ISSN 2581-6330 (Online)

Indian Phytopath News

A quarterly Newsletter of Indian Phytopathological Society

http://ipsdis.org/

Volume 6 • Issue 1 • January - March 2023

From President's Desk

Soil and Plant Health Management in Organic farming system

Trade and industrial advancement of India relies on the development of profitable agrotechnologies, an enhancement in export and limitation on avoidable imports. This is only possible when there is plentiful availability of highly productive and disease-free planting materials of commercially important agricultural crops. Soil and plant health are the backbone of crop productivity and have a major impact on soil microbial biodiversity and organic agriculture system. Healthy soil augments water retention capacity, supports pest and disease suppression, decomposition of organic materials, different nutrient cycles, carbon pool, mitigation of global warming and maintains the demand for food, feed, fuel and fiber. Nowadays there is an increased demand for organic agricultural products in food, beverages, pharmaceutical, perfumery and cosmetic industries due to awareness about adverse impact of conventional agriculture products on human health. The area under organic agriculture is increasing globally at the rate of 10% annually and it has become a global player in food production. But at the same time, it is a tough task to maintain the soil and plant health in organic agriculture, which is challenge by variety of plant pest and pathogens. To counter this problem, we have to opt for intensive microbiome (Phytobiome & Soilbiome) research, which may go a long way in maintaining plant and soil health. For future, I believe that there should be intensive partnership between organic agriculturists and biotechnologists for the mitigation of food security and maintaining plant and soil health.

Rakesh Pandey
President
Indian Phytopathological Society

IN THIS ISSUE

Editorial

Fungal Phytonoses and their Implications on Public Health

Since the 19th century, clinical reports of plant pathogenic fungi being recognized and established as novel agents of serious human diseases in immunologically compromised individuals have been documented worldwide. The attacks are localized in immuno-competent hosts, they are usually disseminated and frequently highly lethal in immuno-deficient hosts. Scientific evidences showed that since the 1980s at least 100 fungi not previously connected with diseases in humans, have been identified as pathogenic in immuno-compromized and sometimes immuno-competent individuals. The fundamental differences between plant and animal physiologies generally prevent cross-kingdom infections. For this to occur, pathogens must be able to overcome unfamiliar conditions in the non-primary host. First is crossing the external physical barrier *i.e.* pathogens must be able to survive in the external environment until infection sites become accessible and pathogens must also be able to

penetrate physical defences, such as the skin/mucin layer in animal hosts and the cuticle/epidermis/cell wall in plant hosts, or invade wounds or natural openings. Another barrier is overcoming the primary host immune system. The common concept of animal and plant immune systems is the recognition and response to foreign biogenic materials. Both plant and animal immune systems express receptors that detect specific or non-specific pathogenic molecules. However, one key difference between animal and plant immune systems is that animal immune systems employ adaptive immunity, in addition to innate immunity. The T cells and B cells that play pivotal roles in animal adaptive immunity by participating in antibody production are not found in plants. On the other hand unlike animals, plants do not utilize circulating immune cells in their innate immune systems. Animal primary innate immune systems use circulating phagocytes, such as macrophages, neutrophils and dendritic cells, to remove invading pathogens. To cause mycoses in humans, the pathogens release certain enzymes such as proteases and keratinases which overcome host antimicrobial peptides, phagocytic engulfment, oxidative burst or nutrient deprivation. Symptoms are reported to result from direct hyphal elongation or by deposits of toxins in the host or sometimes by immune response to the agent as in the case of mycotic sinusitis. While fungal transmission between plants and humans has happened before, a case in India of a 61 year old man reported to have got infected with *Chondrostereum purpureum*, which otherwise affects plant species, especially the rose family has attracted attention of many researchers in agriculture and medical field. Follow up to this, it is essential to evaluate mammalian/human diseases caused by plant pathogenic microbes/fungi using Koch's postulates in cell culture and model animal systems. Comprehensive comparative mechanistic studies of plant and animal microbial pathogenesis in cross-kingdom hosts will also allow identification and characterization of unusual disease incidences. Significant threats to humans and animals from plant pathogens may require higher priority consideration of these microorganisms and possible classification as quarantine microbes. Further research and public education surrounding the potential threat of plant pathogenic fungi/microbes will help raise awareness and reduce the risks posed by pathogenic fungi crossing the kingdom or causing human diseases due to contaminated agricultural products.

