

# Annual Report

# 2018-19



**INDIAN PHYTOPATHOLOGICAL SOCIETY**

Division of Plant Pathology  
Indian Agricultural Research Institute  
New Delhi 110012, India  
[www.ipstdis.org](http://www.ipstdis.org)



# ANNUAL REPORT

2018-19



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# PREFACE

Dear Members of IPS,

Greeting to you and your family. I take this opportunity to express my hearty gratitude and gratefulness to all the esteemed members of IPS for electing me unanimously the President of this prestigious society, adorned in past by stalwarts and doyens of Plant Pathology. The society is third largest society of repute in the world because of its glorious history of achievements. I consider it the great opportunity to serve the society as President. It is my pleasure, privilege and great honour to present the 'Annual Report 2018-19' of the society, which has successfully completed 72 years of its journey in the service of Plant Pathology with keen efforts of past Presidents, Secretaries, Zonal Presidents & Councillors, members of EC & Editorial board and each of the members of the society.



During this year IPS, APAARI, Bangkok; COA, Taiwan; ACIAR Australia; ICRISAT, India; IRRI, Philippines; and DoA, Bangkok; have jointly organized an International Conference on “Role of Soil and Plant Health in Achieving Sustainable Development Goals” at Bangkok, Thailand. The conference has given recommendations to ensure soil and plant health and proposed to create a 'Regional Knowledge Platform' at APAARI, Bangkok. The expertise of members of the society will be availed by 'Knowledge Platform', to access technologies for Asia Pacific to enhance soil and plant health. 'IPS-APS joint workshop on “Decision support system for plant disease management” was organized at IRRISARC, Varanasi, U.P. It was felt to develop decision support system for the diseases of national importance. Society in collaboration with IGKV, Raipur has organized Special National Symposium on 'Extension Plant Pathology: Technological Backstopping to the Farmers/Other Stakeholders', which was unique for extension workers and farmers for adoption of new technologies for sustainable agriculture. Similarly, 'Brain storming on “Blast Proofing in Agriculture” at IIWBR, Karnal, 'Workshop on “Diseases of Makhana: Challenges towards Diagnosis and Management” at MB Agriculture College, Agwanpur' were organized to discuss the emerging problems of the crops and for ensuring the crop health. I am also delighted to inform that Zonal Presidents/Councillors of all eight zones of IPS have organized successfully zonal meetings and symposium on different themes related to present scenario of Plant Pathology for the benefit of students, scientists, farmers, etc. Besides, 71<sup>st</sup> Annual Meeting of the Society and National Symposium on “Recent Challenges and Opportunities in Sustainable Plant Health Management” was organized in collaboration with Institute of Agricultural Sciences, BHU, Varanasi. I am highly thankful to all the Organizing Secretaries, Councilors, for their valuable contributions to the society. The recommendations emerged in the conferences; symposium, etc. are useful to tackle the problems of plant health.

I am happy to inform that Journal : *Indian Phytopathology* is being published regularly in time in collaboration with Springer from January 2018. The Society has initiated to publish quarterly online newsletter “*Indian Phytopath News*” from 2018. This year, 4 books viz. *Bio-intensive Approaches, Application and Effectiveness in Plant Protection* (Eds. MR Khan et al.) in two volumes; *Fasal Rog Prabandhan* (In Hindi language) (Eds: Dr. M. P. Thakur et al.); *Diseases of Medicinal and Aromatic Plants and their Management* (Eds. - Dr. Rakesh Pandey, et al.) and *Wilt Diseases of Crops and their management* (Eds. - Dr. Ashok Bhattacharyya, et al.) were published by the Society which were widely accepted by students, teachers, researchers, plant pathologists and agriculturists. Besides, The *Annual Report* (2017-18) was published and is available on IPS website. I congratulate to all the authors and appreciate their valuable services for society.

During the year, the EC members and other members of IPS have taken keen interest in encouraging the scientists and students to become lifemembers and raising financial condition of the society. I am grateful to them for their commitment for the society and urge all the members to please contribute for the society to give a rich legacy to the coming young Plant Pathologists.

I would like to extend my thanks to the members of the Executive Council of the society, particularly the Secretary Dr. Dinesh Singh, and his team Shree Raj Kumar, policy makers, administrators, Institutional heads, dignitaries, etc. for their involvement and contributions in keeping our society running actively and smoothly. With the grace of almighty, I trust that the society will continue to pursue its goal in right direction. I express my appreciation to Secretary, IPS for compiling and bringing out this report in time.

A handwritten signature in blue ink, appearing to read 'R. Pandey', is enclosed in a white rectangular box.

**(R.N. Pandey)**  
President

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# About the Society

The Indian Phytopathological Society (IPS) was established during the year 1947. It is a professional society established for promoting the cause of science of Phytopathology. It was Dr. B.B. Mundkur who felt the need of forming a society and initiated for its establishment. The society focuses in the field of Mycology, Plant Pathology, Bacteriology, Virology, Phytoplasmology and Nematology. During the journey of last seven decades, the society progressed with time. It started with few members and now the total members are above 2000. The society was started when there was no journal dedicated to plant pathology in the country, however, now there are several journals in the subject, but the progress made by Indian Phytopathology is remarkable and incomparable. The *Indian Phytopathology* become online March, 2011 on ICAR online portal and online access to this journal from 1995 to 2017 are available for the members of the Society. However, I am glad to inform that agreement has been signed with Springer (India) Private Ltd., New Delhi for co-publication of the Journal *Indian Phytopathology* from January 2018 (Vol. 71, Issue 01, 2018) onwards initially for five years (2018-2022). Not only because of its all India status but also due to dedicated and visionary sincere effort of our seniors, who gave the sound footing to the society and made the laws and bylaws so perfect that the society is maintaining its high standard and running perfectly well. The laws and bylaws of the society were made so meticulously that there is no major change even after 70 years of its existence. Annual meetings are held regularly and persons of high dedications are given the responsibility to run the society and journal. During

the seven decades society also encouraged members by giving them due honours and awards in the annual and zonal meetings. High standard of presentations and keen contest for the different awards are the special feature of the society. The journey of 7 decades of the Indian Phytopathological Society is really worth appreciating, which organized annual and zonal meetings without fail and chosen the topics of the national seminars for discussion according to the need of the country.

The society was basically formed with the following objectives:

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

To run the society smoothly, the society is having Executive Council, which takes policy decisions. It consists of 25 members and meets at least twice a year. Following are the members of executive council. The society was earlier having six zones which were later increased to eight zonal chapters, each one having its Zonal President and Councillor elected/ nominated every year.



# Executive Council (2018)



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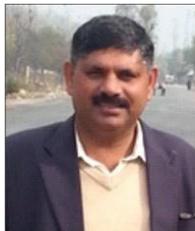
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# Meetings:

## Mid-term Executive Council Meeting

The mid-term EC of the Society was held on February 27, 2017 in the Division of Plant Pathology, IARI, New Delhi and the following members of the Executive Council attended the meeting, namely; Prof. R.N. Pandey, President; Dr. M.P. Thakur, President-elect; Dr. Dinesh Singh, Secretary; Dr. Robin Gogoi, Joint Secretary; Dr. M.Anandaraj, Chief Editor; Dr. V.K. Baranwal, Sr. Editor; Dr. Rashmi Aggarwal, Ex-officio; Dr. D. Bahukhandi, Zonal President (DZ); Dr. S.K. Sharma, Zonal President (NZ); Dr. Meenu Gupta, Zonal Councillor (NZ); Dr. S. Girisham, Zonal President (CZ); Dr. D. Nagaraju, Zonal Councillor (CZ); Dr. Gireesh Chand, Zonal President (EZ); Dr. Chanda Kushwaha, Zonal Councillor (EZ); Dr. M.R. Khan, Zonal President (MEZ); Dr. M.A. Siddiqui, Zonal Councillor (MEZ); Dr. Amar Bahadur Singh, Zonal President (NEZ); Dr. Durga Prasad Awasthi, Zonal Councillor (NEZ); Dr. K.D. Thakur, Zonal President (WZ); Dr. S.B. Bramhankar, Zonal Councillor (WZ). However, Other EC members namely, Drs. S.C. Dubey (Sr.Editor), Vaibhav K. Singh (Treasurer), Lakshman Prasad, Zonal Councillor (DZ), R. Selvarajan, Zonal President (SZ), and R. Thangavelu, Zonal Councillor (SZ) could not attend the meeting due to their pre-occupied schedule. Dr. Dinesh Singh, Secretary, welcomed Dr. R.N.Pandey, President, IPS and requested to chair the meeting. He also welcomed

the other EC members who have taken keen interest to attend this meeting despite their busy schedule.

**The following points were discussed and following decisions were taken:**

**i. Institution of new award in the name of Late Dr. S. Nagarajan**

After thorough discussion, the committee members suggested that the award can be instituted only after raising/generating the endowment fund by voluntary contribution from the IPS members/industries or from other sources.

EC has requested that Dr. Rashmi Aggarwal, Head & Ex-Officio, IPS to take lead to generate endowment fund for new award in the honour of Dr. S. Nagarajan with the help of Dr. M.S. Saharan, Principal Scientist, IARI, New Delhi.

Dr. Rashmi Aggarwal informed that a request letter regarding endowment fund was sent to Mrs. Santa Nagarajan, wife of Late Dr. S. Nagarajan, and Dr. Nagarajan's son agreed to contribute Rs. 1,00,000.00 (Rs. One Lakh only) as endowment fund. However, it was decided to wait till next EC meeting to take final decision.





**ii. Institution of new award of “D.P. Misra and R.N. Pandey IPS Best Women Scientist Award”**

The award endowment fund of Rs. 3,00,000.00 (Rs. Three Lakh only) received from donor Dr. R.N. Pandey, Former Head (Plant Pathology), AAU, Anand with a request to make this award biennial as he can arrange only Rs. 3.0 Lakh only. It was suggested by EC to mobilize among the members to generate the fund to make it Rs.5.0 Lakh as endowment fund. At the end, EC members agreed on his request and the award will be biennial at present and will be instituted from the year 2018. If endowment fund reaches to Rs. 5.0 lakh, then it will be converted to annual.

**iii Institution of new award of BN Chakraborty and Usha Chakraborty Plant Pathology Best Teacher Award**

General Body also approved the institution of new award for best teacher as “**BN Chakraborty and Usha Chakraborty Plant Pathology Best Teacher Award**”

A Meeting of the committee members namely, Drs. D.V. Singh (Chairman), Pratibha Sharma, Rashmi Aggarwal, M.S Saharan and Dinesh Singh, constituted for finalizing the Guidelines and Application Proforma for Best Teacher Award to be instituted by the Society in the name “**BN Chakraborty and Usha Chakraborty Plant Pathology Best Teacher Award**” was held on 13<sup>th</sup> April 2018 in the Division of Plant Pathology, IARI, New Delhi.

**The following points were discussed and approved by the committee members:**

**Name of the Award:** The name of award is as “**BN Chakraborty and Usha Chakraborty Plant Pathology Best Teacher Award**”. However, the committee members felt that the name of award may not be on the name of donor and they suggested that the name of the award may be as follows: “**IPS Best Teacher Award**” sponsored by BN Chakraborty and Usha Chakraborty. It was also emphasized that the matter may be discussed in the forth-coming EC meeting of the Society and let the matter be rethought by EC.

**Eligibility of the Award**

Teachers/Scientists of minimum 50 years of age, holding permanent position and 10 years of IPS Life

Membership.

All teachers/ scientists are eligible provided they take/ took an annual average of 32 (ICAR) and 96 (University) hours lectures per year in undergraduate/post-graduate in UGC recognized University/ Deemed to be University and have minimum of 10 years’ experience in teaching.

