Agriculture and Life Sciences Department of Plant Pathology and Microbiology, led the study published in *PNAS Nexus* showcasing their novel approach — the final study in his career as a plant virology researcher.

THE THREE-PART APPROACH TO IDENTIFYING CRUCIAL GENES IN PLANT DEFENSE

The researchers took a three-step approach in their new technique: infect, knock out, detect. First, they simulated an infection in plants using a modified virus that expresses a green fluorescent protein. The fluorescent protein is important because it provides a way for the scientists to easily see if the virus was able to replicate unchecked.

Next, specific parts of the plant's RNA-silencing pathway, its defense system against viral infection, were targeted and inactivated by gene-editing materials delivered by the same virus. Finally, the researchers checked for a buildup of the virus in the plant, which informed the team whether the targeted, inactivated genes were critical in preventing the virus's replication or not.

By observing where and how much green fluorescence was produced — a visual cue easy for scientists to measure — the researchers could tell whether the plant's defense mechanism was working or not.

If the plant's defense was active and responding to the viral infection, there would be little viral accumulation or green fluorescence. But if the plant's defense is not active because one or more of the crucial genes needed to stop a virus was targeted and silenced, the plant leaf lights up fluorescent green as the virus replicates.

Using this approach, Scholthof said the team was able to target several key genes in the RNA-silencing pathway and identify those essential for preventing viral replication. They were also able to confirm their previous findings that some commonly overlooked genes are crucial in the plant's viral defense.

Scholthof said he considers their study to be a proof of concept, showcasing a new method to quickly screen plant genes involved in antiviral defense. By delivering the gene-editing system directly into the plant cells using a viral vector, the process avoids time-consuming aspects of other methods.

"This represents a significant step forward in unraveling the complexities of plant-virus interactions and may eventually support more resilient agriculture," he said.

THE FINAL CHAPTER IN A RESEARCH CAREER

Scholthof has served as a professor and researcher at Texas A&M AgriLife for almost 30 years. He said this last research study was the perfect way to close the book on his career, as it brought together many of the focus areas he's returned to over the years, such as RNA silencing and viral gene vectors.

A significant amount of the research was done by April DeMell, first author of the study and previous graduate student in Scholthof's lab.

"I've been surrounded by very talented people — technicians, undergraduate and graduate students, postdoctoral researchers, and visiting scientists — who were responsible for carrying out much of the work in the lab," he said. "Training people who then move on to become successful is one of the most rewarding aspects of this profession."

Scholthof and his wife, Karen-Beth Scholthof, professor emerita of the plant pathology department, both retired in July and recently relocated to Colorado. But neither have given up on educating the world about plant pathology.

Instead, Scholthof is starting a new chapter — both literally and figuratively — in the form of a book aiming to shed light on the fascinating world of virology to draw the next generation into its wonders and applications.

"After teaching plant virology for over 30 years, it's more than just the subject matter that you teach," he said. "You find examples, analogies, explanations that other people don't. So, who knows? Maybe other people will find it interesting too. I'm looking forward to sharing what we've learned from viruses and seeing what's ahead for the field I've dedicated my career to."

MICROORGANISMS CAN TRAVEL LONG DISTANCES IN THE TROPOSPHERE

SCIENCE DAILY, 11 SEPTEMBER 2024

Analysis of air samples taken at altitudes of up to 3,000 metres above Japan has revealed the presence of a vast range of viable bacteria and fungi transported by air masses originating more than 2,000 kilometres away, in regions enriched with fertilisers and pesticides. The study, published in *Proceedings of the National Academy of Sciences (PNAS)*, reveals a new way in which human, animal and plant pathogens may travel to distant geographical regions. This research has been led by the Barcelona Institute for Global Health (ISGlobal), a centre supported by "la Caixa" Foundation, in collaboration with the Daniel Bravo Andreu Private Foundation (FPDBA).

Pathogens can be airborne, but little is known about the diversity of microbes that can survive at very high altitudes, where the conditions are harsh. "We know that above a certain point in the troposphere (called the planetary boundary layer), certain materials can be transported over long distances because the air in that region is isolated from the surface and there is less friction. But we did not suspect that viable microorganisms could be there also," says Xavier Rodó, ICREA researcher at ISGlobal.

"Our study is unique in that we performed 10 tropospheric flights to examine microbial diversity at high altitudes, while most studies have been performed only a few metres above the ground or the ocean," he adds.

