

Annual Report

2014-15



INDIAN PHYTOPATHOLOGICAL SOCIETY

Division of Plant Pathology
Indian Agricultural Research Institute
New Delhi 110012, India
www.ipsdis.org

ANNUAL REPORT

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Correct citation

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PREFACE

It is my great privilege and honour to share with you the Annual Report 2014-15. This report comes to you with pride, as it is a collection of our most significant accomplishments. It was a moment of exhilaration and joy when I heard from the Secretary of the Indian Phytopathological Society that I have been elected unanimously as the president of the society. I was overwhelmed by the warmth and confidence of the members and would ever remain grateful for this kind gesture. The society has grown to this level by the vision, foresight and untiring efforts of pioneer leaders in plant pathology and I recollect their contributions with reverence.



During the year, the executive committee and general body were gracious enough to agree for opening a new zone in the North-east for the benefit of the students from this region. The executive has decided that the number of fellows of the society (FPSI) shall not exceed 1% of total number of Life members. National Symposium on “Understanding Host-Pathogen Interaction through Science of Omics” organized at Indian Institute of Spices Research (IISR), Kozhikode during 16-17 March, 2015. The symposium recommended the need for strict enforcement of bio-security and domestic quarantine in plant material movement. Creation of a national database of plant pathogens, more extensive technology demonstration and skill enhancement for plant protection scientists shall be given priority in the activities of the society in the coming years.

I am sure the Society will be growing and contributing not only for the growth of the science of plant pathology but to help and advice policy makers in matters relating to plant disease management and reduction of crop losses to enhance productivity of crop plants.

Thank you all for your continued support in our journey.


(M. Anandaraj)
President

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About the Society

The Indian Phytopathological Society (IPS) is a professional society for promoting the cause of science of Phytopathology. The Society focuses in the field of Mycology, Plant Pathology, Bacteriology, Virology, Phytoplasmology and Nematology. It provides a unique platform to the scientists working in the field of plant pathological related research to share their views and research achievements. It also keeps members informed the various activities related to the development of Plant Pathology and about the members of the society. The society was basically formed with the following objectives:

- (i) To advance the cause of Mycology and Plant Pathology in India.
- (ii) To encourage and promote mycological and plant pathological studies and research in the country.
- (iii) To disseminate the knowledge of Mycology and Plant Pathology.
- (iv) To facilitate closer association and relations among members and other scientific workers in India and abroad.

It was the afternoon of 28th February, 1947, when about 20 mycologists and plant pathologists from various parts of the country assembled at Indian Agricultural Research Institute, New Delhi. A meeting was conveyed by Dr. B.B. Mundkur under the chairmanship of Prof. S.R. Bose to discuss the possibilities of forming a society to bring together all persons interested in the study of fungi, in view of the fact that plant pathology had begun to assume increasingly greater importance in universities and colleges as well as in State Agriculture Departments. The same day unanimous decision was taken and the Indian Phytopathological Society (IPS) was established. A small sub-committee, consisting of Prof. J.F. Dastur (chairman), Dr. S.R. Bose, Dr. B.N. Uppal, Dr. A. Sattar and Dr. R.S. Vasudeva as members and Dr. B.B.

Mundkur as convener was formed to take steps for starting a journal, framing constitution and bylaws of society. Dr. Mundkur was requested to act as Secretary-Treasurer for 1947 or until new office-bearers were elected. With the zeal and enthusiasm, characteristic of Dr. Mundkur, he devoted his full energy for the given task and invited all persons interested in the study of plant pathology in India and abroad to become members of the society. He enrolled a large number of mycologists and plant pathologists working in India and abroad as members of the Society. He even enrolled persons who had some interest in Plant Pathology. It is said that once he was travelling in a train and while talking to fellow passengers impressed upon them and enrolled them as member of the society. In this way he increased the number of members and much needed finance. Later, industrial concerns interested in the subject, were also approached to become patrons of the Society to protect its financial status. Now, over 2,000 members of the society are spread in India and approximately 50 other countries. It is the third largest society of plant pathologists in the world. They comprise scientists, teachers, technicians, students, extension workers, company for the society and for the cause of plant pathology.

Subsequently, several other activities and awards were added time to time in the fold of Indian Phytopathological Society.

The Society was registered on 3-11-1949, under the Societies Registration Act XXI of 1860 with Registration No. S399 of 1949-50. A very significant step to make the Society stable was taken in the XI Annual General Meeting held in Delhi on 2nd January, 1959 when it was resolved that the Division of Mycology and Plant Pathology, Indian Agricultural Research Institute, New Delhi would be the permanent Headquarters of the Society.



Zonal Chapters

The society was earlier having six zones which were later increased to eight zones. Each zone elect or nominate its Zonal President and Councillor every year. The details of zonal chapters are as follows:

Zone	States
Delhi Zone	Delhi
Northern Zone	Chandigarh, Haryana, Himachal Pradesh, Jammu and Kashmir and Punjab
Mid-Eastern Zone	Uttar Pradesh and Uttarakhand
Eastern Zone	Andaman and Nicobar Island, Bihar, Jharkhand, Odisha and West Bengal
Central Zone	Andhra Pradesh, Chhattisgarh, Madhya Pradesh, Rajasthan and Telangana
Western Zone	Gujarat and Maharashtra
Southern Zone	Goa, Karnataka, Kerala, Pondicherry and Tamil Nadu
North-Eastern Zone	Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura

Executive Council

The society is having Executive Council, to run the society smoothly, which takes policy decisions. It consists of 25 members and meets at least twice a year. Following are the members of executive council.

President	President Elect will succeed
President-elect	Elected by General Body
Secretary	Elected by General Body
Joint Secretary	Elected by General Body
Treasurer	Elected by General Body
Chief Editor	Elected by Executive Council
Senior Editor	Elected by Executive Council
Zonal President & Councillor	Elected by General Body
Ex-officio	Head, Division of Plant Pathology, IARI, New Delhi



Executive Council

Executive Council 2014-15

<i>President</i>	: Dr. M. Anandaraj, Indian Institute of Spices Research, Calicut, Kerala Email: anandaraj@spices.res.in
<i>President Elect</i>	: Dr. A.K. Misra, Central Institute for Subtropical Horticulture, Lucknow, U.P. Email: misra_a_k@yahoo.co.in
<i>Secretary</i>	: Dr. Pratibha Sharma, Indian Agricultural Research Institute, New Delhi Email: psharma032003@yahoo.co.in
<i>Joint Secretary</i>	: Dr. R.K. Sharma, Indian Agricultural Research Institute, New Delhi Email: rksharma35@yahoo.co.in
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<i>Ex-officio</i>	: Head (Plant Pathology), Dr. Rashmi Aggarwal, Indian Agricultural Research Institute, New Delhi, Email: rashmi.aggarwal2@@gmail.com

Zonal Chapters (2014)

Zonal President (DZ)	: Dr. K.S. Hooda, Directorate of Maize Research, New Delhi Email: hoodaks@gmail.com
Zonal Councillor (DZ)	: Dr. Vaibhav Kr. Singh, Indian Agricultural Research Institute, New Delhi Email: dr.singhvaibhav@gmail.com
Zonal President (MEZ)	: Dr. S.P. Pathak, N.D. University of Agriculture and Technology, Faizabad, Uttar Pradesh, Email: sppathak.nduat@gmail.com
Zonal Councillor (MEZ)	: Dr. H.K. Singh, N.D. University of Agriculture and Technology, Faizabad, Uttar Pradesh, Email: hksndu@gmail.com
Zonal President (NEZ)	: Dr. S.V. Ngachan, ICAR Research Complex for NEH Region, Umiam, Meghalaya Email: svngachan@rediffmail.com
Zonal Councillor (NEZ)	: Dr. Pankaj Baiswar, ICAR Research Complex for NEH Region, Umiam, Meghalaya Email: pbaiswar@yahoo.com
Zonal President (EZ)	: Dr. Jyoti Kumar, Ranchi University, Ranchi, Jharkhand Email: jyotikumar1@yahoo.com
Zonal Councillor (EZ)	: Dr. Manoj Kr. Barnwal, Birsa Agricultural University, Ranchi, Jharkhand Email: barnwalbau@gmail.com
Zonal President (SZ)	: Dr. I.K. Kalappanvar, University of Agricultural Sciences, Dharwad, Karnataka Email: ikkyashu@gmail.com



Zonal Councillor (SZ) : Dr. S.I. Harlapur, University of Agricultural Sciences, Dharwad, Karnataka
Email: harlapursi@gmail.com

Zonal President (WZ) : Dr. B.M. Waghmare, Maharashtra Mahavidyalaya, Nilanga, Maharashtra
Email: bmw146@gmail.com

Zonal Councillor (WZ) : Dr. Sunita J. Magar, College of Agriculture, Latur, Maharashtra
Email: sunitamagar7@rediffmail.com

Zonal President (CZ) : Dr. Anil S. Kotasthane, Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh
Email: kotasthaneaj@yahoo.com

Zonal Councillor (CZ) : Dr. Harvinder Kr. Singh, Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh
Email: harry.0452@gmail.com

(**CZ:** Central Zone; **DZ:** Delhi Zone; **EZ:** Eastern Zone; **WZ:** Western Zone; **SZ:** Southern Zone; **MEZ:** Mid Eastern Zone; **NEZ:** North Eastern Zone)

Advisory Board

Dean W. Gabriel, USA; A.J. Gibbs, Australia; M.N. Khare, India; M.S. Swaminathan, India; R.D. Wilcoxson, USA; S.M. Paul Khurana, India

Honorary Fellows

M.R.S. Iyengar, India; A.S. Summanwar, India; R.S. Singh, India; J.P. Tewari, Canada; R.D. Wilcoxson, USA



Zonal Activities

Seven Zonal Chapters of the Society have actively organized symposia on different themes at their respective Zonal Meetings on important aspects of Plant Pathology.