The award endowment fund of Rs. 3,00,000.00 (Rs. Three Lakhs only) received from donor Prof. B.N. Chakraborty & Usha Chakraborty with a request that the remaining balance of Rs. 2.0 Lakh will be paid in the month of September, 2018. The EC members agreed on his request and the award will be instituted from the year 2018.

Finally EC members approved the title of the award as “**BN Chakraborty and Usha Chakraborty IPS Best Teacher Award**”.

**National Symposium 2018-19:**

In the last GB meeting it was decided that IPS next Annual Meeting and National Symposium 2018-19 will be held at CSIR-CIMAP, Lucknow and Dr. Rakesh Pandey, CSIR-CIMAP, Lucknow will be the Organizing Secretary of the symposium. However, due to some unavoidable circumstances, Dr. Rakesh Pandey informed the Society that he is unable to organize this symposium. It was thoroughly discussed and two venue i.e. either Jodhpur (Rajasthan) or Nagpur/Goa were suggested for the Annual Meeting cum National Symposium of the Society and the same may be finalized before 20<sup>th</sup> May, 2018.

**Special Symposium on Extension Plant Pathology**

Special Symposium on “**Extension Plant Pathology: Technological Backstopping to the Farmers/State Officials**” will be held at IGKV, Raipur during September 25-26, 2018 and Dr. M.P. Thakur will be Organizing Secretary of the symposium. The brochure of the same will be available soon on IPS website.

**International Conference on “Role of Soil and Plant Health in Achieving Sustainable Development Goals”** will be held in Bangkok, Thailand (2018) in collaboration with APAARI, Bangkok, Thailand in the third week of November, 2018. Dr R.K. Khetarpal, Executive Director, APAARI, will be Organizing Secretary of the conference.



Tentative budget of the conference will be as follows:

On the basis of rates received from our event management partner (Alpcord Network Event Conference Management Co. Pvt. Ltd., New Delhi), the tentative budget of the conference per delegates will be approximately Rs. 45,150.00 (Rs. Forty five thousand one hundred fifty only).

#### **International Conference on Plant Pathology by the Society:**

The 7<sup>th</sup> International Conference of the Society will be held in the month of February 2020 at IARI, New Delhi preferably in NASC Complex, New Delhi. It was suggested to seek the title and theme of the International Conference from EC, Advisory Board and Honorary Fellows of the Society by June 15, 2018, so that the process of permission from the competent authorities can be taken timely.

#### **Brain Storming Session on wheat blast**

Brain Storming Session on “Transboundary wheat blast disease threats in Asia and our preparedness” will be

organized by Dr. D.P. Singh, IIWBR, Karnal. The details of the same will be available on IPS website.

#### **IPS News Letter**

The EC members agreed for IPS Newsletter and it was decided that it will be published quarterly online and will be available on website in pdf form. An Editorial Committee has been constituted for same. It was decided that the immediate Past Presidents will be the Chief Editors of the News Letter.

**Chief Editor:** Prof. B.N. Chakraborty

**Sr. Editor:** Dr. Robin Gogoi

**Editors (08):** Zonal President of each Zone

**Ex-officio:** Secretary of the Society

**Procedure:** Editors will gather the news from their respective zones and forward to Sr. Editor. Senior Editor will finalize the Newsletter with approval of Chief Editor.

#### **ZONAL CHAPTER ACTIVITIES 2018-19:**

The Society has received the following details regarding the Zonal Symposium to be held in 2018-19:

Zone	Date	Topic	Venue
Western	23-24 Aug. 2018	Current and Emerging Trends in Plant Health Management.	Goa/ Nagpur
North Eastern	8-9 Sept . 2018	Emerging diseases of Agricultural Crops and their Noble Management Practices.	College of Agriculture, Tripura
Northern	2-3 Nov. 2018	Alternative Approaches in Plant Health Management for Enhancing Farmers income.	YSPUHF, Solan, HP
Mid-Eastern	15-16 Nov, 2018	Role of Biointensive Approaches in Future Plant Protection Strategies.	Dept. of Plant Protection, AMU, Aligarh
Eastern	17-19 Nov. 2018	Paradigms of Plant Health Management: Sustaining Food Security under climate change scenario.	BAU, Sabour, Bhagalpur, Bihar
Central	1-2 Dec 2018	Recent Trends in Plant Disease-Diagnosis and Control with reference to Central India.	Department of Microbiology, Kakatiya University, Warangal (Telangana)
Delhi	15 Dec. 2018	Bio-prospects of Microbes for Plant and Human Health.	IARI, New Delhi
Southern	21-23 Dec. 2018	Cutting Edge Approaches for the Sustainable Plant Disease Management and Ensuring Farmers Profit.	ICAR-NRC Banana, Tiruchirapalli, Tamil Nadu



### **Award nomination for the year: 2019**

The Award nomination information along with guidelines and the names of previous awardees will be sent to EC members for open nomination.

### **Editorial Board: Nomination of editors:**

It was informed that some of the editors, who even after many reminders do not respond for getting the Manuscripts review done. It was proposed to replace them with the new prominent editors. However, EC members suggested to writing a letter in humble way to complete their assignment or to contact them in person to do the same.

### **Online voting:**

It was informed that currently the Society has approx. 1800 life members (voters), however, out of these; only 1150 members are having email ID/mobile number. Also out of this 1150, approx. 150-200 mail gets bounced. So, we have approx. 900-1000 member with correct email ID, which is only 50% of total members. In this case, how online voting system can be applied. Whether we can go with 50% online and 50% offline voting?

It was suggested that the zone-wise list of members will be given to Zonal President/Councillors to get it updated within a month, so that the decision can be taken for online/offline voting.

### **Development of “IPS App”**

It was suggested by the EC members to develop an “IPS App” for online voting system as well as for other information. The detailed including tentative cost will be worked out in consultation with the expert agencies.

### **Other agendas**

The Society invited agendas from Advisory Board members and Executive Council members for betterment and its smooth functioning. The following agenda were received and decisions were taken as follows:

To develop teams of young researchers that can offer webinars on selected topics, which will be very helpful

to younger researchers to develop new skills that could be applied in their own research.

To organize workshops on effective scientific writing: This could be spearheaded by the editorial board of the Indian Phytopathology and to develop criteria for effective communication of research. This will be done at zonal level as well as national level.

There must be some proportion of applied field work in our prestigious journal *Indian Phytopathology* to duly recognize the joint contribution of extension Plant Pathologists/Entomologists which may benefit the young budding Plant Pathologists/Entomologists dedicated to work on farmers' field and making farmers aware of the latest Plant Protection technologies.

A separate meeting of the Delhi based Editorial Board members was held to discuss the review process invited/contributed review articles, book review and maintaining timeliness of the journal. The proceeding of the same will be shared separately.

A training and lecture programme to the PG students & farmers on plant diseases was proposed by Dr. S. Girisham and it was decided to organize a lecture series to be delivered by the eminent scientists of their areas.

Two lectures in each zone can be arranged and for this the Society will provide Rs. 5,000.00 per lecture towards refreshment expenditures. The Zonal chapter will have to provide the report of the lecture and photographs with IPS banner and after that the money will be released.

Further, Dr. M.P. Thakur, President, Elect informed that there is a provision by State Council of Science and Technology in each state for partial financial support of Rs. 20-25 thousand to conduct such kind of lectures for farmers/students, which can be sought by the organizers.

EC agreed on the Publication of an edited book on the conference theme and its release at the MEZ meeting.

Regarding special discount of group membership, EC agreed on special discount of 25% on group membership for group of minimum 20 members and this offer will valid till 31<sup>st</sup> March 2019.



# Editorial Board Meeting

A meeting of the Delhi based editorial board members with Chief Editor, Dr. M. Anandaraj was held on April 21, 2018 in the Division of Plant Pathology, IARI, New Delhi.

The following members were present in the meeting, namely; Dr. M. Anandaraj, Chief Editor; Dr. V.K. Baranwal, Sr. Editor; Dr. R.N. Pandey, President; Dr. M.P. Thakur, President Elect; Dr. Dinesh Singh, Secretary; Dr. M.S. Saharan and Dr. T.K. Bag, Editors. However, other members could not be present due to their preoccupied schedule.

## **The following agenda were discussed:**

### **Book reviews by IPS fellows- evolving guidelines/ modifying the present guidelines**

As per the norms of the society, the author may send two copies of the book to be reviewed to IPS office. One copy would be sent to a reviewer and another retained in the library of IPS.

### **Review process of Invited review articles and Review articles sent by contributors.**

The review process of the invited review articles will be same as research article review process. The review article will be sent to two reviewers for their comments

and on the basis of comments the decision will be taken for its publications.

However, the award lecture articles in the form of “Invited Review” will be published after thorough editing by the senior/chief editor.

### **Maintaining timeliness of Journal**

It was discussed that some of the editors, who even after many reminders does not respond for getting the MS review done. It was proposed to replace them with the new prominent editors. However, members suggested to withdrawing the article after due date and write a letter in polite way to complete their assignment in future or to talk them in person to do the same.

### **One special issue every year**

It was discussed that one special issue will be published every year on a specific topic. This year it has been proposed to publish fourth issue (October – December, 2018) as special issue on “**Advances in Fusarium Research**”. This issue will contain 3-4 review articles and 16-17 research articles. The chief editor will invite the article from contributors as well as the same information will also be available on IPS website with time frame.



# 71<sup>st</sup> Annual General Body Meeting

The 71<sup>st</sup> Annual General Body Meeting (AGBM) of the Society was held on February 27, 2019 at Banaras Hindu University, Varanasi, Uttar Pradesh, under the chairmanship of Prof. R.N. Pandey, President-IPS. As per agenda, Dr. Dinesh Singh, Secretary-IPS presented the detailed report in the General Body meeting of the Society.

## Dignitaries on dais in the Annual General Body Meeting of the Society

As per agenda, Dr. Dinesh Singh, Secretary, IPS presented the detailed report in the general body meeting of the Society.

## Publications

### JOURNAL: INDIAN PHYTOPATHOLOGY

It was informed that **Journal Indian Phytopathology** started publication from January 2018 (Vol. 71, Issue 01, 2018) in collaboration with Springer. All the four issues of 2018 were published timely and March issue 2019 is also available online.

## IPS NEWSLETTER - INDIAN PHYTOPATH NEWS

The Society has initiated to publish quarterly online newsletter "**Indian Phytopath News**" from 2018 and all the four issues of 2018 (Vol 1, No 1-4) published online and are available on IPS website in pdf form.

## IPS BOOKS PUBLICATION

This year, the following books were published by the Society:

1. **Bio-intensive Approaches, Application and Effectiveness in Plant Protection** (Eds. MR Khan et al.) published in two volumes.
2. **फसल रोग प्रबंधन (संपादक : डॉ. एम.पी. ठाकुर, डॉ. आर.एन. पाण्डेय, डॉ. दिनेश सिंह)** published and released in the Special symposium at IGKV, Raipur.
3. **Diseases of Medicinal and Aromatic Plants and their Management** (Eds. - Drs. Rakesh Pandey, A.K. Misra, Alok Kalra, H.B. Singh and Dinesh Singh) – published and released in



Dignitaries on dais in the Annual General Body Meeting of the Society



National Symposium at BHU, Varanasi on 26<sup>th</sup> Feb. 2019.

4. **Wilt Diseases of Crops and Their Management** (Eds. - Drs. Ashok Bhattacharyya, B.N. Chakraborty, R.N. Pandey, Dinesh Singh and S.C. Dubey) - published and released in the National Symposium at BHU, Varanasi on 26<sup>th</sup> Feb. 2019.
5. The **Annual Report (2017-18)** was also compiled and published and is available on IPS website.