AIRBORNE MICROBES HIGH ABOVE JAPAN

Using a Cessna aircraft, Rodó and an international team of colleagues conducted ten air surveys between 1,000 and 3,000 metres above Japan, starting from Chofu airport near Tokyo. All flights were planned to follow wind currents coming from mainland Asia in what are known as tropospheric bridges, which connect air from distant regions of the world; in this case, air that uplifts in mainland China and then descends over Tokyo due to typical winter weather conditions. For comparison, samples were also collected on the ground at Chofu. A total of 22 aerosol filter samples, collected during two periods (February and April, 2014), were analysed for their chemical and biological composition.

DNA sequencing allowed the research team to identify over 266 fungal and 305 bacterial genera associated with the aerosols, some of which are potentially pathogenic for humans, other animals or plants. For instance, bacterial species such as *Escherichia coli*, *Serratia marcescens*, *Clostridium difficile*, *Clostridium botulinum*, *Haemophillus parainfluenzae*, *Acinetobacter baumannii* and several *Staphylococcus* species were identified, as well as fungal species from genera such as *Candida*, *Cladosporium* and *Malassezia*, capable of causing disease in susceptible and immunocompromised individuals.

By culturing some of the samples, the researchers showed that bacteria collected from the air remained viable, and that some were resistant to commonly used antibiotics. "Surprisingly, the *Micrococcus luteus* strain isolated was resistant to multiple drugs, including carbapenems, glycopeptides, ciprofloxacin, and trimethoprim-sulfamethoxazole. Our findings suggest that antimicrobial resistance could spread over long distances via this previously unrecognised route," says Sofya Podzniakova, co-first author of the study.

TRAVELLING THOUSANDS OF KILOMETRES

The association of these aerosols with certain elements such as zinc sulfate and potassium, commonly used in fertilizers and pesticides, suggests an agricultural origin, consistent with intensively farmed croplands in northeast China.

Finally, during the days sampled, flight and ground samples were very similar in terms of microbial diversity, which can be explained by air descending from high altitudes to the ground. The particle transport models, simulated by Roger Curcoll -currently a researcher at the Universitat Politècnica de Catalunya -- BarcelonaTech (UPC)- have corroborated both the possible transport of these particles from northeast China and the decline of tropospheric air masses to land in Japan.

"Our findings uncover a rich and unprecedented diversity of microbes that are dispersed by wind currents thousands of kilometres away from their sources by intense tunnels of wind that form high in the troposphere," says Rodó. "They represent a paradigm shift in our understanding of how human health can be affected by pathogens thriving in the environment, particularly in the air."

While the study does not prove a causal link between the presence of known human pathogens in aerosols and health effects, it does emphasise the need to further explore the spread of different microbial pathogens over long distances.

Multiple Phytophthora species associated with declining wild olive trees in Sardinia, Italy

A paper by Antonio Deidda *et al.* titled "Multiple *Phytophthora* species associated with declining wild olive trees in Sardinia, Italy" was published on 15 November 2024 by *Plant Pathology Nexus* (early view). The abstract is as follows:-

Wild olive represents one of the most iconic woody plants in the Mediterranean Basin. This slow-growing evergreen tree is characteristic of sclerophyll vegetation, extremely tolerant to drought, salinity and diseases, thus is commonly used as rootstock for grafting cultivated olive varieties. Since 2022, extensive dieback and mortality of wild olive trees have been observed in Sardinia, Italy. Affected plants showed leaf chlorosis, wilting, defoliation, shoot blight and epicormic shoots, often associated with root rot and necroses on the feeder roots, initially associated with *Phytophthora bilorbang* and *P. pseudocryptogea*. A 2-year study was thereafter conducted to clarify the aetiology of this unusual disease. Using a baiting technique, 10 *Phytophthora* taxa from three phylogenetic clades (2, 6, 8) were isolated from 53 of 87 rhizosphere soil samples collected, including *P. asparagi*, *P. bilorbang*, *P. crassamura*, *P. inundata*, *P. kelmanii*, *P. oleae*, *P. pseudocryptogea*, *P. sansomeana* and *P. syringae*. Additionally, some isolates that showed several polymorphisms in rDNA internal transcribed spacer (ITS) sequences compared with closely related known species are reported here as *P.* taxon paulensis. Pathogenicity tests on 1-year-old wild olive seedlings showed that nine out of 10 *Phytophthora* taxa significantly reduced root length of inoculated seedlings compared to controls. *P. inundata* and *P. oleae* caused the greatest reduction, while root length of seedlings inoculated with *P. kelmanii* did not differ from the controls. This study provides insights into the role of *Phytophthora* taxa in the wild olive decline in Sardinia, indicating the urgent need to expand monitoring and implement effective management strategies to mitigate the disease.