Southern Zone	Dec. 11-12, 2014	Plant Diseases – Perspectives and Innovative Management Strategies
Delhi Zone	Jan. 17, 2015	Innovative approaches of plant disease management for sustainable development
Western Zone	Jan. 24-25, 2015	Plant Pathology – Disease diagnosis and management for sustainable Agriculture
Eastern Zone	Jan. 29-30, 2015	Advances in Phytopathological Research in Globalized Era with Reference to Eastern Region
North-Eastern Zone	Feb. 10-11, 2015	Holistic plant health management in organic agriculture
Mid-Eastern Zone	Feb. 28-Mar. 01, 2015	Recent Advances in Diagnosis and Management of Diseases of Field and Horticultural Crops
Central Zone	Mar. 10, 2015	Innovative Management Strategies to Mitigate Diseases of Agricultural and Horticultural crops



Southern Zone

Zonal President: Dr. I.K. Kalappanvar
Zonal Councillor: Dr. S.I. Harlapur

Southern Zone Meeting & National Symposium on “Plant Diseases: New Perspectives and Innovative Management Strategies” at College of Agriculture, Univeristy of Agricultural Sciences, Dharwad, Karnataka, December 11-12, 2014

At the outset, the chairman welcomed all the delegates and briefly introduced Dr. I.K. Kalappanavar, President IPS (SZ) and Principal Scientist & Head ARS, Arabhavi and invite to deliver keynote address on “Strategies to mitigate emerging wheat rust virulence in peninsular India”. Dr. Kalappanavar mentioned the low production of wheat in peninsular India may because of more than 60% area in under rainfed cultivation plus abiotic stresses like heat drought and biotic stresses. Among the rusts, the leaf rust *Puccinia triticina* in known to occur in all wheat growing area of the would including Karnataka. Peninsular zone in general and Karnataka in particulars play an important role in wheat rust epidemiology. It serves the donor of stem and leaf rust inoculums to different parts of the country. Dr. Kalappanavar analyzed the occurrence of all the race pattern and said pathotype 121R63-1(77-5) showed the highest frequency. Totally 25 isolates of *Puccinia triticina* were subjected to DNA profiling. He highlighted the threat posed by new race Ug 99. This race has virulence on *Lr* 31, *Lr* 24 and *Lr* 36 genes which are very common in the present cultivated wheat. He stressed on tracking of pathotypes, prediction and development of host resistance programmes.

Recommendations

I. Measures to increase NAAS rating of the journal

1. Consider minimum two years/season data for research paper processing
2. Data of recent four years should be considered
3. Paper should carry minimum two citations of Indian Phytopathology

II. Emerging new sciences/diseases in plant pathology

1. Nanotechnology in plant disease management
2. Foliar blight of kodo millet, Cocoa pod rot, Leaf curl virus in sunflower, Folier disease of Bt-cotton

III. New molecules in disease management

1. Cabrio top 60% WG (Metiram 55% + Pyraclostrobin 5% WG) against cercospora leaf spot of green gram @ 125g/500 lit. of water.
2. Penflufen 154 + trifloxystrobin 154-308 FS against seed and seedling diseases of groundnut @ 1ml/kg of seed.
3. Ergon (kresoxim -methyl 44.3%sc w/w) - a versatile fungicide cum yield enhancer for the control of rice neck blast @ 250g a. i. /hectare
4. New molecules flupicolide + fosetyl AI in management of downey mildew of grapes while fluxapyroxad + difenconazole was found effective in management of powdery mildew of grapes.
5. Kolenashak (Potassium Phosphonate) against koleroga of arecanut
6. Fluxopyroxad + Epoxiconazole 62.5g/l EC (Adexar 125g/l w/v EC) against rust disease on sorghum
7. Fluopyram 200+Tebuconazole 400 SC on powdery mildew and anthracnose of chilli
8. CCPPL-333 (tricyclazole 33.3% + azoxystrobin 16.7% sc) against sheath blight, brown spot and blast diseases on transplanted rice @750 ml/ha
9. Fluxapyroxad 250 g/l + Pyraclostrobin 250 g/l 500 SC against powdery mildew disease of mango @ 200ml/ha
10. Benalaxyl 8% + Mancozeb 65% (73%) WP (Premix) against Late Blight of Potato @ 3000g/ha

Delhi Zone

Zonal President: Dr. K.S. Hooda
Zonal Councillor: Dr. Vaibhav Kr. Singh

Delhi Zone Meeting & National Symposium on “Innovative Approaches of Plant Disease Management for Sustainable Development” at Division of Plant Pathology, ICAR-Indian Agricultural Research Institute, New Delhi, January 17, 2015

Zonal Meeting & National Symposium on “*Innovative Approaches of Plant Disease Management for Sustainable Development*” was inaugurated, Prof. B.L. Jalali, Ex-Director of Research, HAU, Hisar; Dr. P.K. Chakrabarty, Assistant Director General (PP&B), ICAR, New Delhi; Prof. Pratibha Sharma, Secretary, Indian Phytopathological Society, New Delhi; Dr. Rashmi Aggarwal, Head, Division of Plant Pathology and Dr. K.S. Hooda, President, Indian Phytopathological Society (Delhi Zone), New Delhi.

At the outset, Dr. K.S. Hooda, President, IPS (Delhi Zone) formally extended his heartiest welcome to the dignitaries and delegates to the symposium.

Prof. B.L. Jalali, appreciated the organizers to initiate discussion on such a very important topic; apprised the house about the alarming issues that are the major limiting factors of today's agriculture like health hazards due to high pesticide use, soil health, global climate change and its consequences in the disease and pest population. Dr. Jalali categorically pointed out the changing scenario of disease/ pest problems in the country and emphasized the role of innovative strategies to arrest the pathogen progress successfully. He emphasized on deployment of resistant genes; tailoring variety having in-built resistance to diseases; and further stressed upon the need to initiate research



Inauguration of the symposium



Poster presentation in the symposium

on disease dynamics in different cropping systems under changing climatic conditions. Rice-Wheat cropping system is gradually causing erosion of soil health. The disease management issues become more important in changing global environment (rise in sea level, increase in incidence of pests etc.) and thus are posing major challenges to pathologists. Trans-boundary migration of pests like Ug99, blast of bajra, blast of wheat, late blight of tomato is another challenge to quarantine. He felt the dire need of establishing strong Plant Bio- security System in the country.

Recommendations

1. Host plant resistance is first and foremost indispensable component of IDM and therefore, resistance breeding should be a mandatory requirement of Crop Improvement Program of all research organisations.
2. Cropwise innovative approaches both in conventional as well as conservation agriculture



Oral presentation by the young researcher in the symposium

need to be identified and validated in multilocation trials across the country. Outcome of these studies will be helpful in development of niche based IDM modules.

3. More work on cross talk between plant, endophytes and microbes; non-host resistance; cultural practices; analysis of pathogen virulence is required for sustainable management of plant health.
4. RNAi technology can be exploited for development of transgenic lines against threatening plant viral diseases afflicting different crops.
5. In contrast to registration of synthetic pesticides, there is need to devise separate procedure for registration of biopesticides by Central Insecticide Board.
6. There is need to strengthen Plant Bio-security System in the country so that entry of invasive species of pathogens could be prevented.



Delegates of the symposium

Western Zone

Zonal President: Dr. B.M. Waghmare
Zonal Councillor: Dr. Sunita J. Magar

Western Zone Meeting & National Symposium on “Plant Pathology: Disease Diagnosis and Management for Sustainable Agriculture” at Department of Botany, Maharashtra Mahavidyalaya, Nilanga, Maharashtra, January 24-25, 2015

National Symposium (West Zone) on “**Plant Pathology: Disease Diagnosis and Management for Sustainable Agriculture**” was hosted during January 24-25, 2015, at the Department of Botany, Maharashtra Mahavidyalaya, Nilanga in collaboration with the Department of Plant Pathology, College of Agriculture (Latur), Vasantnao Naik Marthwada Krishi Vidyapeeth, Parbhani. A total of 261 research paper abstracts received (Prof. M.J. Narsimhan Academic Award Contest = 09, Lead Lectures = 17, Oral = 102 and Poster = 133) are being published in the Souvenir and Abstracts Book.

Dr. C.D. Mayee, Former Chairman, Agricultural Scientists Recruitment Board, New Delhi; Dr. Shivajirao Patil Nilangekar, Ex. Chief Minister of Maharashtra and President, M.S.S., Nilanga; Dr. B. Venkateswarlu, Hon. Vice-Chancellor, VNMKV, Parbhani and Dr. P. Vidyasagar, Hon. Vice-Chancellor, SRTMU, Nanded, who were supposed to grace the

Inaugural function couldn't be able due to instantly raised circumstances. However, the function was chaired by Adv. Murlidharrao Mulje, Secretary, M.S.S., Nilanga, who in his presidential address urged the plant protection Scientists to work for enhancing production and productivity in agriculture to guarantee the food security in the country. Prof. C. Manoharachary, as chief guest of the function addressed the gathering and focused on scope and importance of biodiversity for sustainable agriculture. Further, Dr. S.D. Sawant, Director (NRC on Grape, Pune) highlighted the adverse effects of agrochemicals on human health and environmental pollution. Dr. B.B. Bhosle, Director of Extension, VNMKV, Parbhani addressed that unless and until the research done in laboratories is reached to the farmers fields, there will not be upliftment in the socio-economic status of farmers in the country. Adv. Murlidharrao Mulje, Secretary, M.S.S., Nilanga delivered his presidential address to the gathering.



Release of Abstract and Souvenir in Inaugural Session



Media coverage

Introductory remarks were given by Dr. V.L. Yerande, Principal, M.M. Nilanga, Dr. B.M. Waghmare, Organizing Secretary delivered welcome address and the vote of thanks were expressed by Dr. A.P. Suryawanshi, Head (Pl. Pathology), VNMKV, Parbhani.

There were 11 sub-themes distributed amongst five Technical Sessions. Each technical session encompassed the lead lectures of the eminent Plant Pathologists, oral and poster paper presentations.

Prof. M.J. Narasimhan Merit Academic Award Contest

Out of Nine registered contestants, only five viz., P.G. Chavan, B.S. Bhatt, V.S. Chatge, Madhuri Katkar and R.K. Dhabale presented their research work. Based on performance evaluation, the jury declared the nominations of Bhavin S. Bhatt and Madhuri Katkar for their participation in the National Symposium of IPS being organized at ICAR-Indian Institute of Spices Research, Kozhikode, during 16-17. March 2015.

All the Chairman's presented brief reports of their respective Technical Sessions. Certificates to the Award Winners were distributed with the auspicious hands of the dignitaries on the Dias. The function concluded with Vote of Thanks expressed by Dr. Sunita J. Magar. The Symposium has got wide publicity in Electronic media (SAAM Marathi Channel, Regional TV) and in Print media (reputed National and Regional News Papers).