#### Initiation of New Journal:

Proposal for Association of Today & Tomorrow Printers and Publishers with the IPS for the **Journal "International Journal of Tropical Plant Diseases"** - former Chief editor S.P. Raychaudhuri and Anupam Verma". This journal was discontinued in the year 2001 and would like to revive the same. However, EC and General Body did not agree on the proposal.

#### Declaration of results of award 2019

General Body approved the following names recommended in the Executive C-ouncil meeting for following awards:

1. **A.P. Misra Lifetime Achievement Award:** Dr. C. Manoharachary, Hyderabad
2. **S.P. Raychaudhuri Memorial Lecture:** Dr. S.N. Puri, Former Vice chancellor, CAU, Imphal
3. **IPS Recognition Award:**
  - (i) Dr. RK Khetarpal, APAARI, Bangkok
  - (ii) DR. U. N. Saikia, Jorhat, Assam
  - (iii) Dr. B.L. Puttoo, Jammu
  - (iv) Dr. G.S. Dubey, Ranchi
  - (v) Dr. R.B. Somani, Maharashtra
4. **Mundkur Memorial Award:** Dr. M.K. Naik, UAHS, Shimoga
5. **S.N. Dasgupta Memorial Award:** Dr. Govind Pratap Rao, IARI, New Delhi
6. **J.F. Dastur Memorial Award :** Dr. Dilip Kumar Ghosh, ICAR-CCRI, Nagpur
7. **Sharda Lele Memorial Award:** Dr. Satish Kumar Gupta, Dr. YSPUHF, Solan

8. **K.C. Mehta and Manoranjan Mitra Award:** Dr. M.S. Saharan, ICAR-IARI, New Delhi
9. **DP Misra and RN Pandey IPS Best Women Scientist Award:** Dr. Om Gupta, JNKVV, Jabalpur
10. **BN Chakraborty and Usha Chakraborty IPS Best Teacher Award:** Dr. S.J. Kolte, Pune
11. **A.K. Sarbhoy Memorial Award:** Dr. R.N. Kharwar, BHU, Varanasi
12. **M.K. Patel Memorial Young Scientist Award:** Dr. Malkhan Singh Gurjar, IARI, New Delhi
13. **Fellow of Indian Phytopathological Society (FPSI)**

The following 16 names were recommended for FPSI 2018:

- i. Dr. Meena Shekhar, ICAR-IIMR, New Delhi
- ii. Dr. R.R. Pandey, Manipur University, Imphal
- iii. Dr. Anuja Gupta, ICAR-IARI, Karnal
- iv. Dr. Ashwani Kumar, CSKHPKV, Palampur
- v. Dr. Abrar Ahmad Khan, AMU, Aligarh
- vi. Dr. D.K. Jha, Gauhati University, Gauhati
- vii. Dr. Archana U. Singh, ICAR-IARI, New Delhi
- viii. Dr. V. Ambethgar TANU, Tamil Nadu
- ix. Dr. Yogendra Singh, GBPUAT, Pantnagar
- x. Dr. M. Srinivas Prasad, ICAR-IIOR, Hyderabad
- xi. Dr. V. Celia Chalam, ICAR-NBPGR, New Delhi
- xii. Dr. Srikanta Lenka ICAR- NRRI , Cuttack, Odisha
- xiii. Dr. M. Santha Lakshmi Prasad, ICAR-IIOR, Hyderabad
- xiv. Dr. Kamal Khilari, S.V.B.P.U.A.T., Meerut
- xv. Dr. M.K. Biswas, Palli Siksha Bhavana, Sriniketan
- xvi. Dr. S.K. Singh, Agharkar Research Institute, Pune

14. **MJ Narasimhan Medal for Best research paper published in Indian Phytopathology 2017**



The following two research papers have been recommended for MJ Narasimhan Medal for Best research paper 2017.

1. "Detection of new Yr1-virulences in *Puccinia striiformis* f.sp. *tritici* population and its sources of resistance in advance wheat lines and released cultivars", (Indian Phytopath 70, (3) (2017): 307-314) authored by O.P. Gangwar, Subodh Kumar, S.C. Bhardwaj, Pramod Prasad, Hanif Khan, Siddanna Savadi and S.K. Sharma.
2. "Postharvest application of fungicides, antagonists and plant products for controlling storage scab and rots of apple fruits" (Indian Phytopath 70, (3) (2017): 315-321) authored by K.P. Singh, Amitabh Singh, R.K. Prasad, and J. Kumar

#### 15. Prof. M.J. Narasimhan Academic Merit Award 2019

Total seven candidates from different zones participated in the **Prof. M.J. Narasimhan Academic Merit Award contest**. The evaluation committee has recommended the name of **Ms Sahana N Banakar**, Ph.D Scholar, Dept. of Plant Pathology, UAS, GKVK, Bengaluru for Prof. M.J. Narasimhan Academic Merit Award and rest 06 candidates as below will be awarded with commendation certificate:

- (i) **Mr. Prashantha ST**, Division of Plant Pathology, ICAR-IARI, New Delhi - Understanding the interactions of anastomosis groups (AG) of *Rhizoctonia solani* with rice (*Oryza sativa* L.).
- (ii) **Mr. Jagmohan Singh**, Division of Plant Pathology, ICAR-IARI, New Delhi - Identification and expression analysis of pathogenicity-related genes in *Tilletia indica* inciting Karnal bunt of Wheat.
- (iii) **Dr. Ziaul Haque**, Department of Plant Protection, Faculty of Agricultural sciences, AMU, Aligarh - Host resistance and biocontrol as alternative approaches for pesticides against rice root-knot nematode, *Meloidogyne graminicola*.

- (iv) **Dr. Ruchi Tripathi**, Department of Plant Pathology, College of Agriculture, GBPUAT, Pantnagar - Exploration of different methods for detection of *Clavibacter michiganensis* subsp. *michiganensis* (Smith) Davis, the cause of bacterial wilt and canker of tomato (*Lycopersicon esculentum* M.) and its management.
- (v) **A. V. Shitole**, Dept. of Plant Pathology, Dr. PDKV, Akola - Detection of antifungal potency of weed extract against phytopathogenic fungi.
- (vi) **Rupsikha Goswami**, Department of Plant Pathology, Assam Agricultural University, Jorhat - Efficacy of silver nanoparticles against *Colletotrichum musae* and its effect on Crown rot and Anthracnose diseases of banana.

#### 16. APS Travel Sponsorship 2019

This year only two candidates have participated in **APS Travel Sponsorship competition**. The evaluation committee has recommended both the names for APS Travel Grant Sponsorship:

- (i) **Shweta Meshram**, Division of plant Pathology, ICAR-Indian Agricultural Research Institute, Pusa, New Delhi - Mechanism behind disease resistance in maize inbred lines against Maydisleaf bight disease.
- (ii) **Mr. Abhijeet S. Kashyap**, Division of plant Pathology, ICAR-Indian Agricultural Research Institute, Pusa, New Delhi - Indigenous Rhizobacterial isolates ability to promote growth and induction of defense against bacterial wilt of Chilli.

It was also suggested in the EC and approved in the GB that in-service candidate/permanent employee doing Ph.D. will not be considered for this competition.

#### 17. KPV Menon Best Poster Award

The judging committee recommended the following posters for Prof. KPV Menon Best Poster Award presented during the symposium:



Rank	Name & Address	Title of Poster
<b>Winner</b>	<b>Udai B. Singh</b> , Shailendra Singh, Mala Trivedi, Deepti Malviya, Manoj Kumar, Pramod K. Sahu, Manish Roy, H.V. Singh, Anil K. Saxena	Microbe-Mediated Modulation of Physio-Biochemical Properties and Induced Systemic Resistance against <i>Rhizoctonia Solani</i> in Maize ( <i>Zea Mays</i> L.).
<b>Commendation award</b>	<b>Raja M.</b> , R.K. Sharma., P. Jambhulkar and Pratibha Sharma	Characterization of <i>Trichoderma</i> spp. Isolated from Rhizosphere of Different Crops.
<b>Commendation award</b>	<b>Ratul Moni Ram</b> and H.B. Singh	Biological Management of Dry Root Rot of Chickpea by Employing Bacteria Isolated from Drought Stressed Sites of Bundelkhand Region of Uttar Pradesh.
<b>Commendation award</b>	<b>Vandana Sahu</b> , Raina Bajpai and V. S. Thrimurthy	Studies on conditions favouring sclerotial propagules infection and effect of botanical extracts on its production and growth in <i>Sclerotium oryzae</i>

## Composition of Executive Council 2019

The election for the President-Elect (2019) was held among Dr. D.P. Singh, IIWBR, Karnal, Dr. P.K. Chakrabarty, ICAR, New Delhi and Dr. Rakesh Pandey, CIMAP, Lucknow as per schedule. The election result was declared during the General Body Meeting on 27<sup>th</sup> Feb 2017 and Dr. P.K. Chakrabarty won the election as President Elect. On the basis of election result, the composition of new EC will be as follows:

President	<b>Dr. M.P. Thakur</b> , IGKV, Raipur, Chhattisgarh	-
President Elect	<b>Dr. P.K. Chakrabarty</b> , ICAR, New Delhi	Elected
Secretary	<b>Dr. Dinesh Singh</b> , Plant Pathology, IARI, New Delhi	-
Joint Secretary	<b>Dr. Robin Gogoi</b> , Plant Pathology, IARI, New Delhi	-
Treasurer	<b>Dr. Vaibhav Kr. Singh</b> , Plant Pathology, IARI, New Delhi	-
Chief Editor	<b>Dr. M. Anandaraj</b> , IISR, Calicut/IIHR, Bangalore	-
Senior Editor	<b>Dr. S.C. Dubey</b> , NBPGR, New Delhi	-
Senior Editor	<b>Dr. V.K. Baranwal</b> , Plant Pathology, IARI, New Delhi	-
Ex-officio	<b>Dr. Rashmi Aggarwal</b> , Plant Pathology, IARI, New Delhi	-
Zonal President (DZ)	<b>Dr. M.S. Yadav</b> , NCIPM, New Delhi	Unanimously elected
Zonal Councillor (DZ)	<b>Dr. Nasim Ahmad</b> , NCIPM, New Delhi	Unanimously elected
Zonal President (WZ)	<b>Dr. C.D. Deokar</b> , M.P.K.V., Rahuri, MS	Unanimously elected
Zonal Councillor (WZ)	<b>Dr. V.K. Bhale Rao</b> , M.P.K.V., Rahuri, MS	Unanimously elected
Zonal President (NEZ)	<b>Dr. Pankaj Baiswar</b> , ICAR Research Complex for NEH Region, Umiam, Meghalaya	Unanimously elected
Zonal Councillor (NEZ)	<b>Dr. Tasvina R. Borah</b> , ICAR Research Complex for NEH Region, Umiam, Meghalaya	Unanimously elected
Zonal President (CZ)	<b>Dr. TSSK Patro</b> , Agricultural Research Station, Vizianagaram, A.P.	Unanimously elected
Zonal Councillor (CZ)	<b>Dr. PK Varma</b> , Agricultural Research Station, Visakhapatnam, Anakapalli, AP	Unanimously elected
Zonal President (NZ)	<b>Dr. Rakesh Mehra</b> , HAU, Regional Research Station Uchani Karnal, Haryana	Unanimously elected



Zonal Councillor (NZ)	<b>Dr. P.L. Kashyap</b> , ICAR-IIWBR, Karnal, Haryana	Unanimously elected
Zonal President (MEZ)	<b>Dr. Ved Ratan</b> , CSAUAT, Kanpur, UP	Unanimously elected
Zonal Councillor (MEZ)	<b>Dr. U.K. Tripathi</b> , CSAUAT, Kanpur, UP	Unanimously elected
Zonal President (EZ)	<b>Dr. P.M. Bhattacharya</b> , UBKV, Cooch Behar, WB	Unanimously elected
Zonal Councillor (EZ)	<b>Dr. Ayon Roy</b> , UBKV, Cooch Behar, WB	Unanimously elected
Zonal President (SZ)	<b>Dr. M.B. Patil</b> , Agricultural Extension Education Center, Koppal, Karnataka	Nominated by EC
Zonal Councillor (SZ)	<b>Dr. Y.S. Amaresh</b> , College of Agriculture, Raichur, Karnataka	Nominated by EC

## 5. Future Activities 2019-20

### (i) International Conference 2019-20

The Society is planning to organize an international Conference on “Phytopathology in Achieving UN Sustainable Development Goals” during January 16-20, 2020 at IARI, New Delhi.