Rashmi Aggarwal
Chief Editor, IPS Newsletter

Research Highlights

Morphological characterization, pathogenicity screening, and molecular identification of *Fusarium* spp. isolates causing post-flowering stalk rot in maize

Harish J.[1], Prashant P. Jambhulkar[1]*, Ruchira Bajpai[1], Meenakshi Arya[1], Piyoosh K. Babele[1], Sushil K. Chaturvedi[1], Anil Kumar[1] and Dilip K. Lakshman[2]*

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Seventy-one isolates were collected from 40 sites in five agro-climatic zones of India to assess the diversity of *Fusarium* spp. associated with maize crops showing symptoms of post-flowering stalk rot in the field (Fig. 1). *Fusarium* isolates were divided into 9 distinct clusters based on morphological parameters. Ten most virulent *Fusarium* isolates, based on the highest observed disease index, were identified by homology and phylogenetic analyses of partial sequences of the translation elongation factor 1 α (*Tef 1-α*) as *Fusarium acutatum* (2/10), *Fusarium verticillioides* (Syn. *Gibberella fujikuroi* var. *moniliformis*) (7/10), and *Fusarium andiyazi* (1/10). All these species are part of the *Fusarium fujikuroi* Species Complex (FFSC). Due to the pronounced intraspecies morphological variabilities and the presence of multiple species within the FFSC, sequencing of *Tef 1-α* gene is recommended to reliably identify *Fusarium* pathogens.

(Source: Frontiers in Microbiology, 14 https://doi.org/10.3389/fmicb.2023.1121781)

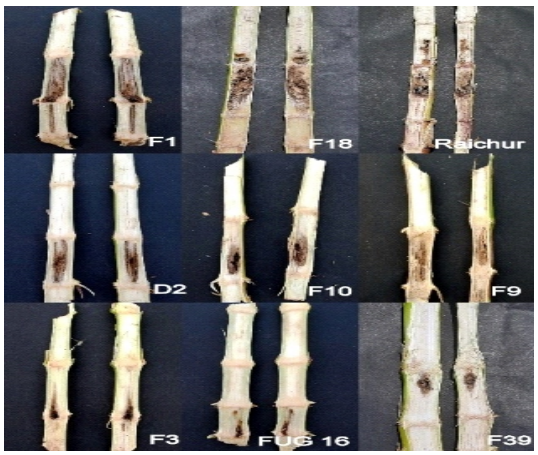

Fig. 1. Comparative lesion sizes of virulent (F1, F18, Raichur), moderately virulent (D2, F10, FUG49), and less virulent (F3, FUG 16, F39) isolates of FFSC. Frontiers in Microbiology, 14 https://doi.org/10.3389/fmicb.2023.1121781

Development of geo-phytopathological model for the prediction of alternaria leaf blight disease of makhana in the Koshi region of Bihar

Santosh Kumar[1]*, Tribhuwan Kumar[2] and Santosh Kumar[3]
[1]*Department of Plant Pathology, Bihar Agricultural University, Sabour, Bihar*
[2]*Department of Molecular Biology and Genetic Engineering, Bihar Agricultural University, Sabour, Bihar*
[3]*Agronomy, Regional Research Station, Agwanpur, Saharsa, Bihar*
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Makhana *(Euryale ferox* Salisb) is an imperative shallow annual aquatic cash crop belongs to family Nympheaceae. Bihar contributes about 80 per cent acreage and more than 90 per cent production. The productivity of makhana is affected to a great extent by the outbreak of alternaria leaf blight disease incited by *Alternaria alternate* (Fig. 1). A geo-phytopathological model has been developed and validated for the prediction of alternaria leaf blight disease of makhana on the basis of mean temperature, mean relative humidity and HTR using data of two consecutive years, 2018 and 2019 in Koshi region of Bihar. Three threshold levels for daily HTR values are given: (1) When the HTR is between 2.5 and 3.5, indicates maximum disease score; (2) When the HTR is less than 2.0, indicates least disease score; (3) When the HTR is more than 3.5, indicates too cold or too wet weather which completely restricts the disease development. Average HTR values of both the crop year 2018 and 2019 in the Koshi region of Bihar were calculated and on that basis disease severity graph was plotted along with HTR values as shown in (Fig. 2). This model infers variables such as mean temperature and relative humidity which shows statistically significant correlation with leaf blight disease of makhana.

(Source: DOI: https://doi.org/10.54386/jam.v23i1.88).

Fig. 1. Symptoms of leaf blight caused by *Alternaria alternata* in makhana

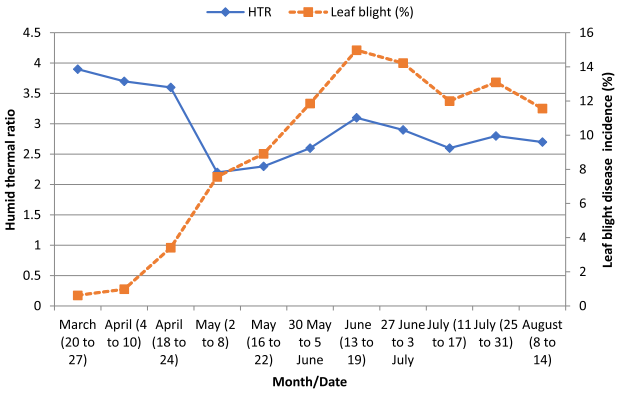

Fig. 2. Pattern of average alternaria leaf blight severity and humid thermal ratio (HTR) of both year 2018 & 2019 at Koshi region of Bihar