Delegates of the symposium

Eastern Zone

Zonal President: Dr. Jyoti Kumar
Zonal Councillor: Dr. Manoj Kr. Barnwal

Eastern Zone Meeting & National Symposium on “Advances in Phytopathological Research in Globalized Era with Reference to Eastern Region” at University Department of Botany, Ranchi University, Ranchi, Jharkhand, January 29-30, 2015

The symposium was conducted during 29-30th January, 2015. About 60 delegates from different Universities research institutes of different states in eastern region attended the Symposium. The symposium was inaugurated on 29th January by Professor Dr. Lakshmi Narayan Bhagat (Honorable Vice Chancellor, Ranchi University, Ranchi), Dr. M. Raziuddin (Pro-Vice Chancellor, Ranchi University, Ranchi), Dr. Ramesh Kumar Pandey (Dean faculty of Science and Head University Department of Botany, Ranchi University, Ranchi), Dr. Jyoti Kumar (Zonal President, Indian Phytopathological Society, Eastern

presence of Dr. G.S. Dubey, Ex Dean PG cum DRI BAU, Ranchi and Dr. R.N. Verma, who were facilitated this Symposium. Distinguished guest Dr. R.C. Mohanty of Utkal University, Orissa was also felicitated. Other dignitaries present were, Dr. Shivendra Kumar, FPSI, Ex-Principal Scientist and Head, ICAR-RCER, Research Centre, Ranchi; Dr. Mukund Variar, CRURRS, Hazaribag; Dr. Dipankar Maiti, CRURRS, Hazaribag; Dr. N.C. Mandai, Visva Bharti, Sriniketan, West Bengal etc.

In all 84 abstracts were accepted for the symposium, including five lead talks and two submissions for Prof.



Inauguration of symposium

Zone), Dr. Anjani Kumar Srivastava (Ex Director Higher Education Jharkhand and Ex Pro Vice Chancellor Yinoba Bhave University) and Dr. Hanuman Prasad Sharma (University Department of Botany, Ranchi University, Ranchi). The occasion was graced by the

M.J. Narsimhan Merit Academic Award contest. Fourteen oral presentations and 28 posters were presented under nine sub-themes viz.: (1). Plant Micrope Interaction and Eco friendly Management of Plant Pathogens; (2). Climate change and emerging



Group photograph of the delegates

plant diseases; (3). Disease diagnosis-traditional and modern approaches; (4). Epidemiology and plant disease forecasting; (5). Role of biodiversity, biotechnology and bioinformatics in plant pathology; (6). Mushroom: exploration, cultivation and their diseases; (7). Host Plant Resistance (HPR); (8). Biotic and abiotic stress management for plant disease control; (9). Plant disease management through traditional and modern approaches. Five lead talks were presented by Dr. M. Variar, Dr. D. Maiti, Dr. S. Kumar, Dr. A.K. Mitra, Dr. N.C. Mandal. Papers under sub-theme were presented in oral and poster presentations. In addition, one session was conducted for MJ Narsimhan Merit Award contest. Beside oral presentation, 3 posters under sub-theme 1 and 9 were presented in separate sessions.

In the valedictory session (30th January) the rapporteurs presented the reports of each session. Twenty seventh Annual General Meeting of Indian Phytopathological Society (Eastern Zone), 2014 was organized before the valedictory function.

Recommendations

Based on the reports of the technical sessions, following recommendations have come out:

1. Guava wilt is a major problem in its cultivation in India including Eastern Region also. Disease management could be achieved by dense planting of trees, use of biocontrol agents like *Aspergillus niger*, *Gliocladium virens*, *Pseudomonas fluorescens* and VAM at the time of planting and use of resistant rootstock from Chittidar, Guatemala and *P. guanese*.
2. Integration of AM supportive crop management components to develop an eco-friendly management package for enhancement of P nutrition of upland rice and integration of AM fungal inoculation with the maize-horse gram (*Dolichos biflorus* L.) rotation under optimum off-season tillage schedule.
3. Breeding of varietal resistance as a means to control the diseases.
4. Research and study on plant quarantine in eastern region is to be promoted for sustainable crop production and marketing.
5. Research on mushroom cultivation to be stressed knowing the fact about its nutritional benefit and its role in livelihood promotion.
6. Farmer's friendly cultural and biological management of diseases should be emphasized.

North-Eastern Zone

Zonal President: Dr. S.V. Ngachan
Zonal Councillor: Dr. Pankaj Baiswar

North-Eastern Zone Meeting & Symposium on “Holistic Plant Health Management in Organic Agriculture” at ICAR Research Complex for NEH Region, Umiam, Meghalaya, February 10-11, 2015

Symposium was jointly organized on 10-11th Feb, 2015 by Zonal chapter, North Eastern Zone, Indian Phytopathological Society and ICAR Research Complex for NEH Region, Umiam, Meghalaya. Dr. SV Ngachan was the chairman of the organizing committee and Dr. Pankaj Baiswar was the organizing secretary of the Symposium.

Around 60 delegates registered for the symposium and delegates were from Assam Agricultural University (AAU), College of Post Graduate studies, Central Agricultural University (CAU), SASRD Campus, Nagaland University, KVKs and from ICAR Research Complex for NEH Region including the regional centers.

Total fifty abstracts were received (Twenty six oral and twenty four poster presentations). Poster and oral presentations were attended by several participants in five sessions.

Very informative lead lectures were presented by Dr. L. Daiho and Dr. D. Majumder. Presentations were mainly focused on bacterial and fungal antagonists, management of pathogens in organic agriculture,

mass multiplication and formulations of bioagents, compatibility studies, molecular characterization, damage associated molecular patterns etc.

MJ Narasimhan Merit Academic award nominations for North Eastern Zone (IPS) were done by a committee - Dr. S.V. Ngachan (Chairman), Dr. Satish Chandra (Member) and Dr. N. Tiameren Ao (Member). Total six participants made the presentations during this session. Ms. Sarodee Boruah and Dr. Amrita Banerjee were nominated from this zone by the committee. Certificates were also distributed during the valedictory session.

Souvenir and abstracts compilation (Printed) was also distributed during the symposium.

A meeting chaired by Dr. SV Ngachan, President North Eastern Zone, Indian Phytopathological Society was also convened in the presence of members and participants. Strengthening this society, inspiring students for quality and cutting edge research and increasing the interaction among the members of this society were discussed in detail.



Inauguration of the symposium



Mid-Eastern Zone

Zonal President: Dr. S.P. Pathak
Zonal Councillor: Dr. H.K. Singh

Mid-Eastern Zone Meeting & National Symposium on “Recent Advance in Diagnosis and Management of Diseases of Field and Horticultural Crops” at N.D. University of Agriculture and Technology, Faizabad, Uttar Pradesh, February 28-March 01, 2015

In the inaugural function the dignitaries present on the dais were Prof. Akhtar Haseeb, Hon’ble Vice chancellor, N.D. University of Agriculture and Technology, Kumarganj, Faizabad as Chief Guest, Dr. A.K. Mishra, President of IPS, Head Division of Plant Protection CISH, Lucknow, as special Guest and Dr. Dinesh Singh, Principle Scientist, IARI, New Delhi, Treasurer of IPS, presided over the function. Dr. Bhagwan Singh, Director Research, Convener, Dr. S.P. Pathak, Zonal President of the Society and organizing Secretary, and Dr. H.K. Singh, Zonal Councillor and Treasurer of the Society, were also presided over the function on dais. The function inaugurated with lighting of lamp by the chief Guest along with other dignitaries present on dais. Convener of the seminar Dr. Bhagwan Singh gave the warm welcome address. Introductory remarks about the Indian Phytopathological society was delivered by Dr. Dinesh Singh, Principle Scientist,

IARI, New Delhi and Treasurer of the Society and give the emphasis on publication of on line Journal of Indian Phyto pathology. Special Guest Dr. A.K. Mishra delivered the keynote address. He said that the plant diseases play a vital role in Indian Horticultural crops. In recent years, growers become more dependent on agro-chemicals but increasing use of chemicals also caused several negative effects and lately people realized its negative effect on soil, human health and environment. Thus, integrated disease management is being considered important and useful and needed to be adopted vigorously. Chief Guest Hon’ble Vice Chancellor Prof. Akhtar Haseeb while addressing to the delegates, said, “I am extremely happy that the Indian Phytopatological Society, New Delhi has chosen our university as a venue to host the Annual meet of its Mid-Eastern Zone and to hold a National Symposium. Since this University has taken long stride



Release of Abstract and Souvenir in Inaugural Session



in minimizing the crop losses due to pest and diseases, using effective and safe agro-chemicals but the modern crop production will continue to require diversity of approaches. Many exciting eco-friendly areas exist for control of plant diseases, search for natural antagonistic microbes and strategies for selection, collection, handling mechanism and commercial evaluation of such microorganisms is the need of the time for younger generation. We should accept that the “Population, poverty and pollution” are the evils of the present generation and all of them should be hit simultaneously not one by one. Then only we can hope a better future for handling over the next generation. I sincerely wish that the outcome of scientific and technical deliberations should provide necessary inputs to the Researchers, Administrators and Policy makers for preparing the strategic Research, Extension and Development plans to overcome the gloomy situation in the most effective way.

Recommendations

The following recommendations were immures from the discussion and deliberations

- Nematode problem a medicinal and aromatic plant is on rising and caused significant damage to these plants. Plant parasitic nematodes

decrease the yield of plant secondary metabolites. The best management practice to manage rease pants is microbial management through use of plant growth promoting bacteria, nematode parasitic bacteria and fungi. In fungal bio agent *Trichoderma harzianum* play major role to decreases nematode population in soil, enhance the crop yield, and plant secondary metabolites.

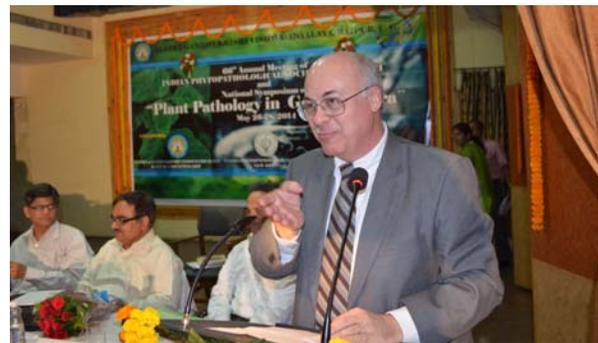
- Recent practices in management of priority diseases of Mango and Guava were discoursed and make recommendations for powdery mildew, spray of wetable sulphur (0.3%) during second week of march, for Mango malformation, regular removing of malformed panicles, application of NAA @ 200 ppm during October and spry of carbendazim 0.1% at 15 days interval during October and February. For dieback disease management use of healthy planting material, eradication of infected branches (10 cm below the infected site) and after that spray of copper oxychloride @ 0.3%. For browing problems spray of 2.0% neem oil to reduce the incidence.
- In case of Guava, wilt is a serious problem and it will be managed through uprooting the infected plants, use of neem cake, mahua cake, intercropping with turmeric and marigold etc. This disease is effectively managed through use of bio agents like *Aspergillus niger* strain AN17 and *Trichoderma harzianum*.