### (ii) Proposal for brain storming session/ Special Symposium on “Post-Harvest Diseases and Technology for Horticultural and other Crops”.

Proposal from Dr. A.P. Suryawanshi, Head, Department Of Plant Pathology, Dr.B.S. Konkan Krishi Vidyapeeth, Dapoli, Dist-Ratnagiri (M.S.) has been received to organize either Brain Storming session (One day) on Special Symposium ( Two Days) at Head Quarter or any nearby suitable place, probably during the month of September - October, 2019. The proposal was agreed by EC and approved by General Body.

### (iii) Scientist-Industry-Farmers interface: The proposal was agreed by EC and approved by General Body.

### (iv) Collaboration for organization of International Conference with Sri Lanka Association for Mycology and Plant Pathology

GB agreed to organize International Conference with Sri Lanka Association for Mycology and Plant Pathology subjected to detail international terms and conditions should be find out.

### iv. Nomination of Honorary Fellow and Advisory Board

General Body approved the names recommended for Honorary Fellows and Advisory Board members of the Society as follows:

**Honorary Fellow** (new addition): **Dr. M.S. Reddy**, Auburn University, USA and **Prof. Akhtar Hussain**, Lucknow, UP

**Advisory Board members** (new addition): **Dr. C.L. Jandaik**, Shimla, H.P. and **Dr. Robert Park**, Australia

### v. Institution of New Awards

#### a. Institution of new award in the name of Late Dr. S. Nagarajan

After thorough discussion, it was suggested that the already existing award “IPS Travel Sponsorship for Young Scientists” be named as “S. Nagarajan - IPS Travel Sponsorship for Young Scientists” and the General Body approved the same.

#### b. Proposal for instituting an Award naming “Prof. A N Mukhopadhyay Oration Award” for Innovation in Biointensive Management of Plant Diseases

EC has recommended and General Body approved the proposal for institution of new award in the name of “Prof. A.N. Mukhopadhyay Oration Award” for Innovation in Biointensive Management of Plant Diseases. The award will be executed



subjected to receiving endowment fund of Rs. 5.00 Lakh from donor Prof. A.N. Mukhopadhyay and mutual consensus on the terms and conditions between IPS and donor.

**i. APS-IPS Travel Grant**

Generation of corporate fund for student travel grant for attending APS Annual Meeting

**2018 International Congress of Plant Pathology, Boston, MA, 31.07.2018**

- o Meeting called to order by Krishna Subbarao, Ashok Chanda facilitated the second half of the meeting and also took notes.
- o APS (American Phytopathological Society) members are encouraged to become IPS (Indian Phytopathological Society) members (IPS life membership is USD 480) and the provision for paying for IPS membership is already on the APS membership renewal form.
- o APS members are encouraged to attend IPS meetings whenever possible, typical IPS meeting is a 3-day program and registration is about USD 300-400. IPS is willing to move the dates of their meeting to facilitate greater participation from the US (several IPS members offered this as an incentive).
- o Set up an email list for APS-IPS working group so that everyone is on the same page.
- o Set up an ad-hoc committee for APS-IPS working group- need volunteers.
- o APS members to serve as science ambassadors to help navigate future APS meetings for IPS members, need volunteers for the next APS meeting depending on how many IPS members will be attending 2019 APS meeting in Cleveland, OH.
- o Explore bilateral funding sources to foster collaborations between APS and IPS members, research centers and also universities.
- o Funding Agencies: Dept. of Biotechnology (DBT), Dept. of Science & Technology (DST), Indian Council of Agricultural Research (ICAR), National Institute of Food and Agriculture (NIFA), Fulbright scholars (8 fellowships for agriculture), USDA-Borlaug fellowships and other fellowships offered by Govt. of India for international experience.
- o APS-IPS travel award costs \$3000 per year per student – need to pursue fundraising efforts on both APS and IPS sides.
- o APS-IPS travel award winners are encouraged to make a 1 minute video about their APS meeting experience and this testimonial should be posted on to the IPS website. In addition, they should give a 15-minute talk discussing their overall experience, connections established, etc. at the annual IPS meetings to encourage greater competition in future years.
- o Distribute IPS newsletter to interested APS members.
- o APS members to serve on editorial board or reviewer for IPS journals.
- o Host webinars on diseases and topics common to APS and IPS members such as Sclerotium rots and Blast diseases, need to identify more topics.
- Offer online courses to IPS members – e.g., Research Ethics, possibly involve APS - Office of Education. Molecular Plant-Microbe Interactions – online course offered previously by Dr. Rao Uppalapati, explore future offerings on a range of topics.
- National Plant Diagnostic Network (NPDN) webinars – accessibility to IPS members.
- Host workshops at IPS meetings - ideas on selected topics - Focus on a host-pathogen system or Key disease or multiple diseases of one crop - e.g., wheat rust, stem rots, Pest-risk analysis.



**7. Any other agenda with permission of chair**

1. Regarding fund assistance and co-operation for collection to Organized Zonal meeting - Not agreed by the EC and hence GB not approved.
2. Miscellaneous (publication of abstracts in Specific format of all Zonal meeting) – Agreed by the EC and approved by GB.
3. Uniform format for Certificates for the national/ zonal/international conferences organized under the banner of IPS.

EC agreed on the proposal to have uniform format for certificate and abstracts for each

symposia/seminar to be organized under the banner of IPS and GB approved the same.

4. Issue related to refund of registration in case of non-attending the conference -

EC did not agree to refund the registration amount in this case and GB also did not agree on this.

5. **Revision of the IPS staff salary**

The revision in salary of IPS Secretariat was discussed and EC & GB agreed for the revision in salary as given below w.e.f. April 1, 2019. Further 10% annual increment will be effective from April 2020.

	Existing salary(Rs.) /month	Revised salary(Rs.) /month
Business Manager	34,560.00	40,000.00
Editorial Assistant	14,000.00	16,000.00
Office Assistant	9000.00	12,000.00



Members attending 71<sup>st</sup> Annual General Body meeting at BHU, Varanasi, February 28, 2019



# Activities

**Society organised brain storming session special Symposium workshop, national symposium, international conference and zonal symposia during 2018-19**

Activity	Date	Title	Venue	No. of delegates
<b>Brain Storming Session</b>	Aug 8, 2018	Blast Proofing in Agriculture	ICAR-Indian Institute of Wheat & Barley Research, Karnal (Haryana)	86
<b>Special Symposium</b>	Sept 25-26, 2018	Extension Plant Pathology: Technological Backstopping to the Farmers/State Officials	IGKV, Raipur, Chhattisgarh	250
<b>National Workshop</b>	Jan 11-12, 2019	Diseases of Makhana: Challenges Towards Diagnosis and Management	Department Plant Pathology, Mandan Bharti Agriculture College, Agwanpur, Saharsa (BAU, Sabour) Bihar	100
<b>National Symposium</b>	Feb 26-28, 2019	Recent Challenges and Opportunities in Sustainable Plant Health Management	Banaras Hindu University (BHU), Varanasi, Uttar Pradesh	400
<b>International Conference</b>	Nov 21-25, 2018	Role of Soil and Plant Health in Achieving Sustainable Development Goals	Bangkok, Thailand	172
<b>Zonal Symposiums</b>				
Zone	Date	Topic	Venue	
<b>Western</b>	Aug 23-24, 2018	Current and Emerging Trends in Plant Health Management	Goa	125
<b>Mid-Eastern</b>	Oct 29-30, 2018	Biointensive Approaches in Plant Protection Strategies and their Socio-economic Impacts	Department of Plant Protection, AMU, Aligarh, Uttar Pradesh	300
<b>Northern</b>	Nov 2-3, 2018	Alternative approaches in plant health Management for enhancing farmers income	YSPUHF, Solan, HP	260
<b>Eastern</b>	Nov 17-19, 2018	New Paradigms of Plant Health Management: Sustaining Food Security under climate change scenario	BAU, Sabour, Bhagalpur, Bihar	100



<b>Central</b>	Dec 28, 2018	Recent Trends in Plant Disease-Management	Department of Microbiology, Kakatiya University, Warangal (Telangana)	120
<b>North Eastern</b>	Jan 19-20, 2019	Emerging diseases of Agricultural Crops and their Novel Management Practices	College of Agriculture, Tripura	125
<b>Delhi</b>	Dec 15, 2018	Bio-prospects of microbes for plant and human health	ICAR-IARI, New Delhi	98
<b>Southern</b>	Dec 21-23, 2018	Cutting edge approaches for the sustainable plant disease management and ensuring farmers profit	ICAR-NRC for Banana, Tiruchirapalli, Tamil Nadu	288
<b>Total</b>				<b>2424</b>

# Brain Storming Session

## Brain storming on 'Blast Proofing in Agriculture' at Indian Institute of Wheat and Barely Research, Karnal on August 08, 2018.

Brain Storming on “**Blast Proofing in Agriculture**” was organized by the Society at Indian Institute of Wheat and Barely Research, Karnal, Haryana in association with *Society for Advancement of Wheat & Barley Research*, Karnal and *Indian Society of Plant Pathologists*, Ludhiana. Total 86 delegates participated in the programme.