Recombinase Polymerase Amplification (RPA) assay based rapid detection of rice false smut pathogen (*Ustilaginoidea virens*) directly from rice spikelet

Amrita Banerjee[1]*, M.K. Bag[2], Adarsh Kumar Chandra[3], Somnath Roy[1], Raghu S.[2] and N.P. Mandal[1]
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[2]*ICAR-National Rice Research Institute, Cuttack, Odisha, India*
[3]*Vinoba Bhave University, Hazaribag, Jharkhand, India*
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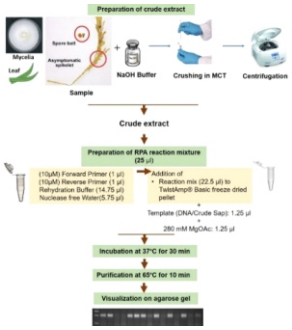


Rice false smut (RFS) disease, caused by *Ustilaginoidea virens* (Cke.) Tak., is the emerging grain disease of rice throughout the world. An early diagnosis of pathogen ahead of symptom is crucial for formulating effective management strategies for RFS. A recombinase polymerase amplification (RPA) assay protocol has been developed to detect *U. virens* directly from rice spikelet. The developed RPA assay using newly designed primers based on *U. virens* GTP binding protein beta subunit (*UVGbeta-1*) gene efficiently and specifically detected *U. virens* from both the genomic DNA and mycelial crude extract. During sensitivity test, other than RPA, all other methods (PCR and LAMP) failed to detect *U. virens* from crude extract. Further, the developed RPA assay was validated on 32 Indian isolates of *U. virens* and also on 34 field samples. The developed assay could be a potential PCR substitute for mass screening and detection of *U. virens* in field samples.

(Source: Crop Protection, 167: 106204. https://doi.org/10.1016/j.cropro.2023.106204)

Awards/Honours/Promotions

- **Prof. Mujeebur Rahman Khan**, Department of Plant Protection, Aligarh Muslim University, Aligarh, Uttar Pradesh has selected for the Biennium Dr. K.C. Mehta Memorial Award (2021-2022) in recognition of his outstanding contributions in Plant Protection by the National Academy of Agricultural Sciences (NAAS). He also received a contractual project on "Bio-efficacy evaluation of its products against yellow stem borer and Bakanae in rice" through the Russel, IPM India.
- **Dr. M.S. Saharan**, Principal Scientist (Plant Pathology), ICARI-IARI, New Delhi has been awarded 23rd Prof. S.N. Banerjee Memorial Award by Indian Mycological Society, Calcutta, West Bengal.
- **Dr. Bindu Roy**, Principal Scientist, Rubber Research Institute of India, Kottayam, Kerala, has been awarded project funding from Indo-French Centre for the Promotion of Advanced Research (IFCPAR/CEFIPRA). It is a collaborative Project with Dr. Valerie Pujade Renaud, Senior Scientist from Centre de cooperation internationaleen recherche agronomique pour le développement (CIRAD), France. The amount sanctioned is 1.62 crores. The project period is May 2023 to April 2026. The Collaborative research project is entitled "Dissecting the complex plant-pathogen interaction network through a multi-omics integrative approach to understand the Corynespora Leaf Fall disease development in rubber and identify candidate genes for molecular breeding".
- **Dr. Shamarao Jahagirdar**, Professor, Department of Plant Pathology, UAS, Dharwad and Former Dean, PAJANCOA & RI, Karaikal, Puducherry UT has been awarded with Dr. M.S. Swaminathan Award-2022 instituted by Society for Plant Research for his outstanding contributions in the field Agriculture.
- **Dr. V. Prakasam**, Founder-Chairman, Mushrooms Foundation of India, Coimbatore has been elected as President of Coimbatore Chapter of Tamil Nadu Senior Agrotechnoligists' Forum (TANSAF) for the years 2023 to 2025.
- **Dr. B. Parameswari**, Senior Scientist, ICAR-NBPGR Regional Station, Hyderabad selected for DST-SERB POWER Fellowship (2023-2026). Dr. Parameswari also received Fellow award from Society for Plant Research at Pondicherry University, Pondicherry.
- **Dr. Shumaila Shahid**, Scientist (Plant Pathology), ICAR-IARI, New Delhi has been awarded with Dr. Rajendra Prasad Excellence Scientist Award and Best Paper Award by the Society of Tropical Agriculture, New Delhi during "14th International Conference on Agriculture, Horticulture and Food Sciences", New Delhi held on 17-18th December, 2022.