National Symposium: 2014

National Symposium on “Plant Pathology in Genomic Era” held at Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh, May 26-28, 2014

National Symposium on “Plant Pathology in Genomic Era” was held from May 26-28, 2014 at Indira Gandhi Krishi Vishwavidyalaya, Raipur. The inaugural ceremony commenced with the National Anthem followed by invocation and lightening of the lamp by honorable dignitaries. The Honorable Vice Chancellor of IGKV, Dr. S.K. Patil who presided the inaugural session welcomed the august gathering of delegates from all over India. Thereafter Prof. Pratibha Sharma Secretary, IPS enlightened the gathering about history and legacy of IPS and also some stalwarts who have been torchbearers of Plant pathology igniting and inspiring the whole generation with scientific temper for years. The theme of the Symposium was brought before the audience by Dr. U.S. Singh, Senior Scientist and South Asia Regional Project Coordinator IRRI Phillipines.

The keynote address on “Recent Advances in Integrated Disease and Pest Management” was given by Dr. Peter Kenmore, Representative of FAO, UN. He exemplified the examples of Mizoram and Meghalaya as states wherein there has been a huge decline in the use of insecticides without compromising with the



Key note address by Dr. Peter Kenmore



Inaugural session of symposium at Indira Gandhi Krishi Vishwavidyalaya, Raipur May 26, 2014

yield *per se*. Near about 65% use of insecticides in India is unnecessary from crop yield point of view which could be brought down to reduce the production cost in farming.

Dr. U.S. Singh in his presidential lecture stressed on the management of plant diseases by developing high yielding varieties coupled with resistance against biotic stresses through intense resistance breeding programmes led by advances in biotechnology and genomic research. The need of the hour is to bring a decline in dependence of pesticides and insecticides.



Presidential lecture by Dr. U.S. Singh

Awards/Honours

The following members were awarded during the symposium

IPS recognition award 2013 was conferred to Dr. D. V. Singh, Dr. S. J. Kolte and Dr. V.S. Trimurthy for their immense contributions in the field of Plant Pathology.

The following award lectures were delivered during the symposium

Professor B.B. Mundkur memorial award lecture was delivered by Dr. T.R. Sharma on the topic “Decoding Plant Genomes for Mining Disease Resistance Genes”. He emphasized on use of genome sequences for in silico identification of SSR and SNP



Mundkur Memorial Award Lecture by Dr. T.R. Sharma

markers, mapping of different genes as well as designing gene specific primers for the cloning of genes and allele mining in related wild species and land races. Rice blast resistance gene Pi54 mapped in Tetep rice line and linked with specific DNA markers has been introgressed in mega varieties of rice using MAS.

Professor S.N. Dasgupta memorial award lecture was delivered by Dr. H.S. Prakash, on the topic “Perspectives of seed health in genomic era”. The change in seed health testing procedures with time from conventional to serological and nucleic acid based methods was highlighted. Nuclear Internal transcribed spacer (ITS) as fungal barcode and 16S rRNA as



S.N. Dasgupta Memorial Award Lecture by Dr. H.S. Prakash



(a)



(b)



(c)

IPS recognition award received by (a) Dr. D.V. Singh, (b) Dr. S.J. Kolte, (c) Dr. V.S. Trimurthy

bacterial barcode could be one of the major identification tool. Viral diagnostics should be based on serology complemented with amplification of specific genes.

Professor J.F. Dastur memorial award lecture was delivered by Dr. Prasoon K. Mukherjee on the topic “*Trichoderma* Genetics, Genomics and Beyond” He emphasized on the importance of diversity of *Trichoderma* at species level wherein about 200 species have been reported. Different mutants can be induced by radiation. Genomics driven future research for identification of traits associated with particular strain, development of molecular markers for early screening, and identification of novel secondary metabolites with their far-reaching role in agriculture and medicines. He also compared the genome of *T. virens*, *T. reesi* and *T. atroviridae*. *T. virens* and *T. reesi* has two siderophore gene clusters while *T. atroviridae* has only one siderophore gene cluster. *T. virens* endochitinase induce defence pathways in plants.



Dastur Memorial Award Lecture by Dr. Prasoon K. Mukherjee

Prof. A.K. Sarbhoy memorial award lecture was presented by Dr. M.K. Naik on the topic “Exploring broad spectrum antibiotic genes of fluorescent *Pseudomonas* in sustainable disease management. He emphasized the application of bio-control agents and PGPR as the most important “green approach” for food security. He also explored various antibiotic producing fluorescent *Pseudomonas* for crop disease control. More particularly “phenazine” isolated from *Pseudomonas aeuroginosa* was effectively applied against sheath blight disease rice. He elaborated about different formulations of *P. putida*, compatibility

of bioagents with fungicides, insecticides and botanicals. The IPM schedule developed by him for chilli disease and its success story impressed the gathering immensely.



Sarbhoy Memorial Award Lecture by Dr. M.K. Naik

Award Contest

Prof. M.J. Narasimhan Academic Merit Award

Mr. Sandeep Kumar, IARI, New Delhi was for awarded Prof. M.J. Narasimhan Academic Merit Award Contest for his presentation on “Studies on virus(es) associated with grapevine leaf roll disease in India”.



M.J. Narasimhan presentation by Mr. Sandeep Kumar

K.P.V. Menon Best Poster Award

The following name for K.P.V. Menon Best Poster Award were recommended:

- i. First prize: “Efficiency of different *Trichoderma* isolates on plant on plant growth promoting activity in rice (*Oryza sativa* L.)” by Kale Sonam Sureshrao, A.S. Kotasthane, Kadu Tanvi Pradeeprao and Chavan Narendra Rameshsing



Release of book "Diseases of Vegetable Crops: Diagnosis and Management" during the conference at IGKV, Raipur



Poster presentation during the conference at IGKV, Raipur

- ii. Second prize: "SYBR green based duplex qRT-PCR detection of Tomato leaf curl New Delhi virus-potato with *Potato virus X* and *Potato leaf roll virus*" by A. Jeevalatha, Praiyanka Kaundal, Anupama Guleria, S. Sundaresha, R.P. Pant and B.P. Singh

- iii. Third prize: Performance of wheat genotypes over the years against leaf rust caused by *Puccinia triticina* Eriks. by I.K. Kalappanavar, S.V. Kulkarni, G.S. Arunakumar and P.E. Pradeep

Commendation Certificate

- (i) In-silico analysis for xa13 gene and its introgression in poornima by marker assisted breeding by Kadu Tanvi Pradeeprao, A.S. Kotasthane, Kale Sonam Suresh Rao and Chavan Narendra Rameshsing
- (ii) Identification of wheat genotypes resistance to yellow rust at seedling and adult plant stages by Vaibhav K. Singh, U.D. Singh, R. Gogoi, R.C. Mathuria, M.M. Jindal, M.S. Saharan, S.C. Bhardwaj and Indu Sharma

66th Annual General Body Meeting

66th Annual General Body Meeting

66th Annual General Body Meeting of the Society was held at Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh on May 28, 2014. The following decision were taken and approved by the General body:

- i. It was decided to give an award to the best zone. Guidelines for nomination of IPS awards for best zone will be developed in due course.
- ii. GB agreed on proposal for paid copy editor for editing the manuscripts by professional language editors. The charges should be borne by the authors.
- iii. The number of FPSI every year will 1% of total number of Life members.
- iv. Creation of new zone *i.e.* North-East Zone: The GB agreed on the creation of new North-East Zone to boost up their active participation in the IPS activities in North-East states. The 8 states North-East will be in the North-East Zone
- v. Annual Meeting and National Symposium (2014-15): The society has received two proposals for the next annual meeting (i) University of Mysore by Dr. S.R. Niranjana and (ii) IISR, Calicut by Dr. M. Anandaraj, Director, IISR and President, IPS. In view of the President's interest and responsibility to conduct the annual meeting & national symposium, the next venue will be held at IISR, Calicut which will be likely to be held in February/March 2015.
- vi. International Conference 2016: It is a pleasure to announce that the 6th International Conference of the Society will be held in February 2016 at IARI, New Delhi on the topic "Plant,



66th Annual General Body Meeting of the Society held at Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh, May 28, 2014

Pathogens and People” with the mission **“Challenges in Plant Pathology for the benefit of humankind”**. First circular for the same will be issued to all the members very soon.

Awards

On the basis of nominations received from EC, the Award Screening Committee has recommended the following names for different awards of the Society:

1. Mundkur Memorial Award : Dr. M. Krishna Reddy, IIHR, Bangalore
2. M.S. Pavgi Award : Dr. Akhtar Haseeb, AMU, Aligarh
3. Dastur Memorial Lecture Award: Dr. P. Chowdappa, IIHR, Bangalore
4. K.C. Mehta and Manoranjan Mitra Award: Dr. Rashmi Aggarwal, IARI, New Delhi
5. J.P. Verma Memorial Lecture Award: Dr. Ramesh Chand, BHU, Varanasi
6. Sharda Lele Memorial Award: Dr. Pratibha Sharma, IARI, New Delhi
7. M.K. Patel Young Scientist Award:
 - (i) Dr. T.S.S.K. Patro, Vizianagaram, Andhra Pradesh
 - (ii) Dr. P. Srinivas, Bhubaneswar, Odisha
8. Fellow of Indian Phytopathological Society (FPSI):

This year GB decided to increase the number of FPSI to 1% of total number of Life Members. Hence, this year a total 16 members have been awarded fellowship of the society, which is as follows:

 - (i). Dr. Kalyan K. Mondal, Principal Scientist, IARI, New Delhi
 - (ii). Dr. V.K. Barnwal, Principal Scientist & I/c ACPV, IARI, New Delhi
 - (iii). Dr. Jagdish Kumar, Principal Scientist & Head, IARI, Regional Station, Wellington
 - (iv). Dr. K.S. Hooda, Principal Scientist, Directorate Maize Research, New Delhi
 - (v). Dr. M.S. Ahmad, Demonstrator, T.M. Bhagalpur University, Bihar
 - (vi). Dr. P. Nallathambi, Principal Scientist, IARI, Regional Station, Wellington
 - (vii). Dr. M.S. Patil, Professor, University of Agricultural Sciences, Dharwad
 - (viii). Dr. Indu Sawant, Principal Scientist, NRC for Grapes, Solapur, Maharashtra
 - (ix). Dr. T. Makesh Kumar, Principal Scientist, CTCRI, Thiruvananthapuram, Kerala
 - (x). Dr. K.S. Meena Kumari, Ex-Registrar, ANGRAU, Hyderabad
 - (xi). Dr. K.K. Pandey, Head, Central Potato Research Institute, Shimla
 - (xii). Dr. S.K. Jain, Principal Scientist & I/c Head, VPKAS, Almora
 - (xiii). Dr. A.N. Sabalpara, NAU, Navsari, Gujarat
 - (xiv). Dr. V.I. Benagi, UAS, Dharwad, Karnataka
 - (xv). Dr. V.B. Nargund, UAS, Dharwad, Karnataka
 - (xvi). Dr. B. Bhadraiah, Satavahan University, Karimnagar, Andhra Pradesh



Brain Storming Sessions

Brain Storming Session on “Plant Health Clinic: Importance and Scope” at Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh, May 28, 2014

Brain storming session on Plant Health Clinics: importance and scope” was organized on May 28, 2014 at IGKV, Raipur during IPS National Symposium. Dr. Pratibha Sharma, Secretary, IPS welcomed the senior plant pathologists and all the participants and initiated the discussion on the topic.