### Recommendations

After presentation of talks and through discussion, following recommendations were given for blast proofing in agriculture:

1. Blast disease is increasing in rice and pearl millet and wheat blast is posing a threat to wheat in India since it is now present in Bangladesh. It is therefore recommended to strengthen quarantine system and also local quarantine in India as pre cautionary measures to avoid any accidental or intended entry of wheat blast pathogen in India. The import of wheat grains, seeds and plant parts (straw etc.) must be completely restricted from Bangladesh and from the South American countries where wheat blast is present. According to CIMMYT, the disease has been established in Bangladesh since 2016.
2. The wheat cultivation along the five km distance from borders of India –Bangladesh in Indian side must be kept wheat free zone and only non host crops of wheat blast like oilseeds and pulses may be grown instead of wheat in these areas.
3. The wheat holiday in neighbouring districts in West Bengal to Bangladesh where wheat blast is reported must be maintained and rest of the districts may be supplied wheat seeds of resistant variety like HD 2967 and new variety in pipeline DBW 187 from North. The wheat grains grown in West Bengal and Assam may be



Group photograph of delegates attending brain storming session at IIWBR, Karnal on August 8, 2018



- consumed locally and internal quarantine may be imposed for stopping marketing of these to neighbouring states.
4. There is need to develop forecasting model for wheat blast and wheat blast tracer software developed may be used for survey and surveillance of wheat blast and restriction of entry in to India.
  5. The wheat sowing should be done after seed treatment with recommended fungicides in Northeastern plains zone (NEPZ).
  6. The weed hosts must be checked thoroughly for presence of wheat blast pathogen near international borders of India and Bangladesh in West Bengal.
  7. There was strong opinion that screening of Indian wheat lines and varieties may be done in Bangladesh for wheat blast resistance and Indian team may be allowed access to screen their material in Bangladesh.
  8. A dedicated programme of wheat blast resistance breeding may be strengthened in Eastern India and those found resistant in Bangladesh may be given preference for their promotion in yield trials and release as variety. The blast resistant varieties may be resistant to brown rust, spot blotch and head scab also.
  9. A strong seed production programme may be worked out for seed production to West Bengal, Assam, Bihar, Eastern UP, Jharkhand etc. to replace old and susceptible varieties on priority and to manage the threat of wheat blast.
  10. The information on epidemiology, survival and pathogenic variability may be generated further in case of *Magnaporthe oryzae* pathotype *Triticum*. The Indian scientists may collaborate with teams working abroad for collaborative research work.
  11. The integrated management of wheat blast may be refined further by giving label claim of new molecules found effective against blast pathogen in rice and pearl millet.
  12. It was informed that wheat blast pathogen in Bangladesh posses almost double the number of genes as compared to rice blast pathogen (*M. oryzae* pathotype *Oryza*).
  13. It was concluded so far that wheat blast is not yet present in India and emphasis should be to prevent its entry in to India as well as mechanism in place to eradicate it in case it gained entry in future.
  14. The seed growers, farmers and extension agencies may be further sensitized about the threat of wheat blast in NEPZ.
  15. A total of seventeen accessions of pearl millet were found resistant to blast disease at ICRISAT and these may be used for breeding for disease resistance.
  16. For IPM of pearl millet blast, foliar sprays of tebuconazole+ trifloxystrobin along with Agroneem (Neem extract) and bioagent, *Trichoderma harzianum* may be used.
  17. It was recommended that new blasticides developed by Bayer (India) Ltd. and Indofil Industries Ltd. as well as other pesticide companies may be tested for generating bio efficacy data and these may be registered for blast disease management both as seed treatment and foliar sprays.
  18. The issue of pesticide residue in rice due to some fungicides was discussed and it was recommended that farmers need to be educated for its proper time and doses of spray as well as further trials are required to degenerate more data on basmatirice.

# Special National Symposium

## A Special National Symposium on "Extension Plant Pathology: Technological Backstopping to the Farmers/Other Stakeholders" at Indira Gandhi Krishi Vishwavidyalaya (IGKV), Raipur during September 25-26, 2018

A Special National Symposium on "Extension Plant Pathology: Technological Backstopping to the Farmers/Other Stakeholders" was jointly organized by Indira Gandhi Krishi Vishwavidyalaya (IGKV), Raipur and Indian Phytopathological Society, New Delhi at IGKV, Raipur on September 25-26, 2018 in collaboration with the Directorate of Horticulture and Farm Forestry, Govt. of Chhattisgarh, Chhattisgarh State Marketing Federation(Mandi) Board, CG Beej Awam Krishi Vikas Nigam Limited, Raipur, NABARD, Chhattisgarh Council of Science and Technology, Raipur. The symposium was mainly focused on transferring the knowledge/tools/ techniques of Plant Pathology generated by the research system and being used directly by the farming community with regards to identification, detection, diagnosis and management of the plant diseases including mushroom technology which has now

become the important source of food, nutritional, employment and income and livelihood security in rural areas of the country. Keeping in view of the title of the symposium, an attempt was made to divide the entire symposium into seven themes/Technical Sessions touching the most important field aspects benefitting directly to the farmers/field functionaries. The symposium in this regard was a great success because very good achievement was brought about in the form of publication of an important book in Hindi entitled "*Phasal Rog Prabandhan*" published by Today and Tomorrow Printers, New Delhi which is contributed by 31 Plant Pathologists of the country specialized in their field keeping in view of the theme of the symposium covering all aspects scheduled in Technical Sessions I-VII.



Release of abstract book during inauguration session of special National Symposium at IGKV Raipur on September 26, 2018



Release of book

The symposium was open to all the scientists, academicians, researchers, students, progressive farmers, input Dealers, government officials, policy makers and it was attended by about 250 participants. The total number of papers/articles including Lead, Invited, Contributory and posters in seven Technical Sessions were 268 and all these papers were compiled in the form of a **Souvenir cum Abstract** of 206 pages. Out of 268 papers, 85 percent of the papers were presented in all the sessions by the renowned Plant Pathologists gathered from almost all parts of the country. Four technical Sessions were held on 25<sup>th</sup> September, 2018 two each at Swami Vivekanand Auditorium, College of Agriculture and Seminar Hall, College of Agriculture, Raipur concurrently. However, three technical sessions were held on 26<sup>th</sup> Sep., 2018 in Swami Vivekanand Auditorium, College of Agriculture, Raipur. The poster session was organised in the Department of Plant Pathology, College of



SMP Khurana honoured with Scroll of Honour

Agriculture, Raipur. Out of total posters presented in five technical Sessions, two best posters each from Technical Session I,II,IV,V,VI were adjudged as Best posters by the Judging Committee constituted by the Organising Secretary. A cultural evening on Chhattisgarh Folk Dance and Chhattisgarh Darshan (Festivals) which have direct relevance with agriculture was organised on 25<sup>th</sup> evening after the technical session was over which was very much liked by the participants. The Inaugural function was held on 25<sup>th</sup> Sep., 2018 at Swami Vivekanand Auditorium, College of Agriculture, Raipur in which Dr. A.K.Singh, DDG (Agril. Extensio), ICAR, New Delhi was Chief Guest and was presided over by the Vice Chancellor of IGKV, Raipur, Dr.S.K.Patil. The Guest of Honours were Dr.C. Chattopadhyay, Vice Chancellor, Uttarbanga Krishi Vishwavidyalaya, Coochbehar (WB), Dr.C.D.Mayee, Former Chairman, ASRB, New Delhi, Shri Anoop Shrivastava, IFS, Secretary, Govt. of Chhattisgarh,



Group photograph of the delegates during special National Symposium at IGKV Raipur



Raipur, Shri N.P. Mohapatra, CGM, NANARD, Raipur, Dr.R.N. Pandey, President, IPS, Dr. Dinesh Singh Secretary and Dr.M.P.Thakur Organising Secretary. During the Inaugural Function, seven renowned Plant Pathologists (Dr.C.D.Mayee, S.S. Chahal, Dr. S.M.Paul Khurana, Dr.M.P.Srivastava, Dr. R.P.Thakur, Dr.R.P.Singh and Dr.M.N. Khare) were honoured with Scroll of Honour for their Life Time Achievements in Plant Pathology. Similarly, five farmers of Chhattisgarh (Shri Shirish Taunk, Shri Vimal Chawda, Shri, Manoj Choudhary, Shri Sanjay Chaoudhary and Smt. Namrata Prem Ji Yadu) who have significantly contributed in the transfer of different technologies were also recognised with “**Certificate of Recognition**”. The Valedictory function was held at the Swami Vivekanand Auditorium, COA, Raipur in which Shri Shyam Bais, Chairman, CG Beej Awam Krishi Vokas Nigam Ltd. Raipur was Guest and presided by Dr.S.K.Patil, Hon,ble Vice Chancellor of IGKV, The Guest of Honours were Dr. C. Chattopadhyay, Hon,ble Vice Chancellor of Uttar Banga Krishi Vishwavidyalaya, Coochbehar (WB). Dr. R.N.Pandey, President, IPS, Dr. Dinesh Singh, Secretary, IPS and Dr.M.P.Thakur, Organising Secretary and President Elect 2018 of IPS were also present.

### Recommendations

1. Identification and diagnosis of plant pathogens based on morpho taxonomic criteria and molecular approaches (protein and nucleic acid based techniques) were greatly emphasized along with management of plant diseases using IPM (use of biocontrol agents and use of transgenics), phytosanitation, quarantines etc.
2. Indigenous and commercial production of biocontrol agents particularly *Trichoderma* and *Pseudomonas* for disease management by individual farmers/SHGs/FPOs & entomopathogenic fungi for insect management were found to be the need of the present days to promote chemical less farming.
3. Ideal plant protection equipments to cover the target with maximum efficiency and minimum efforts to keep the pests under control was emphasized with creation of ideal storage facilities to minimize stored grain losses due to biotic/abiotic factors.
4. Integrated pest management using varieties of components like use of resistant varieties, use of forth generation fungicides as prophylactic/curative measures, use of biopesticides were focused for successful crop health management.
5. The need for intensive research and development efforts was felt to develop new biofertilizers/biopsticides with multi-crop growth promoting activities and with multiple mode of action against pest and diseases for sustainable development of agriculture and need to be demonstrated under field conditions in a big way.
6. A need for creating awareness on nutritional and medicinal values of common edible and medicinal values and their cultivation in livelihood upgradation by rural/urban youths/women was strongly felt.
7. ICT should be effectively used in identification, timely diagnosis and management of diseases of different crops by creating on line Plant Health Clinics, uploading crop doctors and using all social media platforms to avoid huge losses from the diseases.

# National Workshop

## National Workshop on “Diseases of Makhana: Challenges towards Diagnosis and Management” at MB Agriculture College, Agwanpur on 11th and 12th January, 2019

The two days National Workshop on “Diseases of Makhana: Challenges towards Diagnosis and Management” was organized by MBAC, Agwanpur in collaboration with Indian Phytopathological Society, New Delhi at MBAC Agwanpur on 11<sup>th</sup> and 12<sup>th</sup> January, 2019 in which Dignitaries & delegates from different states of India and more than 100 farmers from Different area of *Koshi* region of Bihar also participated in the workshop. The workshop was inaugurated with lighting of lamp by Dr. Ajoy Kumar Singh, Honourable, Vice Chancellor Bihar Agricultural University, Sabour, Dr. Umesh Singh, Associate Dean cum Principal, MBAC, Agwanpur, Saharsa, Dr. Dinesh Singh, Secretary, IPS, New Delhi, Dr. Vaibhav Kumar Singh, Treasurer, IPS, New Delhi, Dr. I. S. Singh, Head & Senior Scientist, ICAR-RCER, Research Centre for Makhana, Darbhanga and Dr. Gireesh Chand, Zonal President, IPS, New Delhi. Dr. Santosh Kumar, Organizing



Lightening of the lamp during workshop by chief guest and other dignitaries

Secretary of the workshop focused on the relevance, need and structure of the workshop. Ajoy Kumar Singh, the Chairman–cum–Chief Guest of the occasion emphasized over the scientific cultivation of makhana with protected cultivation in his presidential speech. He advised farmers to do cultivation in pool and make



Release of laboratory manual cum abstract book in the inaugural session of National Workshop at MB Agriculture College, Agwanpur on January 11, 2019



federation to procure high return price of their produce. Dr. Umesh Singh, Convener of the workshop highlighted the holistic view of makhana cultivation. Dr. Dinesh Singh, Secretary and Dr. Vaibhav Kumar Singh, Treasurer, IPS, New Delhi and Guests of Honour of the workshop, shared the various ongoing activities of the IPS and their scope in the protection of makhana disease. Dr. I. S. Singh the other Guest of the Honour of the occasion described pros and cons of makhana cultivation in the northern Bihar. They have also expressed their concern on increasing use of chemicals in makhana cultivation and proposed to evolve practices to modify the current scenario of plant disease and insect pest management. A Laboratory manual entitled "*Basic Laboratory Techniques in Plant Pathology*" (edited by Santosh Kumar, Erayya, & Gireesh Chand) and Souvenir-cum-Abstract of the National Workshop was also released during inaugural session of the Workshop.