Read paper.

Climate change and plant pathogens

A paper by Deepak Kumar and Ria Mukhopadhyay titled "Climate change and plant pathogens: Understanding dynamics, risks and mitigation strategies" was published on 13 November 2024 by *Plant Pathology* (early view). The abstract is as follows:-

Climate change is reshaping the interactions between plants and pathogens, exerting profound effects on global agricultural systems. Elevated tropospheric ozone levels due to climate change hinder plant photosynthesis and increase vulnerability to biotic invasion. The prevailing atmospheric conditions, including temperature and humidity, profoundly influence fungal pathogenesis, as each stage of a pathogen's life cycle is intricately linked to temperature variations. Likewise, climate change alters bacterial behaviour, fostering increased production of extracellular polysaccharides by plant-pathogenic bacteria in warmer temperatures. Heat-adapted bacteria, such as Burkholderia glumea and Ralstonia solanacearum, are emerging as significant global threats as temperature rise. Viruses, too, respond dynamically to climate shifts, with certain species favouring warmer climates for replication, resulting in expanded geographical ranges and modified transmission patterns. Nematodes, formidable constraints in crop production, exhibit temperature-dependent life cycles and would have potentially accelerated proliferation and distribution as global warming progresses. Molecular-level changes in pathogenesis, induced by temperature fluctuations, influence various pathogens, thereby impacting their virulence and interactions with host plants. Modelling studies predict changes in disease risks and distributions under future climate scenarios, highlighting the necessity of integrating climate data into crop disease models for accurate forecasts. Mechanistic and observational models illustrate pathogen behaviours amidst changing environmental conditions, providing crucial insights into future disease dynamics. In addition, controlled experiments study disease responses under simulated climate scenarios, underscoring the urgency for comprehensive research to devise effective resistance strategies against severe plant diseases.

Read paper.

FROM GLORY TO DECLINE: UNCOVERING CAUSES OF OAK DECLINE IN IRAN

A paper by Diego N. L. Pequeno *et al.* titled "From glory to decline: Uncovering causes of oak decline in Iran" was published in 27 October 2024 by *Forest Pathology* (Vol. 54, Issue 5, e12898). The abstract is as follows:-

Oak decline is a major concern in Iran. A literature search with the terms 'Iran' AND 'oak' OR '*Quercus*' from 1963 through 2023 resulted in 635 articles with over 200 dealing specifically with oak decline. In Iran, oak decline is most severe in the Zagros forests, followed by the Arasbaran and Hyrcanian forests. Of Iran's 11 native oak species, *Quercus brantii* is the most affected. Several factors have been identified as contributing to oak decline in Iran. Some economic and social factors include high rural unemployment, livestock overgrazing and uncontrolled cutting of live tree branches with the wood used for firewood and foliage used as food for farm animals. These pruning wounds can serve as entry points for pathogens and attract insects. Important abiotic factors included extended drought, increasing air temperature and wind speed, and increased levels of airborne dust and heavy metals. Important pathogens identified in the early 2000s included *Armillaria mellea* and charcoal rot fungus (*Biscogniauxia mediterranea*). More recently, many other fungal pathogens (e.g., *Discula quercina*, *Neoscytalidium dimidiatum*, *Obolarina persica*, *Paecilomyces formosus* and *Phaeoacremonium tuscanicum*) and bacterial pathogens (e.g., *Bacillus pumilus*, *Brenneria goodwinii*, *Gibbsiella quercinecans*, *Rahnella victoriana* and *Stenotrophomonas maltophilia*) were found in association with declining oaks. Among the insects, severe oak defoliation has resulted from various Lepidoptera in the families Erebidae, Geometridae and Tortricidae. Similarly, several bark- and wood-boring beetles in the families Buprestidae and Cerambycidae were reported from declining oaks, with the buprestid *Agrilus hastulifer* being one of the most common. It is hoped that this review will improve our understanding of the many factors involved in oak decline in Iran and promote the development of management strategies.

Read paper.