Dr. U.S. Singh, President, IPS : Remote area farmers are most constrained to get their samples diagnosed. Most of the times scientists also get confused with the correct identification of disease. Can the plant disease diagnosis mimic the medical diagnosis? What may be the scope of mobile plant clinic? Through IPM modules are available it is different to be followed at field crops. There has to be ETL based recommendations for disease management. Five years programme on Plant Doctor Programme can be a possible strategy to develop a cadre to cater the need of disease diagnosis and management. There has to be some accreditation programme to accreditate the cadors (Plant doctors). May be few universities can start the programme and the IPS or similar societies can accreditate the passed out cadre.



Dr. U.S. Singh, President, IPS and Sr. Scientist, IRRI, New Delhi presentation in Brain Storming Session at IGKV, Raipur

Dr. M. Anandaraj, President-elect IPS: In India despite having best of the talent pool of scientists and technologies the same do not reach the farmers. Targeting the market (Haat) place for interaction with the farmers coming from different villages could be one possible avenue. ‘Agropedia’ is a new initiative where farmer users can contribute his concerns and practices. Factors starting from soil nutritional states to climatic conditions and pathogen dynamics affect the plant health. Nutritional deficiency may also aggravate the disease. Besides developing the pool of cadres the idea of PDC be including ADG (PP), all AICRIPs, Director T.P. Rajendran.



Dr. M. Anandaraj, President-elect IPS and Director, IISR, Calicut, Kerala presentation in Brain Storming Session at IGKV, Raipur

Open discussion by the delegates in brain storming session:

Dr. M.K. Biswas, Visva Bharati, West Bengal: He shared his experience that plant chemical dealers are more accessible to farmers. Also some of the diseases are of unknown etiology and some of them are related to soil nutrition deficiency. So a team of scientists be included in plant doctor team.



Open discussion by the delegates in brain storming session

Dr. M.P. Thakur, IGKV, Raipur: The research organizations based on a specific crops have several diagnostic tools especially for viruses, these tools are needed to be pooled at national level by IPS. Rather than training the farmers the pesticide dealers can be trained for being the advisory point in the villages,. The dealer can call the expert when farmer raises a concern to the dealer. Use of ICT can be utilized for identification and recommendations.

Dr. P. Narayan Reddy, Hyderabad: IIIT Hyderabad already documented the diseases and developed the tools to take the symptoms from the field and send to expert to get recommendation. In India we have poor documentation of different diseases in different parts which may serve. We have lost the basics of diagnostic methodology so we have to modify the UG and PG curriculum with proper practical training. We do not have the basic diagnostic facilities even at premier institutes. CABI, DBT, ICAR – based project for plant diagnosis (2010) plant disease clinic for delivering diagnostic services to farmers though initiated has lost its sheen. PDC should have person with long field exposure. A. P. Govt came up with a programme to establish real time diagnostic services. We all should sharpen our diagnostic skill, under guidance.

Dr. C. Gopala Krishnan, IIHR, Bangalore: Pomegranate affected by BLB was diagnosed and treated by IIHR at farmers field. GKVK, UAS, state Dept, have PDCs sponsored by NHM, But there are not having very well trained personnel.

Dr. Pratibha Sharma, IARI, New Delhi: The PDC concept has to be totally oriented towards the farmers. The society can come with a white paper on diagnostic services which may go to the govt. for policy decisions. The PDC, also will create job opportunities.

Dr. A.K. Saxena, IIHR, Bangalore: Most of the scientists/researchers are not moving to field. Farmers are cheated by touts and they come in the scientist when the problem is aggravated. New molecular tools are now available and should be recommended to farmers. Networking of people may be initiated.

Dr. V.S. Trimurthy, IGKV, Raipur : Diagnostic and forecasting should go hand in hand.

Dr. Anil S. Kotasthane, IGKV, Raipur: We have to diagnose the disease before the disease sets in.

Dr. R.S. Mishra, NDUAT, Faizabad: A regulatory authority should be there to regulate the PDC

Dr. R.K. Sharma, IARI, New Delhi : We should concentrate only on detection and diagnosis.

Dr. T. Makesh Kumar, CTCRI, Thiruvananthapuram, Kerala: The information on disease pictures be put on the web by the expert institutes which can be linked to PDC call centres. Training programme on disease diagnosis has to be done. Persons from traditional universities may be brought in to the network of specialists.

Dr. T. G. Nageswar Rao: Post of extension pathologists can be created

Dr. M. Anandaraj, IISR, Calicut: KVKs have to be integrated in the system involve CIB

Dr. R.M. Gade, PDKV, Akola: In Krishi doot yojna one person from a village is trained for pest and diseases, seed treatment and disseminate the technology (Ratan Tata funded). The Krishi doot serves as the link person between scientists and farmers.

Dr. Dipankar Maiti, CRURRS, Hazaribag: Village level PDC personnel are needed. APDC course/diploma can be initiated.

Dr. S.J. Kolte, Pune: Agricultural practices have regular problems which may not be very easily diagnosed. Bench mark survey of agricultural practices should be undertaken.

Dr. B. Pushpavathi, ANGRAU, Hyderabad: Network project on diagnosis is the need of the hour. Plant health clinic and plant disease clinic distinction has to be done. Specialists on different crop/disease be identified. The consultancy provided at PDC should be free of cost.



Brain Storming Sessions

Brain Storming Session on “Shifting Patterns of Major and Minor Rice Diseases as Function of Climate Change and Roadmap to Address the Issue” at ICAR-Central Rainfed Upland Rice Research Station, Hazaribag, Jharkhand, October 14 , 2014

The Brain Storming Session was conducted on 14 October, 2014 at CRURRS, Hazaribag. About 25 delegates from different ICAR institutes and Universities (SAUs and other Universities) participated. Dr. Dipankar Maiti, Principal Scientist, CRURRS was the convener of the program and conducted the whole session.

The meeting was inaugurated by Dr. Anjani Kumar Srivatsava, Professor, University Department of Botany, Ranchi University, who was the chief guest of the inaugural session. Agenda for brain storming session was presented by Dr. Mukund Variar, Officer-In-Charge, CRURRS, Hazaribag. Dr. S. Kumar (former Head, ICAR Research Complex for Eastern Region, Ranchi), Sister Joseline, Directress, Holy cross, Hazaribag among other delegates from several parts of the country graced the inaugural session. In the following technical session, six lead lectures were presented by invited scientists from different parts of India. Dr. N.P. Mandal, Dr. C.V. Singh, Dr. Yogesh Kumar, Dr. Anantha M.S. and research scholars from CRURRS Hazaribag, Dr. V.K. Singh from KVK Koderma, Dr. R. Dushyanth and Mr. S.N. Chaudhry from KVK Holy cross, Hazaribag were also actively participated in the discussion. The Data on climate change of different regions of India during past several years and their impact on diseases were presented. Evidences and research data on influence of climate change on rice diseases clearly indicated that there is considerable increase in majority of diseases with a few exceptions. Disease severity of different rice diseases across India in last ten years was also presented. New emerging diseases of rice and their occurrence were discussed. For example, Bakane of

rice was less prevalent earlier, is now emerging as major disease. Effect of climate change on drought and its implication on biotic stress was also discussed.

Both negative as well as positive effect of climate change was also talked about. Temperature change (increase) emerged as the main determinant of crop loss even negating the projected positive effects of elevated CO₂ concentration of atmosphere as consequent of Climate change. Rice plants grown in an elevated CO₂ concentration were observed to be more susceptible to leaf blast and sheath blight. However, rising temperature can boost the effectiveness of some resistance genes, such as Xa7, which is more effective against *Xanthomonas oryzae* pv *oryzae* causing BLB. IR-64 was earlier resistant to leaf blast but current reports indicated its susceptibility during recent years. It was also indicated that Environmental instability and increased incidence of extreme weather events may reduce the effectiveness of pesticides on targeted pests. It was also narrated how it is possible to augment and utilize the beneficial micro-flora (e. g arbuscular mycorrhiza and other endophytes) under stressed environments to alleviate nutrient deficits and protect the crop under moisture stress.

The recommendations of the discussion were finalized in the valedictory session. The meeting was ended with vote of thanks presented by Dr. N.P. Mandal, Principal scientist, CRURRS, Hazaribag.

Recommendations

1. Research on need based deployment of genes for abiotic and biotic stress tolerance through genetic engineering is required to be further strengthened.



2. Data sharing with other institutions and group discussion (at least once in a year) needs to be promoted among research groups sharing similar research domains to complement the efforts.
3. Variability Index of rice diseases with reference to base line index need to be drawn very precisely to come out with need of the time roadmap
4. Risk analyses based on host pathogen interactions monitoring is required to be further strengthened
5. IPM should be strongly linked to early warning and decision support systems. The existing systems need to be further strengthened
6. Location specificity agronomic management (e.g., crop configurations and cropping patterns etc.) and other crop culture components promoting micro-climatic change in favor of crop need to be integrated with ICM modules
7. Soil moisture and soil temperature (using Infra-red thermometer) parameters should also be added on list of monitoring weather parameters in all weather stations.
8. Biological control research with end user friendly product should be emphasized upon
9. Strong linkage with stakeholders should be established in formulating any R & D project
10. Exploitation of endophytes imparting plant to tolerate biotic and abiotic stresses should be strengthened.

Mid-Term EC Meeting

The of Mid-term EC meeting of the Society was held on August 11, 2014 at University of Madras, Guindy Campus, Chennai, Tamil Nadu.

Following members of the Executive Council attended the meeting, namely, Drs. M. Anandaraj, President; A.K. Misra, President–Elect; Pratibha Sharma; Secretary; Dinesh Singh, Treasurer; I.K. Kalappanvar, Zonal President (SZ); S.I. Harlapur, Zonal Councillor (SZ); B.M. Waghmare, Zonal President (WZ); Sunita J. Magar, Zonal Councillor (WZ) and Harvinder Kr. Singh, Zonal Councillor (CZ).