#### **Release of laboratory manual cum abstract book in the inaugural session**

The workshop was convened in three sessions; 1. Economic important and plant protection 2. Post harvest management 3. Demonstration of land and farmer interaction. The Third session was followed by valedictory session in which Rajesh Kumar Singh, DDC, Saharsa, Dr. Dinesh Kumar Singh, DAO, Saharsa and DHO, Santosh Kumar Suman graced the occasion and appreciated all the delegates, participants and farmers for their presence in this successful two days National Workshop. Certificates were also given to participants and best presenters of the session were also awarded. The Workshop ended by the vote of thanks given by Dr. Umesh Singh, Convener of the workshop and associate Dean-cum-Principal MBAC, Agwanpur, Saharsa.

Many researchable issues and recommendations came out for the consideration after through discussion and deliberation in all three technical sessions of the workshop are given below;

#### **Researchable Issues**

- Development of disease and pest tolerant makhana variety using collaborative approach of concerned organization.

- Effective weed management in makhana under ponds and field conditions.
- Refinement of technology in integration with air-breathing fish, carp fish in both system of makhana cultivation.
- Refinement of technology in integrated farming system mode of makhana cultivation.
- Makhana has received little attention of pathologists and, therefore, the biology of biotic stresses of makhana and their management is not deeply understood. Thus, the research work on the control of insect-pest like aphids and some prominent diseases must be accelerated.
- Effective and cheap methods of processing (puffing) are not yet available. Thus, there is an urgent need to design and develop a low cost mechanical processor which could be easily operated.
- Development of better packaging material for makhana for long term storage and distant marketing of Makhana puffs as puffed makhana packaged in plastic lined gunny bags is easily spoiled by some particular insects if stored for long duration i.e. up to 1 to 2 years.

#### **Recommendations**

Following recommendations came out from all three technical sessions of this National Workshop:

1. Ecologically sustainable agronomic crop management strategies should be given priority.
2. Being an aquatic crop, makhana is a high water requiring crop, climate change impact on plant health should be monitored properly and minutely.
3. Major diseases of makhana such as *Alternaria* leaf spot and blight, gray mould and hypertrophy disease need special attention as these diseases cause maximum loss in makhana crop in this region.
4. The detail etiology and epidemiology study is required to formulate the better management



practices and control the major diseases of makhana as these areas are still untouched by plant pathologists as far as makhana crop is concerned.

5. Makhana diseases and pest management practices need the involvement of bio-pesticides as makhana is an aquatic crop and chemical pesticides may cause hazard to health of other aquatic flora and fauna.
6. The detail study of interaction of insect pests and plant pathogens including their involvement in disease development beside their role in crop loss is required to formulate their management practices.

#### Other Recommendations

- A Marketing Intelligence System (MIS) need to be developed. A customer orientated MIS with relevant informationshould be able to impart line department, organizations as well as entrepreneurs, both in the cultivating and in the consuming area. The MIS should be preceded by a study linked with their feasibility and possibilities for implementation.
- Extensive governmental support in the makhana sector is totally negligible; therefore, the government may be informed to take necessary steps to strengthen the scientific

cultivation of makhana in north Bihar so as the glory of makhana cultivation could be restored in this region. The income support scheme would be much better and possibly the ideal one as the payment is purely a cash transfer to farmers as per leased makhana ponds.

- Inadequate market, export facility and promotional activities for makhana should be explored.
- Formulation of policies and extension services are not up to the mark, therefore, it must be strengthened.
- The major Makhana producing region of Northern Bihar should be identified and needs to be developed as makhana corridor.
- Federation of makhana growers/Farmer producer organizations may be framed for its holistic cultivation and to provide help in gaining good and lumpy economical return to the makhana growers.
- Scientists may be advised to organize a scientists-farmer's interaction meeting at farmer's pond to explore the difficulties faced by them subsequently scientists would provide the possible feasible and cheap scientific remedial measures to the farmers to overcome on their problems.



# Zonal Activities: West Zone Symposium

Zonal President: Dr. K.D.Thakur

Zonal Councillor: Dr. S.B. Bramhankar

## National Symposium on 'Current and Emerging Trends in Plant Health Management at Goa on 23- 24th August, 2018

The symposium entitled "*Current and Emerging Trends in Plant Health Management*" was organized at Goa w. e. f. 23- 24<sup>th</sup> August, 2018. Total 125 participants were present, at the outset Dr. K. D. Thakur, Zonal President (WZ) IPS welcomed the dignitaries on dais and gave introductory speech. The Programme was inaugurated by Dr. C. D. Mayee, Former Chairman, Agricultural Scientist Recruitment Board, New Delhi in presence of Dr. Eknath Chakorikar, Director Central Coastal Research Institute (ICAR), Goa, Dr. Bhagirath Choudhari, Dr. Dinesh Singh, Secretary, IPS, New Delhi. The program was inaugurated on 23<sup>rd</sup> August, 2018. Dr. S. B. Bramhankar, Zonal Councilor (WZ) IPS proposed vote of thanks.

There was lead lecture of the eminent scientist immediately after the inaugural function. There were seven lead lectures delivered on different topics by Dr. Dinesh Singh, Dr. V. K. Bararnwal, Dr. Bhagirath Choudhari, Dr. Pratibha Sharma, Dr. Indu Sawant, Dr. R. M. Gade, Dr. D. K. Gosh and Dr. Sujoy Saha.

Immediately after lead lecture - Prof. M. J. Narsimhan Academic Merit Award Competition was conducted. Out of four entries two were recommended for awards. The details are as under:



Address by Dr. Dinesh Singh, Secretary, IPS in inaugural session of the symposium at Goa on August 23, 2018



SN.	Name of Participants	Title of Research	Address
1	Y. M. Rojsara	Molecular characterization of <i>Fusarium oxysporum</i> sp. <i>ricini</i> using internal transcribed spacer (ITS) causing wilt of castor	Bidi Tobacco Research Station, Anand Agricultural University, Anand Email: yogeshrojasara@gmail.com
2	A. V. Shitole	Detection of antifungal potency of weed extract against phytopathogenic fungi	Dept. of Plant Pathology, Dr. PDKV, Akola Email: amolsht@gmail.com

The technical session on “Integrated Plant Disease Management” was chaired by Dr. V. K. Baranwal in which four papers were presented. The technical session was on “ Biotech and Nanotech, Climate Change, Ecology, Epidemiology and Forecasting , Seed Technology, Extension Plant Pathology and General Plant Pathology was held under the chairmanship of Dr. A. P. Suryawanshi.

On 24<sup>th</sup> August, 2018 poster presentation (TS1) Session was held under the chairmanship of Dr. InduSawant where 26 poster presented by the participants under Integrated Plant Disease Management. The poster presentation TS2 on the theme of PGPR, Mycorrhiza and biocontrol was conducted by the Chairman Dr. SanjoySaha. Poster presentation PS3 session entitled “Biotech and Nonotech, Climate Change, Ecology, Epidemiology and Forecasting, Seed Technology,

Extension Plant Pathology and General Plant Pathology” was conducted by the Chairman Dr. Mansa Bag.

Valedictory function was held on 24<sup>th</sup> August, 2018 at 11.30 a.m. The function was chaired by Dr. C. D. Mayee, Guest of Honor Dr. M.P. Thakur in presence of Dr. C. D. Deokar (Head, Department of Plant Pathology and Agril. Microbiology, MPKV, Rahuri, Dr. A. P. Suryawanshi ,Head, Department of Plant Pathology, BSKKV, DapoliDisttRatnagiri : Dr. K. D. Thakur, Dr. G. K. Giri and Shri. Bhalchandra Thakur, Director RuchiAgrofarm, Gondia. The award ranking first and second category were presented to six participants both oral poster presentation each. These awards were given by the dignitaries -during the function. At the end Dr. S. R. Potdukhe proposed vote of thanks. The function ended with permission of chair.

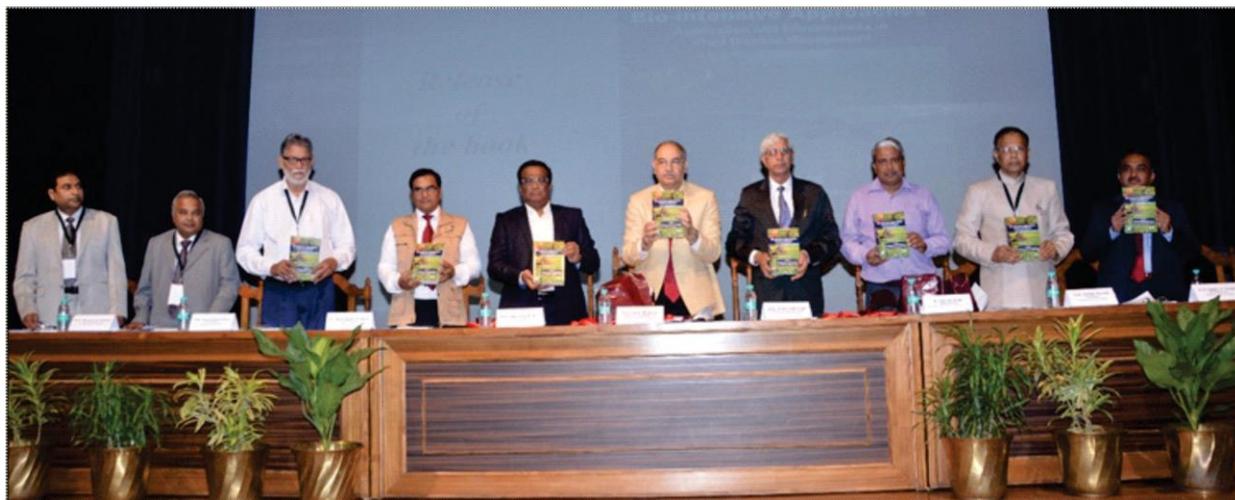
# Mid-Eastern Zone Symposium

Zonal President: Prof. M.R. Khan  
Zonal Councillor: Prof. Mansoor A. Siddiqi

## The National Symposium on 'Bio-intensive Approaches in Plant Protection and their Socio-economic Impacts at Department of Plant Protection, Aligarh Muslim University, Aligarh from 29-30 October, 2018.

All the sessions including Inaugural and Valedictory were held in JNMCH Auditorium AMU. The Inaugural session was presided by the Prof. Tariq Mansoor, Vice Chancellor, AMU (Chief Patron), and the Chief Guest was Prof. Appa Rao Podile, VC, University of Hyderabad. Other dignitaries on the dais were Prof. M. Hanif Beg (PVC, AMU), Prof. R. N. Pandey (National President, Indian Phytopathological Society), Dr. Dinesh Singh (General Secretary, IPS), Prof. M. Saghir Ansari (Dean, Faculty of Agricultural Sciences), Prof. Akhtar Haseeb (Chairman, Organizing Committee), Prof. P. Q. Rizvi, (Co-Chairman Organizing Committee), Prof. Mansoor A. Siddiqi (Co-Organizing Secretary & Zonal Councillor, IPS), and Prof. Mujeebur Rahman Khan (Convenor & Organizing Secretary of the conference and Zonal President IPS). The Souvenir on the technical programme and abstracts of the research papers to be presented at the conference

was released by the VC, Chief Guest and other dignitaries. A book on the theme of the conference edited by M.R. Khan *et. al.* was also released. Thereafter, memorial awards were presented to the scientists selected on the basis of merit of their nominations, namely Prof. Abrar Mustafa Khan Memorial Award to Dr. Anil Kumar Saxena, Director, ICAR-NBAIM; Dr. Mohammad Rafiq Siddiqi Memorial Award to Dr. Rakesh Pandey, CSIR-CIMAP; and Prof. M. Wajid Khan Memorial Award to Prof. Rashmi Aggrawal, Head Division of Plant Pathology, IARI; Prof. Abrar Mustafa Khan Memorial Award (Junior category) to Dr. Prem Lal Kashyap, ICAR-IIWBR, Karnal (Plant Pathology) and Dr. Rashid Pervez (Nematology), IARI. This was followed by address by the Chief Guest and Presidential address. After the Inauguration session high tea was offered to all the attendees (around 300).