Symposia/Workshop: Organized

- **A training program on Application of molecular markers in crop improvement at UBKV, Coochbehar:** Ten days (15th to 24th Feb, 2023) training program was organized by Dr. Apurba Kumar Chowdhury, Principal Investigator, NAE Project, Department of Plant Pathology, UBKV. on "Development of blast resistance high yielding short grain aromatic rice variety for northern Bengal" at Uttar Banga Krishi Viswavidyalaya, Coochbehar, West Bengal.
- **ICAR Short Course on "Application of Molecular and Conventional Approaches in Plant Disease management":** ICAR Short Course on "Application of Molecular and Conventional Approaches in Plant Disease management" w.e.f. 13th to 22nd February 2023 was organized by Dr. D.K. Banyal, Head cum course Director, Department of Plant Pathology, CSKHPKV, Palampur along with Dr Pardeep Kumar and Dr Shikha Sharma as Course Coordinator. The has organised.
- **International Workshop on Complementing Current Techniques with Next Generation Technologies for Crop Health Improvement:** A one-week International Workshop on *Complementing Current Techniques with Next Generation Technologies for Crop Health Improvement* in collaboration Prof. Mohamed F.R. Khan, Department of Plant Pathology, North Dakota State University and University of Minnesota, U.S.A. was organized by with Prof. Mujeebur Rahman Khan, Aligarh Muslim University at the Department of Plant Protection, Faculty of Agricultural Sciences, Aligarh Muslim University, Aligarh. The workshop

was sponsored by the Ministry of Education, Govt of India under the Global Initiative of Academic Networks (GIAN) programme, and was aimed at tapping the talent pool of international scientists and entrepreneurs to encourage their engagement with the institutes of Higher Education in India so as to augment the country's existing academic resources, accelerate the pace of quality reform, and elevate India's scientific and technological capacity to global excellence.

- **Hands-on training workshop on plant pest/pathogen diagnostics associated with hill agriculture under Accelerate Vigyan Scheme sponsored by DST-Science and Engineering Research Board (SERB), New Delhi:** ICAR-Vivekananda Parvatiya Krishi Anusandhan Sansthan, Almora organized 10 days high end workshop on "Hands-on training workshop on plant pest/pathogen diagnostics associated with hill agriculture" under Accelerate Vigyan Scheme sponsored by DST- Science and Engineering Research Board (SERB), New Delhi. The workshop was specifically designed for Post-Graduate and PhD students to impart contemporary pest/pathogen diagnostics technique associated with hill agriculture. Dr. Ashish Kumar Singh, were the event organizers and Dr. Gaurav Verma, Dr. K.K. Mishra were the coordinators.

IPS Symposia/Conferences 2022-23

IPS Mid-Eastern Zone Symposium

A conference on "Plant Health for Sustainable Agriculture" was jointly organized by Sardar Vallabhbhai Patel University of Agriculture, Meerut and Indian Phytopathological Society (MEZ) on January 6-7, 2023.

IPS Eastern Zone Symposium

The Zonal meeting and National Symposium on "Climate Change and Plant Diseases" has jointly organized by the Indian Phytopathological Society (EZ) and Dr. Rajendra Prasad Central Agricultural University, Pusa, Samastipur, Bihar during 23-24 January 2023 at Dr. Rajendra Prasad Central Agricultural University, Pusa, Bihar.

IPS Delhi Zone Symposium

Delhi Zone (online mode) organized one day symposium on "Pathogen Profile and Pathogenesis in Relation to Crop Disease Management" was jointly organized by Division of Plant Pathology, ICARI-IARI, New Delhi during January 13, 2023.

IPS Southern Zone Symposium

Southern Zone organized one one-day symposium on "Plant Health Protection: Advancement and Applications" was jointly organized by Indian Phytopathological Society (Southern) on February 01, 2023 at University of Mysore, Mysuru, Karnataka during the IPS Platinum Jubilee Conference on "Plant and Soil Health Management: Issues and Innovations".

IPS Platinum Jubilee Conference on "Plant and Soil Health Management: Issues and Innovations"

IPS Platinum Jubilee Conference on "Plant and Soil Health Management: Issues and Innovations" was organized at University of Mysore, Mysuru during February 2-4, 2023.The conference was inaugurated by Honorable Dr. S. Chandrashekar, Secretary, DST, New Delhi as Chief Guest; Dr. Sharanappa V. Halse, Vice Chancellor, KSOU, Karnataka, Dr. K.M. Indiresh, Vice Chancellor, UoHS, Bagalkote, Dr. K.S. Rangappa, Former Vice Chancellor & Distinguished Professor, University of Mysore, Mysuru as Guest of Honour. Total eight IPS publications *viz*., (i) Abstracts and Souvenir, (ii) Compendium of Maize Diseases, (iii) Compendium of Medicinal and Aromatic Plant Diseases, (iv) Diseases of Oilseed Crops in India, (v) Spice Disease Compendium, (vi) Sugarcane Disease Compendium, (vii) Rice Diseases Compendium and (viii) Sabjiyon Mein Samanvit Padap Rog Niyantran were released in the inaugural function. Altogether more than 250 delegates participated in this conference. During the 3 days conference, total 7 technical sessions on different themes were conducted. There were 7 award lectures, 13 Prof. M.J. Narasimhan Academic Merit Award Contestants, 6 APS Travel Sponsorship Award Contestants, 17 Keynote Lectures, 29 Invited Lectures, 67 Oral Presentations, and 83 posters presented in the conference.