Other EC members namely, Drs. K.S. Hooda, Zonal President (DZ); Vaibhav K. Singh, Zonal Councillor (DZ); Jyoti Kumar, Zonal President (EZ); Manoj Kr. Barnwal, Zonal Councillor (EZ); A.S. Kotasthane, Zonal President (CZ); S.P. Pathak, Zonal President (MEZ) and Hemant Kr. Singh, Zonal Councillor (MEZ) could not attend the meeting due to their pre-occupied schedule.

Dr. Pratibha Sharma, Secretary, welcomed Dr. M. Anandaraj, President and other EC members who have taken keen interest to attend this meeting despite their busy schedule.

Secretary briefly presented about overall activities of IPS and highlighted the significant achievement of society and proceedings of Annual General Body Meeting at IGKV, Raipur.

The major decisions taken in this meeting is as follows:

- 1. National Symposium:** President informed the house that the next Annual Meeting will be held in Kerala in February/March, 2015. The exact venue will be decided after December 2014. The President will pursue the matter and finalize the topic, venue and date.
- 2. International Conference:** Secretary informed that the 6th International Conference on “**Plant, Pathogens and People**” with the mission “**Challenges in Plant Pathology for the benefit of humankind**” will be held in February 2016 at IARI, New Delhi. Request for the necessary permission from the competent authority has been sent and after getting the permission, first circular for the same will be issued very soon.
- 3. Enhancement in FPSI Fee:** President Elect, Dr. A.K. Misra has suggested for revision in FPSI fee from Rs. 3000.00 to Rs. 5000.00 for betterment of financial health of the Society. It was agreed by EC members.
- 4. Copy editing and paid reviewing system:** To raise the status of our journal and also reduce the editing/proof reading on editorial board, the President suggested the name of Dr. Yateendra Joshi, Pune, a well-known certified editor in the Board of Editors in the Life Sciences (BELS), for copy editing service of the journal Indian



Mid-term EC meeting of the Society held on August 11, 2014 at University of Madras, Guindy Campus, Chennai, Tamil Nadu



Phytopathology. Secretary will pursue the same with concerned person in consultation with President. It was also suggested that the paid reviewing system may be applied for the next volume *i.e.* January 2015 onwards.

5. **IPS Project - Crop Disease Survey and Surveillance:** EC members agreed that each zone will send the project proposal for the Project: Crop Disease Survey and Surveillance for their zone. The guidelines and proforma of application will be prepared by Drs. R.K. Sharma, Joint Secretary (IPS), Dinesh Singh,

Treasurer (IPS) under the chairmanship of Pratibha Sharma, Secretary (IPS).

Prof. Prof. C.V. Subramanian was felicitated with A.P. Misra Lifetime Achievement Award during the National Seminar on “Biology and Application Potentials of Fungi” organized by Mycological Society of India (Chennai) in honour of Prof. C.V. Subramanian on his 90th Birthday (August 11, 2014) at Centre for Advanced Studies in Botany, University of Madras, Guindy Campus, Chennai, Tamil Nadu.



Felicitations of Prof. C.V. Subramanian with A.P. Misra Lifetime Achievement Award by the EC members of IPS on his 90th Birthday (August 11, 2014) at Centre for Advanced Studies in Botany, University of Madras, Guindy Campus, Chennai

National Symposium: 2015

National Symposium on “Understanding Host-Pathogen Interaction through Science of Omics” held at ICAR-Indian Institute of Spices Research, Kozhikode (Calicut), Kerala, March 16-17, 2015

National Symposium on “Understanding Host-Pathogen Interaction through Science of Omics” was held at ICAR - Indian Institute of Spices Research(IISR), Kozhikode during 16-17 March, 2015.

The event was inaugurated by renowned plant pathologist, Dr. Y.R. Sarma, FAO Consultant and former Director of IISR. In his inaugural address, Dr. Sarma stressed the need to have a better understanding of the complex interaction between the pathogen, its host and the environment for developing effective plant disease management strategies. Integrating such knowledge from diverse disciplines is the key for integrated disease management in complex agricultural production systems. Pointing out several cases of spread of diseases within the country through planting material movement, Dr. Sarma also stressed the need for implementing an effective internal quarantine

system. A strong domestic quarantine can prevent the movement and spread of plant pathogens across geographical regions within the country. He also pointed out the need to develop bio-control agents with multi mode action to make them a viable and economically attractive choice for the farming community for plant disease management.



Inaugural address by Dr. Y. R. Sarma



Release Abstract & Souvenir in the Inaugural session of the symposium at ICAR-Indian Institute of Spices Research, Kozhikode on March 16, 2015



Presidential Address by Dr. M. Anandaraj

Dr. M. Anandaraj, Director, IISR, and President of the Indian Phytopathological Society presided over the inaugural meeting. In his presidential address, Dr. Anandaraj said that the plant pathology researchers should strive to harness the advancements in the science of genomics, proteomics, transcriptomics etc. to address the immediate concerns of the farming community. He stressed that an enhanced understanding of molecular events involved in plant disease development opens up the possibility of evolving new methods for tackling persistent plant diseases.

Dr. S. Devasahayam, Head Division of Crop Protection, Dr. Pratibha Sharma, Secretary, Indian Phytopathological Society and Dr. A.I. Bhat, organizing secretary also spoke on the occasion.



Dr. S. Devasahayam addressing the delegates

Special lecture on “Skill development for plant health management” delivered by Dr. Ravi Khetarpal, CABI, New Delh, India.



Special lecture by Dr. Ravi Khetarpal

The symposium consisted of three technical sessions on aspects like epidemiology, diagnostics, host-pathogen interaction and integrated disease management. A special Industry-Researchers interface session was held to bring about better convergence of research priorities and requirements among the research institutions and industry stakeholders. Apart from this, different memorial award lectures, invited lead lectures and several poster presentations in frontier areas of plant pathology were also conducted during the meeting. About 200 delegates from different universities and institutes from different parts of the country took part in the event.

The symposium recommended the need for strict enforcement of bio-security and domestic quarantine in plant material movement. The forum also felt the need for certification of nurseries engaged in planting material production. It was also decided to convey the need to delineate bio-control from the purview of Central Insecticide Board as a chemical pesticide. Creation of a national database of plant pathogens, more extensive technology demonstration and skill enhancement for plant protection scientists shall be given priority in the activities of the society in the coming years.

Recommendations

Policy

1. Biosecurity and domestic quarantine need to be strictly enforced while importing the planting material and their movement within the country.
2. Interaction with the industry should be encouraged and promoted to reap the power of ‘omics’



3. Plant pathogens from India (viruses, bacteria, fungi, oomycetes and nematodes) may be compiled and ranked as done internationally
4. Quality of planting materials of horticultural crops needs to be ensured through the certification of nurseries.
5. Quality of bio inoculants produced in the country has to be strictly monitored. Presently, bio control agents are under the purview of Central Insecticide Board as chemical pesticides. This needs to be amended and separate guidelines for bio-agents need to be developed.
6. Skill of plant protection scientists and extension workers need to be developed to empower the actual stake holders.

Research

7. Hidden defense pathways in disease resistance may be identified through proteomics and metabolomics.
8. The feasibility of designer fungicides targeting effector molecules may be explored.
9. A national database accessible to all researchers may be created for disease surveillance, linking the existing institutes

Extension

10. Newly developed plant protection technologies should be demonstrated extensively for better adoption by the farming community.

Awards/Honours

The following award lectures were delivered during the National Symposium

Mundkur Memorial Award Lecture: Dr. M. Krishna Reddy delivered lecture on “Phylogeography and molecular evolution of begomoviruses infecting okra” on March 16, 2015.



Mundkur Memorial Award Lecture by Dr. M. Krishna Reddy

J.P. Verma Memorial Award Lecture: Dr. Ramesh Chand delivered lecture on “Diversity, diagnosis and management of bacterial diseases in India” on March 16, 2015.



J.P. Verma Memorial Award Lecture by Dr. Ramesh Chand

Dastur Memorial Award Lecture: Dr. P. Chowdappa delivered lecture on “Recent changes in the Phytophthora populations led to severe outbreaks of foliar blights and fruit rots in vegetable crops in South India” on March 16, 2015.



Dastur Memorial Award Lecture by Dr. P. Chowdappa

Sharda Lele Memorial Award Lecture: Dr. Pratibha Sharma delivered lecture on “Trichoderma- Lab to Field” on March 16, 2015.



Sharda Lele Memorial Award Lecture by Dr. Pratibha Sharma

Award Contest

Prof. M.J. Narasimahan Academic Merit Award

The judging committee recommended the name of Dr. Sushil Kumar Sharma, IARI, New Delhi for Prof. M.J. Narasimahan Academic Merit Award for the paper presentation on “*Genome characterization, infectivity and development of immunodiagnostics for badnaviruses associated with banana*”.



Dr. Sushil Kumar Sharma presentation for Prof. M.J. Narasimahan Academic Merit Award contest

Dr. Nirbhay Kumar Kushwaha, JNU, New Delhi recommended for Commendation Award of Prof. M.J. Narasimahan Academic Merit Award for the paper presentation on “*Histone 2B interacts with replication initiator protein of Chilli leaf curl virus and confers resistance in chilli*”



Dr. Nirbhay Kumar Kushwaha presentation for Prof. M.J. Narasimahan Academic Merit Award contest

K.P.V. Menon Best Poster Award

The following posters were recommended for Prof. K.P.V. Menon Best Poster Award:

- First position – poster entitled “Marker assisted

pyramiding of three genes governing blast resistance (Pi54, Pi1, Pita) into a popular indica rice variety “Samba Mahsuri” by S Gopala Krishnan, R Rathour, P Dwivedi, G Dhawan, U D Singh, T R Sharma, M Variar, S K Prashanthi, P K Bhowmick, M Nagarajan & A K Singh

- Second position – poster entitled “Diagnostics and management of fusarium wilt infecting tomato and chilli” by M Loganathan, V Venkataravanappa, S Saha, S Tripathi, M K Verma & A B Rai
- Third position – poster entitled “A reverse transcription loop mediated isothermal amplification assay for rapid detection of Dasheen mosaic virus in Amorphophallus paeoniifolius” by T Makesh Kumar & S Kamala
- Fourth position – poster entitled “Microarray analysis of Ralstonia solanacearum induced gene expression in Arabidopsis thaliana” by Devendra Kumar Choudhary, Vibhuti Munjal, Neelam Sheoran, R K Saritha, S Gopalakrishnan, Pratibha Sharma, Rashmi Aggarwal & A Kumar
- Fifth position – poster entitled “Real time loop mediated isothermal amplification – an advanced tool for the field diagnosis of Ralstonia solanacearum biovar 3 infecting ginger” by T P Prameela, R Suseela Bhai, A Kumar & M Anandaraj
- Sixth position – poster entitled “Pathogen modulation on host machinery for gaining virulence” by Shweta Roy, Priya Gupta & Ashis Kumar Nandi

Felicitation of awardees during in the Symposium



Felicitation of Dr. T.S.S.K. Patro, Vizianagaram, Andhra Pradesh with M.K. Patel Young Scientist Award



Felicitation of Fellow of the Society (FPSI)



Dr. K.S. Hooda receiving FPSI



Dr. V.K. Baranwal receiving FPSI



Dr. Indu S. Sawant receiving FPSI



Dr. V.I. Benagi receiving FPSI



Delegates group photographs during the symposium at IISR, Calicut

67th Annual General Body Meeting

67th Annual General Body Meeting of the Society held at ICAR-Indian Institute of Spices Research, Kozhikode (Calicut), Kerala, March 17, 2015

Dr. Pratibha Sharma, Secretary welcome M. Anandaraj, President of the Society and also welcome all the members of the Society, who have shown their keen interest in the affairs of the Society and have taken trouble to come over here at Calicut to attend this Annual Meeting and National Symposium.