Release of the Souvenir on the technical programme and abstracts of the research papers in the inaugural function of National Symposium at department of plant protection, AMU, Aligarh on October 29, 2018



**M.J. Narsimhan Merit Award Competition:** (Chairman: Prof. Akhtar Haseeb, AMU; Co-Chairman: Dr. Rakesh Pandey, ICAR-CIMAP, Co-Chairman: Dr. Gulsar Banu, ICAR-CICR)

Candidates namely Dr. Touseef Hussain, Ruchi Tripathi and Ziaul Haque participated in the competition. Their oral presentations were evaluated by judges. Following candidates for M.J. Narsimhan Merit Award Competition from Mid-Eastern Zone were recommended by the committee for their participation in the final competition to be held at IPS Annual Meeting, 2019.

1. Dr. Ziaul Haque, Department of Plant Protection, Faculty of Agricultural sciences, AMU, Aligarh

**Title of paper:** Host resistance and biocontrol as alternative approaches for pesticides against rice root-knot nematode, *Meloidiogyne graminicola*

2. Dr. Ruchi Tripathi, Department of Plant Pathology, College of Agriculture, GBPUAT, Pantnagar

**Title of paper:** Exploration of different methods for detection of *Clavibacter michiganensis* subsp. *michiganensis* (Smith) Davis, the cause of bacterial wilt and canker of tomato (*Lycopersicon esculentum* M.) and its management.

**Session 13 Poster Competition:** Twenty nine posters were presented by M.Sc. students, which were evaluated by judges.

Valedictory sessions was also held in JNMCH Auditorium, AMU. This session was presided by Prof. M. Hanif Beg, Pro-Vice Chancellor, AMU, and the Chief Guest was Prof. A. N. Mukhopadhyay, Ex. VC, AAU, Jorhat, and Guest of Honor was Prof. Ajit Verma Dy. VC, Amity University. Other dignitaries on the dias were Prof. M. Saghir Ansari (Dean, Faculty of Agricultural Sciences), Prof. Akhtar Haseeb (Chairman Organizing Committee), Prof. P. Q. Rizvi, (Co-chairman, Organizing Committee), Prof. Mansoor A. Siddiqi (Co-Organizing Secretary & Zonal Councillor, IPS) and Prof. Mujeebur Rahman Khan (Convenor & Organizing

Secretary of the conference and Zonal President IPS). Keynote address was delivered by Prof. A. N. Mukhopadhyay. Prof. A. N. Mukhopadhyay and Prof. Ajit Verma were felicitated with the Lifetime Achievement Awards for their contribution in Crop Protection and Production. To encourage young scientists, researchers and Scientists, 4-6 Best Presentation Awards as recommended by the judges for each Poster Session were presented to the winners by the Chief Guest. The session was attended by around 250 participants.

Local hospitality including breakfasts, meals, lodging and local transportation were offered to all the participants in the conference by the organizers. To acknowledge the financial support by the DRDO, CSIR, AMU Tibbia Dawakhan, AYUSH, the logo as co-sponsors was printed on the Souvenir/ banners of the conference.

#### Recommendations

Following recommendations are proposed based on the deliberations and discussions made during twelve sessions themed on various plant pathological aspects of national significance.

1. Use of plant growth promoting microorganisms and microbial antagonists be exploited to improve crop health. The indigenous strains of the microorganisms isolated and tested by researchers should be deposited in a Microbial Culture Depository.
2. Nanotechnological advances should be exploited in the production nanofertilizers and nanopesticides. Modern molecular approaches like ITS, DNA sequences etc should be used for accurate identification of plant pathogens, and CRISPR-cas technique can be exploited for gene editing to develop host resistance against pathogens.
3. In view of emerging serious nematode problems in various vegetable, cereal and fruit crops, the ICAR and ASRB were urged upon to create/ allocate teaching and research positions in Nematology in Agricultural Universities and Institutes. Further, at least one Nematology

course should be included in the course curricula of B.Sc. (Hons) Agriculture and M.Sc. (Ag) Plant Pathology.

4. In view of effectiveness and eco-friendliness of biopesticides, government subsidy be provided to farmers. Further strict measures be imposed to maintain a high quality of biopesticides (CFU load) available in the market.
5. Teaching and research on entomopathogenic

nematodes (EPN) be promoted in agricultural institutions, and one course on EPN should also be taught in M.Sc. (Ag) Entomology. Further, status of pine wood nematode and its insect vector should be ascertained in the Himalayan ranges under Indian territory, and strict measure should be enforced to avoid import of non-certified coniferous wood from China, Bhutan, Nepal, Myanmar etc.



Felicitation of chief guest during inaugural function of the symposium



Group photograph of the delegates during the symposium



# Northern Zone Symposium

Zonal President: Dr. S.K. Sharma  
Zonal Councillor: Dr. Meenu Gupta

## National symposium on 'Alternative approaches in plant health management for enhancing farmers' income' at Department of Plant Pathology, Dr YS Parmar University of Horticulture and Forestry, Nauni, Solan (HP) during 2-3, November 2018

National symposium on “**Alternative approaches in plant health management for enhancing farmers’ income**” organized by Department of Plant Pathology, Dr Y.S. Parmar University of Horticulture and Forestry, Nauni, Solan (HP) in association with Indian Phytopathological Society, New Delhi and Himalayan Phytopathological Society, Nauni, Solan (HP) w.e.f. November 2-3, 2018, was inaugurated by Dr. V.L. Chopra, Former Member, Planning Commission & Former Secretary, DARE & DG, ICAR who was the Chief Guest and Dr VS Thakur, Former Vice Chancellor and presently Director of Extension Education , YSP UHF, Nauni, presided over the function. The other dignitaries on the dais were Dr JN Sharma, Director of Research, YSP UHF, Nauni, Dr. H.R. Gautam, Professor and Head, Department of Plant Pathology, YSP UHF, Nauni, Dr Dinesh Singh, Principal Scientist & Secretary IPS, New Delhi, and Dr Satish K Sharma, Joint Director Research (H) &

President IPS (North Zone)-cum-Organizing Secretary of the National Symposium. During the inaugural session four publications i.e. **Souvenir-cum-Abstract Book**, a half yearly newsletter “**Technological Notes**”, two books viz. “**Alternative Approaches in Plant Disease Management**” by Dr Satish K Sharma and Dr HR Gautam and “**A Comprehensive Book on Agriculture Competitive Exams**” by Dr H R Gautam were released by the Hon’ble Chief Guest.



Inaugural function addressed by the chief guest Dr. V.L. Chopra, Former member of Planning Commission



Release of the abstract book in the inaugural function of national symposium at Department of Plant Pathology, Dr YS Parmar University of Horticulture and Forestry, Nauni, Solan on November 2, 2018



Dr HC Sharma, Hon'ble Vice Chancellor, YSP UHF, Nauni was the Chief Guest on the valedictory function of the National symposium on “**Alternative approaches in plant health management for enhancing farmers' income**” organized by Department of Plant Pathology, Dr YS Parmar University of Horticulture and Forestry, Nauni, Solan (HP) in association with Phytopathological Society, New Delhi and Himalayan Phytopathological Society, Nauni, Solan (HP) w.e.f. on November 3, 2018. The ceremony was presided over by Mr. Ranbir Singh, Chief General Manager, NABARD, Shimla. The other dignitaries on

the dais were Dr JN Sharma, Director of Research, YSP UHF, Nauni, Dr H R Gautam, Professor and Head, Department of Plant Pathology, YSP UHF, Nauni, and Dr Satish K Sharma, Joint Director Research (H) & President IPS (North Zone) – cum- Organizing Secretary. During the closing session, certificates were awarded to the winners of poster session and Prof. M.J. Narasimhan Academic Merit Award winners for north zone by the Hon'ble Chief Guest. The symposium ended with the vote of thanks by the Organizing Secretary.



Poster evaluation by the committee members



Distribution of certificates to awardees



# Eastern Zone Symposium

Zonal President: Dr. Gireesh Chand  
Zonal Councillor: Dr. Chanda Kushwaha

## National Symposium on New Paradigms of Plant Health Management: Sustaining Food Security under Climate Change Scenario, at BAU, Sabour, Bhagalpur, Bihar during 17-19 November 2018.

A three day seminar on 'New Paradigms of Plant Health Management: Sustaining Food Security under Climate Change Scenario' and 'Annual Meeting of Indian Phytopathological Society (East Zone)' was organized during 17-19 November, 2018 by Bihar Agricultural University, Sabour (Bhagalpur) Bihar in association with Indian Phytopathological Society, New Delhi. The national seminar & IPS-EZ Annual Meeting was inaugurated by Hon'ble Vice Chancellor, Dr. A K Singh in the gracious presence of chief guest Dr. Vijay Singh Thakur, former Vice-chancellor, YSPUAF, Solan along with delegates viz., Dr. Robin Gogoi, Joint Secretary, IPS, New Delhi; Dr. R K Sohane, Convener-cum-DEE, BAU, Sabour and Dr. R. R. Singh, Dean (Ag.) BAU, Sabour. The seminar was co-sponsored by Bihar Horticulture Development Society and National Bank for Agriculture and Rural Development. The Seminar had six technical sessions viz., M. J. Narasimhan Award



Inaugural ceremony with Lightening of the lamp by Dr. Vijay Singh Thakur, Former Vice-Chancellor, Dr. Y. S. Parmar University of Horticulture and Forestry, Nouni, Solan, Himachal Pradesh and Hon'ble Vice-Chancellor, BAU, Sabour

contest, Recent approaches in epidemiology, disease diagnostics and crop health monitoring, Innovative approaches for eco-friendly disease management, Microbial diversity and plant microbe interaction and Recent Advances in Extension Plant Pathology. The seminar received a total of 165 articles/abstracts of



Release of abstract book in the inaugural function of National Symposium at BAU, Sabour, Bhagalpur, Bihar on November 19, 2018



research, reviews and policy matters related to various themes of the seminar. More than 100 participants from different states of the country including Himachal Pradesh, Haryana, Telangana, Uttar Pradesh, West Bengal, Sikkim, Arunachal Pradesh, Orissa, Meghalaya, Tripura and Bihar attended the seminar. There were more than 40 deliberations and about 30 poster presentations.

The National Seminar on New Paradigms of Plant Health Management: Sustaining Food Security under Climate Change Scenario & IPS-EZ Annual Meeting (NPPHM-2018) was organized at Bihar Agricultural University, Sabour headquarters. The seminar was inaugurated by **Dr. Ajoy Kumar Singh**, Hon'ble Vice-Chancellor, BAU, Sabour, in the gracious presence of chief guest **Dr. Vijay Singh Thakur**, Former Vice-Chancellor, Dr. Y. S. Parmar University of Horticulture and Forestry, Nouni, Solan, Himachal Pradesh, along with delegates viz., **Dr. Robin Gagoi** Joint Secretary Indian Phytopathological Society IARI, New Delhi, Dr. D. K. Chakrabarti, N. D. University of Agriculture and Technology, Kumarganj, Faizabad (Uttar Pradesh), Dr. Ramesh Chandra, Banaras Hindu University, Varanasi and Plant pathologist other institution viz: UBKV, West Bengal, Rajendra Agricultural University, Pusa, Samastipur (Bihar), National Research Centre for Litchi, Muzaffarpur (Bihar), different colleges of BAU Sabour, progressive farmers researchers from various states like Delhi, Jharkhand, Himanchal Pradesh, Arunachal Pradesh, Sikkim, Uttar Pradesh, West Bengal and Bihar and representatives of various NGOs and organisations.