CURRENT VACANCIES

University of Manitoba Research Chair in Potato Sustainability

The University of Manitoba invites applications for a Research Chair in Potato Sustainability, a tenure-track position at the rank of Assistant or Associate or Professor. The Chair's program will be funded with an investment by a consortium of potato industry stakeholders including growers, processors, potato marketers, sector suppliers, and service providers. The Chair position will be conferred for a five-year term. The Chair's distribution of work duties will be research (55%), extension and sector engagement (25%), and teaching (20%). The tenure-track position will continue after the term without it being designated as a Chair. The position is expected to commence May 1, 2025 or as soon as possible thereafter. The Chair will be a faculty member in the Department of Plant Science, Faculty of Agricultural and Food Sciences (FAFS). FAFS is investing heavily to grow and modernize its horticulture and agronomic research and training capacity. Crop and soil research teams have been renewed by the addition of eleven new tenure-track faculty positions over three years (2020-23) as well as new infrastructure. The potato sector is an important part of Canadian agriculture, representing the fifth largest primary agriculture crop in Canada. Potatoes are Manitoba's fourth most valuable crop. Most potatoes produced in Manitoba are for processing, though fresh and seed potatoes are also grown. Research and innovation are key to enabling this sector to thrive and remain sustainable. In the 2022 Manitoba Potato Science and Technology Strategy, potato sector stakeholders presented a bold vision statement: "Make Manitoba Canada's leader in potato research and innovation". Following extensive consultation, the key priority areas identified in the Manitoba Strategy were soil productivity, fertility, and health; irrigation and water management; disease and pest management; variety evaluation and management; and storage. One of the primary recommendations in the strategy was to enhance the research and training capacity in potatoes at the University of Manitoba in areas including agronomy, soils, potato quality, and sustainability.

The Manitoba Research Chair in Potato Sustainability will ensure the University remains a recognized leader in agronomic sciences and crop production systems, supporting each of the four pillars identified in the Faculty's 2022-2027 Strategic Research Plan (https://umanitoba.ca/agricultural-food-sciences/sites/agricultural-food-sciences/files/2023-04/FAFS-Strategic-Research-Plan-2022-2027.pdf): promoting sustainable, resilient, fair, diverse & healthy, and technologically advanced agri-food systems. FAFS is actively working with Manitoba Agriculture to highlight research efforts by dedicating significant resources to foster knowledge translation and mobilization activities. It is expected that the Chair will play a significant role in knowledge exchange and extension as it applies to sustainable potato production.

Application Deadline: 6 December 2024. Applications should be sent to Dr. Nazim Cicek, Search Committee Chair, University of Manitoba, agresearch@umanitoba.ca. Applications should include:

- a cover letter outlining the candidate's qualifications and how they fulfill the above-listed qualifications
- a curriculum vitae (may include examples of significant research or extension contributions)
- a maximum two-page statement outlining the innovative research, extension, and stakeholder engagement activities envisioned for the programage
- a maximum one-page teaching statement

- a maximum one-page statement on the candidate's strengths and experiences in fostering Equity, Diversity and Inclusion
- names and contact information of three referees (will only be contacted with permission of candidate)

More information on job including responsibilities and qualifications.

Assistant Professors: Horticulture and Plant Pathology, Clemson University

The Department of Plant and Environmental Sciences in the College of Agriculture, Forestry and Life Sciences at Clemson University is seeking to fill two 9-month, tenuretrack positions at the Assistant Professor level (75% research and 25% Extension) to work on small fruit crops. The positions are located on the main campus in Clemson, South Carolina. Clemson University is an R1 Land Grant University located on the shores of Lake Hartwell within view of the Blue Ridge Mountains in the upper Piedmont region of South Carolina, USA. The 1,400-acre campus is part of the 18,000 acres of University Farms and Forests devoted to teaching and research.

The successful candidates are each expected to develop a vigorous, innovative, and extramurally supported research program. The first successful candidate should have a strong background in horticulture and focus on the cultivation of economically important small fruit crops in South Carolina and the southeastern United States. The second successful candidate should have a strong background in Plant Pathology and focus on the management of fungal diseases in small fruit crops. The research must be responsive to grower and stakeholder needs. Successful candidates are expected to collaborate with other faculty members in the department and college and interact with stakeholders and commodity groups in the region and around the country. There is an expectation of excellence in grantsmanship, timely communication of research findings through publication of peer-reviewed journal articles, and active participation in the training and mentoring of graduate students and postdocs. In addition to the above responsibilities, the successful candidate will be expected to communicate findings effectively with stakeholders and to assist in teaching activities.

Deadline: For full consideration, please apply by 15 November, 2024. Applications will be reviewed as they are received. The position will remain posted until it is filled.

More information on job and submit application.