Awards conferred in the IPS Platinum Jubilee Conference 2023

A.P. Misra Lifetime Achievement Award: Prof. S.S. Chahal, Former (VC MPUAT) & Honorary Emeritus Professor, Punjab University, Chandigarh, Punjab

IPS Recognition Award

(i) **Dr. N. Iboton Singh**, Former Dean, Department of Life Sciences, Manipur University, Canchipur, Imphal, Manipur

(ii) **Prof. B.N. Chakraborty**, Department of Biological Science, Aliah University, Kolkata, West Bengal

(iii) **Dr. R. Sridhar**, Former Principal Scientist, Plot 54, Padmavathy Street, Santosh Nagar Extn., Madanandapuram – Porur, Chennai, Tamil Nadu

(iv) **Dr. A.P. Suryawanshi**, Former Head & Professor, Department of Plant Pathology, VNMKV, Parbhani, Maharashtra

S.P. Raychaudhuri Award Lecture: Dr. U.S. Singh, Asia & Africa Advisor for Research & Partnership, IRRI-India Office, NASC Complex, Pusa, New Delhi (Title: Direct seeded rice - impact on rice diseases and their management)

K.C. Mehta and Manoranjan Mitra Award: Prof. Ashwani Kumar Basandrai, Former Dean, College of Agriculture & Basic Sciences (CSKHPKV, Palampur), Kangra, Himachal Pradesh

Sharda Lele Memorial Award Lecture: Dr. R.M. Gade, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, Maharashtra (Title: Phytophthora diseases: A major threat to citrus industry)

J.P. Verma Memorial Award Lecture: Dr. T.S.S.K. Patro, Acharya N.G. Ranga Agricultural University, Agricultural Research Station Vizianagaram, Andhra Pradesh (Title: Exploiting the potential of Miracle grains on eve of international year of Millets by ecofriendly management of banded leaf and sheath blight)

B.N. Chakraborty and Usha Chakraborty IPS Best Teacher Award: Dr. D.K. Banyal, Professor & Head, Department of Plant Pathology, Himachal Pradesh Agricultural University, Palampur, Himachal Pradesh

J.F. Dastur Memorial Award Lecture: Dr. P.D. Meena, ICAR-Directorate of Rapeseed-Mustard Research, Bharatpur, Rajasthan (Title: Topographical dispersal of rapeseed-mustard diseases under changing climate in India)

S. Sinha Memorial Award Lecture: Dr. B. Parameswari, ICAR-NBPGR, Regional Station, Hyderabad, Telangana (Title: A whole genome based reduced representation approach for identification of resistance against Sugarcane yellow leaf virus in Indian sugarcane)

M.K. Patel Memorial Young Scientist Award Lecture: Dr. Amalendu Ghosh, ICAR-Indian Agricultural

Research Institute, New Delhi (Title: New insights into the transmission biology of plant viruses by thrips and whitefly and their management)

Fellow of Indian Phytopathological Society (FPSI) - 2021

(I) **Dr. Sachin Gupta**, Associate Professor (Plant Pathology), SKUAST-J, Jammu, Jammu and Kashmir

(ii) **Dr. Tasvina Rahman Borah**, Scientist (Plant Pathology), ICAR Research Complex for NEH Region, Umiam, Meghalaya

(iii) **Dr. Pankaj Sharma**, Principal Scientist (Plant Pathology), ICAR-DRMR, Sewar, Bharatpur, Rajasthan

(iv) **Dr. Satish Kumar Sain**, Principal Scientist (Plant Pathology), ICAR-CICR, Regional Station, Sirsa, Haryana

(v) **Dr. Bholanath Mondal**, Assistant Professor (Plant Protection). P.S.B. Sriniketan, Visva- Bharati, Birbhum, Santiniketan, West Bengal

(vi) **Dr. Palash Deb Nath**, Professor & Head (Plant Pathology), Assam Agricultural University, Jorhat, Assam,

(vii) **Dr. S.S. Veena**, Principal Scientist (Plant Pathology), ICAR-CTCRI, Thiruvananthapuram, Kerala

(viii) **Dr. Malkhan Singh Gurjar**, Senior Scientist (Plant Pathology), ICAR-IARI, New Delhi

(ix) **Dr. Jitender Singh**, Associate Professor Immunology, SVPUAT, Modipuram, Meerut, Uttar Pradesh

(x) **Dr. Zaki A. Siddiqui**, Professor (Botany), Aligarh Muslim University, Aligarh, Uttar Pradesh

(xi) **Dr. R.Z. Sayyed**, Professor (Microbiology), PSGVP Mandal's Arts, Science & Commerce College, Shahada, Maharashtra