She informed the house that the journal Indian Phytopathology is up-to-date. March issue of the journal is in process of publication. The contents with abstract is available online. The revision of rating of the journal is being taken up with the NAAS and for the purpose the necessary steps have already been taken. Efforts are being made to get better rating and boost image of the journal nationally and internationally. It was also informed that the Society will organize a brain storming session on *Trichoderma* and *Gliocladium* to review it's status in India and subsequently an international workshop on the same will be conducted along with the International Conference of the Society in October 2016. The Society

has already applied for seeking permission to hold the international conference with the required documents.

The following decision were taken and approved by the General body.

- i. Appreciation certificate for Reviewers: It was decided to give Appreciation Certificate to sincere reviewers by the Chief Editor.
- ii. Travel Allowance (TA) to Executive Council (EC): It was decided that EC is entitled for avail the Shatabdi/Rajdhani Second AC or cheapest air fare to attend the meeting of the Society.
- iii. Open nomination for awards: General Body agreed for open nomination from members for the awards of the Society with as processing fee of Rs. 500.00. The application must be proposed and seconded by two independent Fellows of the Society. The detailed guidelines will be will be made shortly and will available on IPS website.



67th Annual General Body Meeting of the Society held at ICAR-Indian Institute of Spices Research, Kozhikode (Calicut),



- iv. Advisory Board and Honorary Fellows: General Body agreed on addition of the following names for

Honorary Fellow: Dr. Anupam Varma, Dr. C.D. Mayee, Dr. A.N. Mukhopadhyay

Advisory Board: Dr. S. Nagarajan, Dr. Y.R. Sarma and Dr. C. Manoharachary

Declaration of Awards

The award review committee has recommended the name for following awards:

1. Mundkur Memorial Award : Dr. H.B. Singh, Banaras Hindu University, Varanasi, U.P.
2. Jeersanidi Award : Dr. R.N. Pandey, Anand Agricultural University, Anand, Gujarat
3. K.C. Mehta and Manoranjan Mitra Award: Dr. J. Kumar, G.B. Pant University of Agricultural & Technology, Pantnagar, Uttarakhand
4. Dastur Memorial Award: Dr. S.C. Dubey, ICAR-National Bureau of Plant Genetic Resources, New Delhi
5. A.K. Sarbhoy Memorial Award :Dr. S.K. Singh, Agharkar Research Institute, Pune, Maharashtra
6. Sharda Lele Memorial Award : Dr. Neeta Sharma, Lucknow University, Lucknow, Uttar Pradesh
7. M.K. Patel Memorial Award :
 - (i) Dr. Dharmendra Kumar, N.D. University of Agriculture and Technology, Kumarganj, Faizabad, Uttar Pradesh
 - (ii) Dr. Pankaj Baiswar, ICAR Research Complex for NEH Region, Barapani, Meghalaya
9. M.S. Pavgi Lecture Award : Prof. Akhar Haseeb, Narendra Deva University of Agriculture and Technology, Kumarganj, Faizabad, Uttar Pradesh
10. Fellow of Indian Phytopathological Society (FPSI)
 1. Dr. R.M. Gade, V.N. College of Agriculture Biotechnology, Yavatmal, Maharashtra
 2. Dr. I.K. Kalappanavar, Agricultural Research Station, Arabhavi, Karnataka
 3. Dr. A.P. Suryawanshi, College of Agriculture, Latur, Maharashtra
 4. Dr. M. Krishna Reddy, ICAR-Indian Institute of Horticultural Research, Bengaluru, Karnataka

5. Dr. S.I. Harlapur, University of Agricultural Sciences, Dharwad, Karnataka
6. Dr. N.P. Dohroo, Dr. Y.S. Parmar University of Horticulture and Forestry, Solan, Himachal Pradesh
7. Dr. R.K. Sharma, ICAR-Indian Agricultural Research Institute, New Delhi
8. Dr. S. Sriram, ICAR-Indian Institute of Horticultural Research, Bengaluru, Karnataka
9. Dr. A. Ramesh Sundar, ICAR-Sugarcane Breeding Institute, Coimbatore, Tamil Nadu
10. Dr. K.B. Yadahalli, College of Agriculture, Hanumanamatti, Karnataka
11. Dr. Gururaj Sunkad, University of Agricultural Sciences, Raichur, Karnataka
12. Dr. S.R. Niranjana, Gulbarga University, Gulbarga, Karnataka
13. Dr. I.K. Das, ICAR-Indian Institute of Millet Research, Rajendranagar, Hyderabad, Telengana
14. Dr. R. Selvarajan, National Research Centre for Banana, Tiruchirapalli, Tamil Nadu
15. Dr. T.S.S.K. Patro, Agricultural Research Station, Vizianagaram, Andhra Pradesh
16. Dr. Amar Nath Singh, Department of Botany, A.N. College, Dumka, Jharkhand
11. A.P. Misra Lifetime Achievement Award (2015)
Prof. A.N. Mukhopadhyay, Former Vice Chancellor, Assam Agricultural University, Jorhat, Assam
12. IPS Recognition Award 2014
 - (i) Dr. B.B. Nagaich, Former Director General, Bundelkhand Farm Development Centre, Hamirpur, Uttar Pradesh
 - (ii) Dr. R.S. Mehrotra, Professor (Retd.), Kurukshetra University, Kurukshetra, Haryana
 - (iii) Dr. M.P. Srivastava, Former Director, Planning and Professor & Head, Plant Pathology, CCS Haryana Agricultural University, Hisar, Haryana
13. IPS Recognition Award 2015
 - (i) Prof. S.M. Paul Khurana, Amity University, Haryana, Gurgaon, Manesar
 - (ii) Dr. C. Manoharachary, Former Dean, Osmania University, Hyderabad, Andhra Pradesh
 - (iii) Dr. D.J. Patel, Ex. Principal & Dean, Anand Agricultural University, Anand, Gujarat



Publications

Journal: *Indian Phytopathology*

Chief Editor's Report 2014-15

The report was presented by the Secretary on behalf of Chief Editor, IPS. During 2014-15, total 202 papers were received through on-line submissions. Out of these, 56 were rejected, 78 published, 38 were in review, 12 have been accepted for next issue and 18 have been sent back to authors for revision. This shows approximately 27% articles rejection rate and at present we do not have any backlog.

In 2014, we had published all the 4 issues timely.

- The 1st issue contained 15 Research Articles, 4 Short Communications, besides one Invited Review Article.
- The 2nd issue contained 12 Research Articles, 7 Short Communications, besides one Review Article.
- The 3rd issue had 17 Research Articles, 4 Short Communications, besides one Review Article.
- Similarly, 4th issue had 15 Research Articles, 4 Short Communications and two award lecture (Prof. S.N. Dasgupta Memorial Award Lecture and K.C. Mehta and Manoranjan Mitra Award-2012).
- Total 59 research articles and 19 short communications published in 2014.

After the Journal has become online, published papers in Indian Phytopathology are accessible to a very large group of scientists and academicians across the world, more than 20 papers have been downloaded, more than 100 times, which are from Vol. 64, 65 & 66. The total downloads till March, 2014 are 10,045.

The Journal is abstracted in 23 online abstracting services, which includes CAB Abstracts, Indian Science Abstracts, Indian Citation Index, Google Search Engine, AGRIS, AGRICOLA, Science Index, Research Gate etc. Around the world, 171 countries are accessing Indian Phytopathology and among them top 5 countries are India, China, USA, Pakistan and Iran.

I highly appreciate the efforts rendered by Editors who helped in refereeing and evaluation of the manuscripts.

Further, I am thankful to all the referees who reviewed the papers and to name a few Drs. Ashok Aggarwal, Ramesh Chand, C. Manoharachary, P.N. Sharma, S.N. Tewari, M.S. Saharan, A.N. Mishra, P.P. Thirumalsamy, S.K. Duttamajumder who helped in prompt and critical reviewing of the manuscripts.

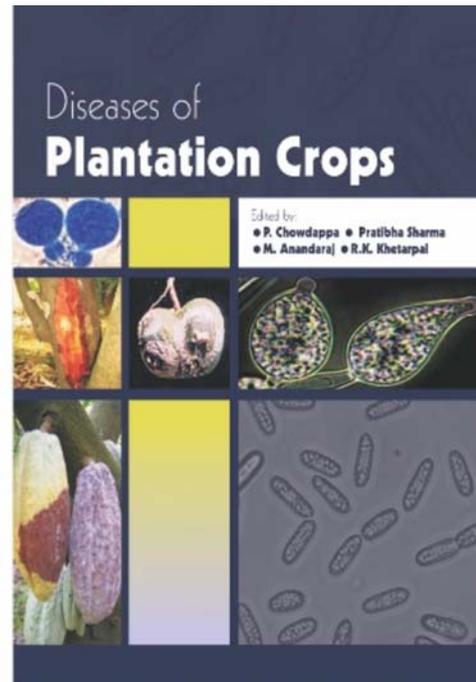
Publications: Books

Diseases of Plantation Crops

Edited by P. Chowdappa, Pratibha Sharma, M. Anandaraj and R. K. Khetarpal Year: 2014 / Pages : 274 Price: Rs. 3995.00, US\$ 100.00 (Discount 20%)

Description

This book emphasis on Diseases of Important plantation crops like arecanut, coconut, cocoa, tea, coffee, rubber and spices. The occurrence, distribution, economic impact, biology and pathology of causal agents, diagnosis, Host-pathogen-environment interactions and integrated disease management strategies are covered. This book would serve as valuable resource for plant pathologists, horticulturists, nursery managers, teachers, students, exporters, importers, extension specialists and those who are associated with development of plantation crops.