Professor and Department Head (Academic Administrator), Pennsylvania State University

The Department of Plant Pathology and Environmental Microbiology at The Pennsylvania State University is seeking an outstanding individual to provide leadership and vision as Department Head. The Department thrives on understanding the nature of how diverse factors impact food safety, crop quality/productivity, and agricultural and ecosystem health with the goal to develop effective strategies for sustainable food and feed production. Specifically, the Department supports integrated extension programs in field crops, fruits, mushrooms, and vegetables. The faculty lead basic and applied research programs on biological control, fungal biology, microbial ecology, genomics and evolution, and plant/microbe/environment interactions. The Department fosters a highly ranked graduate program in Plant Pathology and actively participates in undergraduate and inter-college graduate programs to provide an intellectually stimulating, diverse, and inclusive environment for education and professional development.

Responsibilities:

The Head serves as the Departmental program leader and administrative officer and reports directly to the Dean of the College of Agricultural Sciences. The Head works with faculty to develop and meet strategic goals and to engage with diverse internal and external stakeholders.

Duties include:

Academic program leadership in research, graduate and undergraduate instruction and extension. Administrative responsibility for academic affairs, departmental personnel, financial matters, and physical facilities. Leadership and coordination of Departmental relations with other Penn State units and programs, agricultural producers, agricultural industries, government agencies, and citizens of the Commonwealth of Pennsylvania. Creating an environment that supports and cultivates diversity, equity, inclusion and belonging.

More information on job and submit application.

ACKNOWLEDGEMENTS

Thanks to Grahame Jackson, Greg Johnson, Yong-Hwan Lee, and Kee Hoon Sohn for contributions.

COMING EVENTS

Plant & Animal Genome 32 Conference (PAG 32)
10 January – 15 January, 2025
San Diego, USA
Website: www.intlpag.org/PAG32/

International Organization of Citrus Virologists (IOCV) XXIII Conference
16 March – 20 March, 2025
Mildura, Victoria, Australia
Website: www.iocvaustralia2025.org.au

Joint meeting of the 70th Conference on Soilborne Plant Pathogens and the APS Pacific Division
25 March – 27 March, 2025
University of California, Davis, USA
Website: soilfungus.wsu.edu

International Symposium on Plant Pathogenic Sclerotiniaceae - BotryScleroMoni 2025. Joint meetings of XIX International *Botrytis* Symposium, XVII International *Sclerotinia* Workshop, and II International *Monilinia* Workshop
25 May – 30 May, 2025
Thessaloniki, Greece
Website: botryscleromoni.com

Australasian Plant Pathology Society Conference
26 May – 28 May, 2025
International Convention Centre at Darling Harbour, Sydney, Australia
Website: www.apps2025.org

14th Conference of the European Foundation for Plant Pathology (EFPP)
2 June – 5 June, 2025
Uppsala, Sweden
Website: www.efpp2025.com

XVII Working Group "Biological and integrated control of plant pathogens." From single microbes to microbiome targeting One Health.
11 June – 14 June, 2025
University of Torino, Torino, Italy
Contacts: Davide Spadaro and Monica Mezzalama
Email: iobc2025@symposium.it
Website: www.iobctorino2025.org

17th Congress of the Mediterranean Phytopathological Union - New phytopathology frontiers of research and education for plant health and food safety
7 July – 10 July, 2025
Ciheam-Bari, Italy
Contact and Email: Anna Maria D'Onghia
mpu2025@iamb.it
Website: www.mpunion.org

13th International Workshop on Grapevine Trunk Diseases
21 July – 25 July, 2025
Ensenada, Baja California, México
Contact and Email: Rufina Hernández
13iwgtd@cicese.mx
Website (under construction): 13iwgtd.cicese.mx

Plant Health 2025
2 August – 5 August, 2025
Honolulu, Hawaii
Website:
www.apsnet.org/meetings/annual/PH2025/Pages/default.aspx

Conference of the IOBC/WPRS Working Group "Integrated Protection in Viticulture"
13 October – 15 October, 2025
Mikulov, Czech Republic
Website: event.fourwaves.com/ipvc/pages

14th Arab Congress of Plant Protection Sciences
3 November – 7 November, 2025
Algeria city, Algeria
Contact and Email: info@acpp-aspp.com
Website: acpp-aspp.com

8th International Bacterial Wilt Symposium (IBWS)
22 March – 26 March, 2026
Wageningen, the Netherlands
Website: event.wur.nl/ibws2026

13th International Congress of Plant Pathology 2028
19 August – 25 August, 2028
Gold Coast, Queensland, Australia
Website: www.icpp2028.org


ICPP2028
13th International Congress of Plant Pathology
19-25 August, Gold Coast Convention & Exhibition Centre, Queensland, Australia

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.

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

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