(xii) **Dr. Raj Kumar Mishra**, Principal Scientist (Plant Pathology), Division of Crop Protection, ICAR-IIPR, Kanpur, Uttar Pradesh

M.J. Narasimhan Medal for Best Research Paper Award (2019 to 2021)

(i) Detection of resistance to demethylation inhibitor fungicides in *Erysiphe necator* from tropical India by biological and molecular assays - *Shashikant B. Ghule et al.* 72(1): 53-61 (2019)

(ii) Leaf stripping: an alternative strategy to manage banded leaf and sheath blight of maize - *Harleen Kaur et al.* Vol. 73(2): 203-211 (2020)

(iii) Molecular characterization and development of sequence characterized amplified region (SCAR) marker for detection of *Ascochyta rabiei* (Pass.) Labr., infecting chickpea - *L. Manjunatha* Vol. 74(3): 605-613 (2021)

Prof. M.J. Narasimhan Academic Merit Award 2022-23

Total 13 candidates from 8 zones of the Society participated and presented in the Prof. M.J. Narasimhan Academic Merit Award contest 2022-23. Out of which, **Ms. Anwesha Sharma**, *School of Crop Protection, CPGSAS, Central Agricultural University (Imphal), Umiam, Meghalaya, India* has been awarded for Prof. M.J. Narasimhan Academic Merit Award contest 2022 for presentation of her paper "Leaf assisted biosynthesis of silver-silica nanocomposite for management of sheath blight disease of rice".

Commendation Certificate

The following contestants awarded with commendation award for rof. M.J. Narasimhan Academic Merit Award.

(i) **Ms. Sehla Khursheed**, Division of Plant Pathology, SKUAST-Kashmir, Shalimar, Srinagar, Jammu and Kashmir, India (Title: Elucidating genetic variability and detection of shot hole disease infecting different stone fruits using SSR markers)

(ii) **Mr. Deepak Reddy Beerelli**, College of Agriculture, Wyra, PJTSAU, Andhra Pradesh (Title: Variability and management of pigeon wilt (*Fusarium udum* Butler))

(iii) **Ms. C.H. Sai Bhavana**, Department of Plant Pathology, CoA, UAS, GKVK, Bangalore, Karnataka (Title: Identification of host differentials and pathotyping of *Pyricularia setariae* (Nishikado) causing leaf blast on foxtail millet (*Setariaitalica* (L.) Beauv))

APS-IPS Travel Sponsorship Award

Total 6 candidates from 4 zones of the Society participated and contested for APS-IPS Travel Sponsorship Award. All the participants have been recommended for final selection by American Phytopathological Society, USA.

(i) **Ms. Shugufta Parveen**, ICAR-Central Institute of Temperate Horticulture, Srinagar, Jammu & Kashmir, India (Title: Exploring the endophytic microbiota as potential bioagents for management major fungal diseases of rice (*Oryza sativa* L.))

(ii) **Ms. Dibya Sree Dutta**, Department of Plant Pathology, Assam Agricultural University, Jorhat, Assam, India (Title: Distribution, molecular diagnostics and host diversity of phytoplasma associated with brinjal little leaf disease in Assam)

(iii) **Ms. Shenaz Sultana Ahmed**, Department of Plant Pathology, Assam Agricultural University, Jorhat, Assam (Title: Encapsulation of microbial bioagents for development of bioinoculant kit for sustainable disease management)

(iv) **Ms. Sanghmitra Aditya**, Division of Plant Pathology, ICAR-Indian Agricultural Research Institute, New Delhi (Title: Genomics led population diversity studies of leaf blight complex pathogens of wheat)

(v) **Mr. Venu Emmadi**, Division of Plant Pathology, ICAR-Indian Agricultural Research Institute, New Delhi (Title: Prediction of leaf curl disease risk in chili for management decision)

(vi) **Mr. Namburi Karunakar Reddy**, Department of Plant Pathology, College of Agriculture, University of Agricultural Sciences, GKVK, Bengaluru, Karnataka (Title: Characterization of *Xanthomonas oryzae* pv. *oryzae* strains in Karnataka and improving *Xoo* resistance in rice through SWEET gene editing)

IPS Election Result 2023

Election result of the Society for the year 2023 is as follows:

President Elect (2023): Dr. Dilip Ghosh, Director, ICAR-Central Citrus Research Institute, Nagpur, Maharashtra

Secretary (2023-25): Dr. Kajal K. Biswas, Principal Scientist, Division of Plant Pathology, ICAR-IARI, New Delhi

Joint Secretary (2023-25): Dr. Kalyan K. Mondal, Principal Scientist, Division of Plant Pathology, ICAR-IARI, New Delhi

Treasurer (2023-25): Dr. Malkhan Singh Gurjar, Senior Scientist, Division of Plant Pathology, ICAR-IARI, New Delhi

Zonal President (Delhi Zone): Dr. Jameel Akhtar, Principal Scientist, ICAR-NBPGR, New Delhi