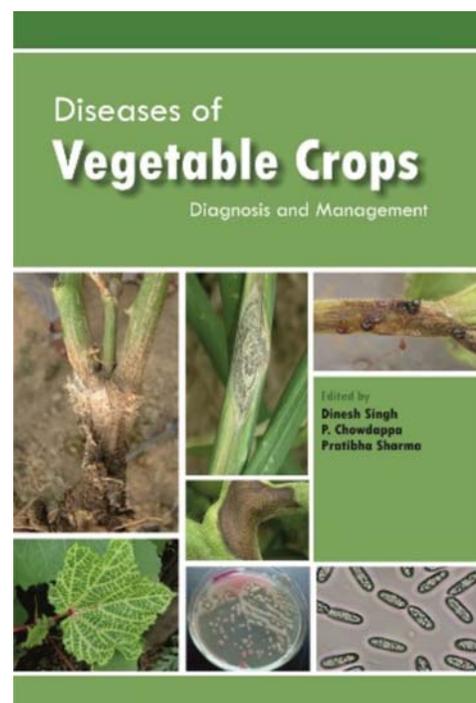


Diseases of Vegetable Crops: Diagnosis and Management

Edited by Dinesh Singh, P. Chowdappa and Pratibha Sharma Year: 2014 / Pages : 746 Price: Rs: 5995.00, US\$ 120.00 (Discount 20%) ISBN: 8170194970

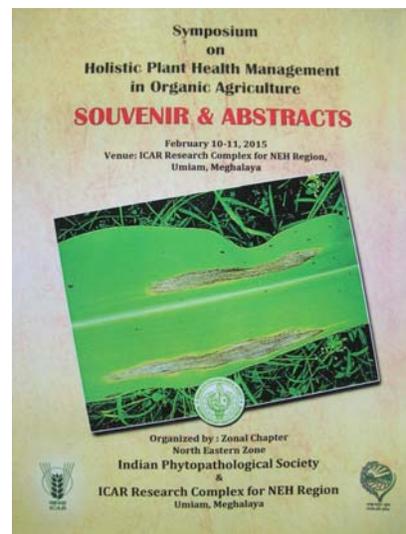
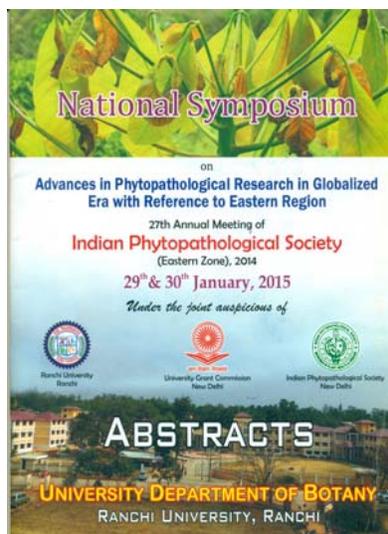
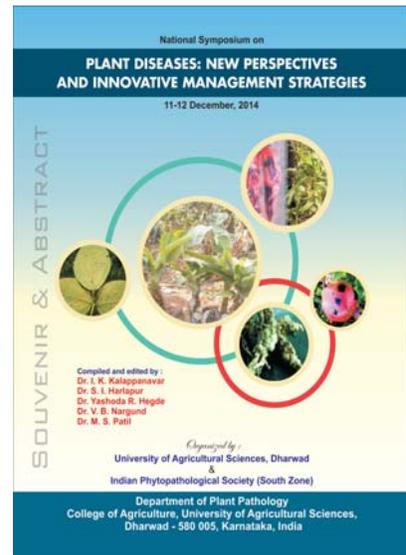
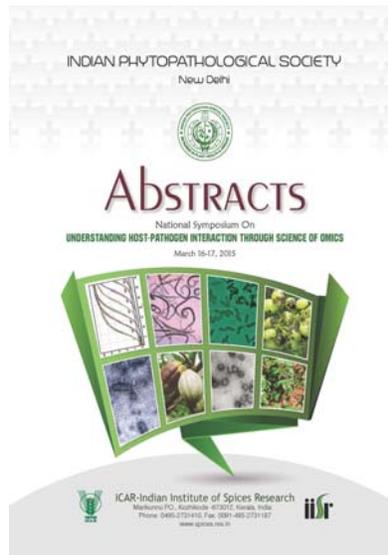
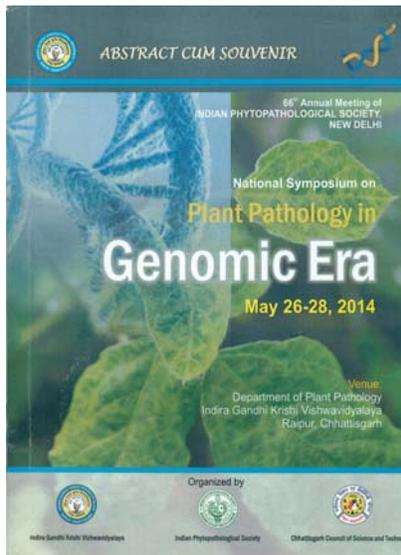
Description

This Book Focuses on Diseases of Vegetable crops. The occurrence, distribution economic importance, disease sings, biology and pathology of etiological agents, molecular diagnosis, host range, disease cycle and integrated disease management strategies are covered. This book would serve as valuable resource for plant pathologists, horticulturists, nursery managers, teachers, students, exporters, importers, extension specialists and those who are associated with cause of vegetable corps.





Abstracts book published in the national/zonal symposium (2014-15)





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INDIAN PHYTOPATHOLOGY

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Financial Report

Treasurer's report

The report was presented by the Dr. Dinesh Singh, Treasurer, IPS. A marked improvement in collection of fund has been achieved during this period and Society is in sound financial position. During this financial year (2014-15) an additional amount of Rs.

2.5 Lakhs (Rs. Two Lakhs Fifty thousand) has been fixed as Term Deposit. He also informed that in last four years, the Society has additional increased in its financial position of Rs. 30.00 Lakhs.



Profit & Loss A/c

Indian Phytopathological Society, New Delhi

P&L A/C FOR THE YEAR ENDED 31st MARCH 2015

Expenditure		Amounts	Income		Amounts
IPS Staff Salary		5,21,000.00	Annual Membership		1,36,950.00
Postal Charges		60,086.00	Life Membership		1,86,000.00
Printing Charges of journal		2,59,227.00	Institutional subscription		5,93,750.00
Stationery Charges		30,668.00	Processing Fee		80,550.00
National Symposium		3,42,226.00	Postage and Establishment		3,600.00
Mid - term meeting & AP Misra Lifetime Award		1,22,211.00	FPSI Fee		45,000.00
Website Renewal Charges		4,844.00	Subscription for Digitized volumes		1,00,000.00
Telephone Expenditure		4,150.00	Sale of vision 2030		1,200.00
Editorial Board Meeting		3,421.00	Associate Membership (EZ+DZ)		6,800.00
Miscellaneous Expenditure		20,211.00	Sale of Book (Fruits + Veg. + Plantation)		51,940.00
Audit fee		34,989.00			
Election		21300.00			
Bank Charges		91.00	Delhi Zone Collection		1,49,500.00
Delhi Zone Symposium Expenditure		97,000.00	Interest of SB A/c & FD Credited in Bank		5,86,323.41
Dep On:-					
Computer (1 - 3) & P - IV with UPS	3,067.45				
Computer (1 - 3) New	7,762.80				
Laptop (HP Pavilion Laptop)	10,752.00				
Printer (HP Lasterjet 6L Pro)	455.88				
Printer (HP Lasterjet P 1007)	488.02				
UPS (650 VA)	170.99				
EPSON LX 300+	236.52				
Air Conditioner	3,164.59				
Furniture	4,314.71				
Microwave Oven & Refrigerator	2,129.25				
SLR Camera	4,350.00				
Bicycle	570.00				
		37,462.21			
Surplus		15,58,886.21			
		3,82,727.20			
		19,41,613.41			19,41,613.41

For Tasky Associates
Chartered Accountants

Anil Kumar Mathpal
Partner
Membership No. 503011

Place:- *New Delhi*
Date:-

Dinesh Singh
Dinesh Singh
(Treasurer)
Dr. DINESH SINGH
Treasurer

Indian Phytopathological Society
Division of Plant Pathology
I.A.R.I., New Delhi-110 012, India

Pratibha Sharma
Pratibha Sharma
(Secretary)

Dr. PRATIBHA SHARMA
Secretary
Indian Phytopathological Society
Division of Plant Pathology
I.A.R.I., New Delhi-110 012, India





Balance Sheet

Indian Phytopathological Society, New Delhi

BALANCE SHEET AS ON 31st MARCH 2015

Liabilities	Amounts	Assets	Amounts
Capital A/c		Assets	
Opening Balance	63,91,479.84	Computer (1 - 3) & P - IV with UPS	2,044.96
Add:- Surplus From P&L A/c	3,82,727.20	Computer (1 - 3) New	5,175.20
		Laptop (HP Pavilion Laptop)	7,168.00
		Printer (HP Lasterjet 6L Pro)	2,583.32
		Printer (HP Lasterjet P 1007)	2,765.46
		UPS (650 VA)	968.94
		EPSON LX 300+	1,340.25
		Air Conditioner	17,932.70
		Furniture	38,832.37
		Microwave Oven & Refrigerator	12,065.75
		SLR Camera	24,650.00
		Bicycle	3,230.00
		Cash in Hand	1,508.00
		Syndicate Bank	
		Saving Bank	3,91,638.47
		Fixed Deposit	62,62,303.62
	67,74,207.04		67,74,207.04

For Tasky Associates
Chartered Accountants

Anil Kumar Mathpal
Partner
Membership No: 503011

Place:- *New Delhi*
Date:-

Dinesh Singh
Dinesh Singh
(Treasurer)
Dr. DINESH SINGH
Treasurer

Indian Phytopathological Society
Division of Plant Pathology
I.A.R.I., New Delhi-110 012, India



Pratibha Sharma
Pratibha Sharma
(Secretary)
Dr. PRATIBHA SHARMA
Secretary
Indian Phytopathological Society
Division of Plant Pathology
I.A.R.I., New Delhi-110 012, India



Acknowledgements

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success. My thanks are also due to all the staff members and students for rendering their valuable help in various ways for making the symposium success. It is my prime duty to thank all the members of Executive Council for their cooperation, active support and suggestions in various activities of the Society. Last but not least, I am thankful to the staff of the headquarter of IPS for their valuable support.

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Secretary
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