Zonal Councillor (Delhi Zone): Dr. Pardeep Kumar, Scientist, ICAR-NBPGR, New Delhi

Zonal President (Mid-Eastern Zone): Dr. Dinesh Singh, Principal Scientist (Plant Pathology), ICAR-IISR, Lucknow, Uttar Pradesh

Zonal Councillor (Mid-Eastern Zone): Dr. Sanjay Kumar Goswami, Scientist (Plant Pathology), ICAR-IISR, Lucknow, Uttar Pradesh

Zonal President (Northern Zone): Dr. Sachin Gupta, Professor/Chief Scientist, SKUAST, Jammu and Kashmir

Zonal Councillor (Northern Zone): Dr. Deepak Kumar, Professor/Chief Scientist, SKUAST, Jammu and Kashmir

Zonal President (Southern Zone): Dr. T. Makeshkumar, Principal Scientist (Plant Pathology), ICAR-CTCRI, Thiruvananthapuram, Kerala

Zonal Councillor (Southern Zone): Dr. S.S. Veena, Principal Scientist (Plant Pathology), ICAR-CTCRI, Thiruvananthapuram, Kerala

Zonal President (Western Zone): Dr. S.V. Kolase, Associate Professor, MPKV, Rahuri, Maharashtra

Zonal Councillor (Western Zone): Dr. Sudarshan Bhausaheb Latake, Assistant Professor (Plant Pathology), MPKV, Rahuri, Maharashtra

Zonal President (Central Zone): Dr. Pramod Kumar Gupta, Jawaharlal Nehru Krishi Vishwavidyalaya Jabalpur, Madhya Pradesh

Zonal Councillor (Central Zone): Dr. Vijay Kumar Yadav, Jawaharlal Nehru Krishi Vishwavidyalaya Jabalpur, Madhya Pradesh

Zonal President (Eastern Zone): Dr. P. Srinivas, Central Horticultural Experiment Station (CHES) (Regional Research Station of ICAR-IIHR, Bangalore) Bhubaneswar, Odisha

Zonal Councillor (Eastern Zone): Dr. Sandeep Kumar, Department of Plant Pathology, Odisha University of Agriculture & Technology, Bhubaneswar, Odisha

Zonal President (North-Eastern Zone): Prof. L.N.K. Singh, Department of Plant Pathology, CoA, CAU, Iroisemba, Imphal, Manipur

Zonal Councillor (North-Eastern Zone): Dr. Bireswar Sinha, Department of Plant Pathology, CoA, CAU, Iroisemba, Imphal, Manipur

IPS Awards Result 2023

The award result for the year 2023 is as follows:

A.P. Misra Lifetime Achievement Award: Dr. R.K. Jain, Dean (Retd.) & Head (Plant Pathology), ICAR-IARI, New Delhi

S.P. Raychaudhuri Memorial Lecture: Dr. T.R. Sharma, DDG (CS), Indian Council of Agricultural Research (ICAR), New Delhi

IPS Recognition Award:

(i) **Dr. Mustaq Ahmad**, Former VC, SKUAST-K, Srinagar, Jammu & Kashmir

(ii) **Dr. A.K. Misra**, Ex. Project Coordinator & President, IPS, ICAR-CISH, Lucknow, Uttar Pradesh

(iii) **Dr. S.R. Niranjana**, Retd. Professor & Head, University of Mysore, Mysuru, Karnataka

(iv) **Dr. K.C. Puzari**, Retd. Professor & Head, AAU, Jorhat, Assam

Mundkur Memorial Award: Dr. S.C. Dubey, ADG (PP&B), Indian Council of Agricultural Research (ICAR), New Delhi

B.N. Chakraborty & Usha Chakraborty IPS Best Teacher Award: **Dr. Palash Deb Nath**, Professor & Head (Plant Pathology), AAU, Jorhat, Assam

D.P. Misra& R.N. Pandey IPS Best Women Scientist Award: **Dr. V. Celia Chalam**, Head (Plant Quarantine), ICAR-NBPGR, Pusa Campus, New Delhi

J.F. Dastur Memorial Award: **Dr. L.M. Suresh**, Maize Pathology Lead - Sub Saharan Africa, CIMMYT, ICRAF, Gigiri, Nairobi, Kenya

K.C. Mehta and Manoranjan Mitra Award: Dr. Jameel Akhtar, Principal Scientist (Plant Quarantine), ICAR-NBPGR, Pusa Campus, New Delhi

M.K. Patel Memorial Young Scientist Award: Dr. Udai Bhan Singh, Senior Scientist, ICAR-NBAIM, Kushmaur, Mau Nath Bhanjan, Mau Uttar Pradesh

M.S. Pavgi Award: Dr. Dinesh Singh, Principal Scientist (Plant Pathology), ICAR-IARI, New Delhi

Sharda Lele Memorial Award: Dr. Pranab Dutta, Associate Professor (Plant Pathology), School of Crop Protection, CPGSAS, CAU, Umiam, Meghalaya

Fellow of Indian Phytopathological Society (FPSI) – 2022

(i) **Dr. Chandra Bhanu**, Principal Scientist (Plant Pathology), ICAR-IIFSR, Modipuram, Meerut, Uttar Pradesh

(ii) **Dr. Someshwar Bhagat**, Principal Scientist (Plant Pathology), ICAR-CRURRS, Hazaribag, Jharkhand

(iii) **Dr. Rajesh Kumar Pandey**, Assistant Professor (Botany), Bundelkhand University, Jhansi, Uttar Pradesh

(iv) **Dr. Sanjeev Sharma**, Principal Scientist (Plant Pathology), ICAR-CPRI, Shimla, Himachal Pradesh

(v) **Dr. Amaresh Y.S.**, Professor (Plant Pathology)/ Chief Scientific Officer, Directorate of Research, UAS, Raichur, Karnataka

(vi) **Dr. Baswaraj Raigond**, Senior Scientist, Center on Rabi Sorghum, ICAR-IIMR, Regional Station, Shelgi, Solapur, Maharashtra

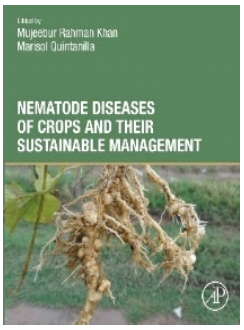
(vii) **Dr. C.N. Biju**, Senior Scientist (Plant Pathology), ICAR-IISR, Kozhikode (Calicut), Kerala

Obituary

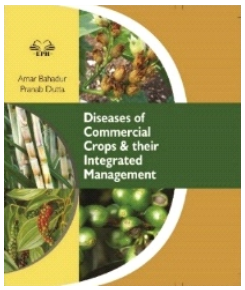
- **Dr. Baikunth Mishra**, Former Professor Plant Pathology, Birsa Agricultural University, Kanke, Ranchi passed away on 28th March, 2023 at the age of 87 years. His research work was classical and was published in international journals. He was excellent researcher and teacher in the area of Mycology and Plant Pathology.
- **Dr. Vishwadhar**, Former Principal Scientist and Head, Division of Crop Protection, Indian Institute of Pulse Research, Kanpur passed away on 8th March, 2023 at Noida. He did his Ph.D. from IARI, New Delhi, under Late Dr. A.K. Sarbhoy on Soyabean diseases during 1982-85. He was country's well known Pulse Pathologist.
- **Dr. Saroj Singh**, Ex-Director, ICAR-NCIPM and great oilseed pathologist has left this world for heavenly abode on April 23, 2023.
- **Dr. Theodor O. Diener,** an eminent ARS scientist inducted into the USDA ARS Science Hall of Fame in 1989, died at his home in Beltsville, MD, on March 28, 2023, at the age of 102. Dr. Diener was a luminary in the field of virology and molecular biology as the discoverer of the first circular RNAs, the plant pathogens known as viroids. Dr. Diener also made the seminal discovery that the small non-coding RNAs could cause devastating plant diseases while functioning simply as an RNA.

Books Published

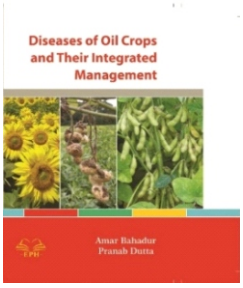
Nematode Diseases of Crops and Their Sustainable Management
Editors: M.R. Khan, India and M. Quintanilla, USA
Publisher: Academic Press, USA, an imprint of Elsevier Science
Published: 2023
Page Count: 746
ISBN: 978-0323912266



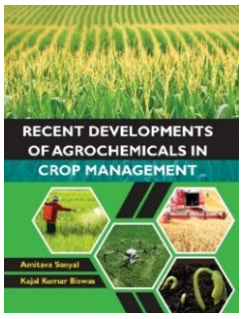
Diseases of Oil Crops and Their Integrated Management
Editors: Amar Bahadur & Prabanb Dutta
Publisher: Elite Publishing House, Rohini, New Delhi
Published: 2023
ISBN No.: 9789395185059



Diseases of Commercial Crops and Their Integrated Management
Editors: Amar Bahadur and Pranab Dutta
Publisher: Elite Publishing House, Rohini, New Delhi
Published: 2023
ISBN No.: 9789395185257



Recent Developments of Agrochemicals in Crop Management
Editors: Amitava Sanyal and Kajal Kumar Biswas
Publisher: AKN Learning, Jasola Vihar, New Delhi
Published: 2023
ISBN: 9789393682109



Editorial Board - Newsletter

Published by
Indian Phytopathological Society
Division of Plant Pathology
ICAR-Indian Agricultural Research Institute
New Delhi – 110 012, India
Tel: +91-11-25840023
E-mail: ipsdis@yahoo.com, website: http://ipsdis.org