During the inaugural session, a souvenir-cum-Abstract entitled "New Paradigms of Plant Health Management: Sustaining Food Security under Climate Change Scenario & IPS-EZ Annual Meeting (NPPHM-2018)" was released by the Hon'ble guests. Dr V. S. Thakur suggested in his opening remarks that the effective management strategies are very much needed in the fruit crops like mango banana litchi etc. by minimizing the use of chemicals. Dr Ajoy Kumar Singh in his presidential address highlighted requirement of the complete plant health management module to be disseminated among the farmers. The participants attending the seminar were welcome by the Dr. R. K. Sohane, Director Extension Education, BAU, Sabour. A Brief introduction of seminar

was given by Dr Gireesh Chand (Organizing secretary), Dr. Robin Gagoi Joint Secretary gave brief remark on the role & activities of the Indian Phytopathological Society IARI, New Delhi and Dr. R. N. Singh Co-Convener-cum-ADEE, BAU, Sabour extended the vote of thanks.

#### **Prof. M. J. Narasimhan Merit Academic Award:**

The technical session started with Prof. M. J. Narasimhan Merit Academic Award Competition which was Chaired by Renowned Plant Pathologist Dr. V.S. Thakur, Ex. VC, Y S Parmar University of horticulture and forestry, Solan and Co-Chaired by Dr. Robin Gagoi, Joint Secretary, IPS, New Delhi. A total 4 presentations were made in this session. Mr. Md. Mahtab Rashid from BHU, Varanasi presented his masters research entitled "*Chickpea responds to Fusarium oxysporum fsp. Ciceris races through JA-mediated pathway*" and reported that, FOC-7684 treated plants showed altered activity of JA responsive gene namely 14.3.3 (down regulation) and acyl-activating enzyme gene (up regulation) and concluded that Chickpea responded to FOC through JA pathway. The second contestant Dr. Chandramani Raj from ICAR-RC NEH, Megalaya presented his doctoral research entitled "Study on inheritance and allelism of resistance in pearl millet to the pathogen and avirulence in *Sclerospora graminicola*" and reported that, Line 834B and IP 18294 contain one non-allelic dominant gene RSg2 and RSg3 respectively whereas, IP-18298 carries dominant genes RSg2 and RSg3 which confers resistance against three races of *Sclerospora graminicola*. SSR marker Sg\_SSR49 was tightly linked to avirulence gene which can employ for identification of Avirulent genes. Third contestant Dr. Shweta Singh from ICAR- RC NEH Regional Station, Tadong, Sikkim presented her doctoral research entitled "Pearl millet [*Pennisetum glaucum* (L) R.Br.]-Blast [*Magnaporthe grisea* (Hebert) Barr.] Interaction and resistance mechanisms" and informed that, genetic studies carried out confirms The monogenic nature of blast resistance in pearl millet. Transcriptome analysis revealed enhanced expression of defense gene PR gene (Pathogenesis related gene). The last presenter Ms. Anita from BAU, Sabour presented her masters research on "Genetic variability in pathogens determines differential biochemical defense towards necrotrophic fungi in

Chickpea (*Cicer arietinum* L.)” and revealed that, Aggressiveness of *Sclerotinia rolfisii* and *Macrophomina phaseolina* varied from least to highly aggressive with location and host. Peroxidase, Superoxide dismutase and total phenols facilitate defense reaction in host against both the pathogen. *M. phaseolina* were found more variable than *S. rolfisii*.

#### Recommendations:

1. Varietal improvement towards effective disease management should be taken up in important crops wherever possible for reducing the cost of plant protection. Some genotypes of wheat shows resistance against leaf blight disease of wheat must be added in wheat improvement research programme.
2. Adoption of multidisciplinary and holistic approach among the researcher to address the regional specific issues on priority basis and collaborative initiatives among the researchers should be promoted for effective Plant Health Management. Shelf life of litchi fruit against browning of litchi fruit bark should be added in value added for product development and marketing research programme of litchi.
3. Use of epidemiological models integrated with judicious use of fungicides is to be implied. Various detection kits may lead to early detection and there-by improving the efficiency of any management principle applied.
4. Innovative approaches can be incorporated to manage the diseases of crops through employment of bio pesticides and fungicides, nutrient management, resistance breeding in integrated approach to effectively and efficiently manage the disease.
5. Innovative approaches for the diverse world of the microbial pathogens their interaction with hosts and the cascade of mechanisms which operates during their interaction.
6. Recent approaches in employing effective plant protection under organic system and deployment of various protection techniques in integrated manner to combat the losses due to diseases in sustainable and eco-friendly manner. Emphasis for development and use of region specific strains of bio-agents for effective control.
7. More focus is required for adoption of standard pre harvest operations, integrated pest and disease management and proper post-harvest handling, value chain management from harvesting to consumer including processing and marketing of fruits to make the produce of international standard.
8. Training and extension on awareness about role of bioagents in plant health management and pesticides application against pathogens during crop season is essential for making most successful sustaining food security under climate change scenario.



View on keen interest of participants collecting knowledge during technical session of National Seminar on NPPHM-2018

# Central Zone Symposium

Zonal President: Dr. S. Girisham  
Zonal Councillor: Dr. D. Nagaraju

## National Seminar on: 'Recent Trends in Plant Disease Management, at the Department of Microbiology, Kakatiya University, Warangal on 28th December 2018.

One day National Seminar on '*Recent trends in Plant Disease Management*' was organized by Department of Microbiology, Kakatiya University, Warangal on 28<sup>th</sup> December 2018. The objective was to bring the researchers, teachers, farmers, scholars and students to a common platform and to discuss and share contemporary trends in Plant disease Management. A total of 120 delegates involved in active research from various universities of both basic and agricultural and research organizations have participated. Abstracts of different technical sessions were published in the form of "Souvenir and Abstracts".

The programme was started with an inaugural function on 28.12.2018 at 10.00 am by the lighting of the lamp. The inaugural function was presided by the Prof. S M Reddy, Chairman of the National seminar who warmly

welcomed all the guests, delegates, researchers and participants. The Organising Secretary of the seminar, Prof. S. Girisham had projected the relevance and scientific significance besides welcoming the gathering.



Lightening of the lamp by chief guest and other dignitaries during central zone symposium



Release of the Souvenir and abstract book in the inaugural function of National Seminar at the Department of Microbiology, Kakatiya University, Warangal December 28, 2018.



Prof V. Praveen Rao, Vice-Chancellor of Dr Jayashenkar Telangan Agricultural University was the chief guest and delivered the keynote address. Dr Dinesh Singh Secretary IPS, Prof C. Manoharachary Emeritus Professor,Osmania University, Hyderabad and Prof G. Gangadhar Reddy, Dean Faculty of Sciences were the guest of honour. Dr Sujatha (Head, Department of Microbiology, KU highlighted the Department of Microbiology, Kakatiya University Warangal. Pros S. Girisham (Zonal President and Organizing Secretary) spoke about the Seminar and technical sessions to be conducted during the Seminar. Dr Dinesh Singh (Secretary, IPS briefed about the society, its establishment, zonal chapters, awards, etc. and welcome the delegates requested the participants to become members. Prof C. Manoharachary and Prof G. Gangadhar Reddy, Dean Faculty of Sciences gave remarks for the IPS and wished the conference grandsuccess. The inaugural function ended with vote of thanks by Dr. Nagaraju, Councilor CZ IPS.

SUB THEMES OF SEMINAR

- Modern trends in plant protection
• Exploration of microbial diversity with molecular markers
• Characterization and identification of microorganisms
• Microbialgenomics
• Bioinoculants, Biofertilizers and Biopesticides

The Souvenir & Abstract was released by Prof V. Praveen Rao in the Inaugural session of the National Seminar

The curtain for scientific sessions was raised with the keynote address by Prof. V Praveen Rao, Vice-Chancellor, Professor Jayashankar Telangana State Agricultural University, Hyderabad for - ' Farmers and their Agriculture of Tomorrow: Opportunities Pathways for Transformation' and signified the importance of microbial diversity and elaborated the role of microbes in the management and sustenance of the environment. Further, he had appreciated the department for the organization of such socially relevant scientific seminar. He exhorted the delegates to imbibe the information on microbial technology and its application for self-sustenance.

Recommendations

The following recommendations are emerged out of the seminar deliberations

- 1. There is a need for evolving new techniques for identification of pathogens especially bacteria.
2. Food spoilage by storage fungi and elaboration of mycotoxins are contributing for considerable loss of foods and causing health hazards of animals including man.
3. There is a need for innovative methods of plant protection to make the country self-sufficient for food grains.



Participation of the delegates in the national symposium



News about national seminar published in local newspaper

# North-Eastern Zone Symposium

Zonal President: Dr. Amar Bahadur

Zonal Councillor: Dr. Durga Prasad Awasthi

**National Symposium on 'Emerging Diseases of Agricultural Crops and their Noble Management Practices' at College of Agriculture, Lembucherra, Agartala from 19-20 January, 2019.**

## Inaugural Session:

Inaugural session was held in College of Agriculture, Tripura Lembucherra, Agartala Auditorium. All technical sessions were held in seminar hall and poster session was held in college gallery. The Inaugural session was presided by the Dr. D. P. Sarkar, Director of Agriculture and Farmers Welfare, Govt. of Tripura (Patron) as the Chief Guest, Mr. Arun Debbarma, Director of Horticulture and Soil Conservation, Govt. of Tripura was as Guest of Honor, Ex. Prof. (Dr) K. N. Bhagavati, AAU, Assam as Guest of Honor. Other dignitaries on the dais were Dr. Dinesh Singh, Secretary, IPS and Convener, Dr. D. Sen, Principal I/c, College of Agriculture, Tripura as Chairman of Organizing Committee, Dr. Amar Bahadur. Organizing Secretary of the symposium and Zonal President IPS. The Abstract book of the technical programme was released by the Dr. D. P. Sarkar, Chief Guest alongwith other dignitaries. This was followed by address by the

Chief Guest and Presidential address. After the Inauguration session high tea was offered to all the attendees thereafter Technical Session was conducted. Total 125 delegates participated in the symposium.

**Technical session of Poster paper Presentations:** - Nine posters were presented which were evaluated by judges.

**M.J. Narsimhan Merit Award and APS Student Travel Award Competition:** (Chairman: Dr. Rakesh Pandey, ICAR-CIMAP, Co-Chairman: Ex. Prof. (Dr) K. N. Bhagavati, AAU, Assam. Rapporteur: Dr. Pranab Dutta, Scientist, AAU, Assam)

Candidates i.e. Ms. Mridusmita Deori, Ms. Rupsikha Goswami, Ms. Kala Chhetri participated in the M.J. Narsimhan Merit Award and Ms. W. Tampakleima Chanu participated in APS Student Travel Award competition. Their oral presentations were evaluated by judges. Following candidates for M.J.



Inauguration of the Symposium



Poster session



Narsimhan Merit Award and APS Student Travel Award Competition from North Eastern Zone were recommended by the committee.

1. Ms. Mridusmita Deori, Department of Plant Pathology, Assam Agricultural University, Jorhat, Assam, India.

Title of paper: Arbuscular Mycorrhizal Fungi (AMF) showed efficacy against *Phytophthora* blight of of Pippali, *Piper longum*.

2. Ms. Rupsikha Goswami, Department of Plant Pathology, Assam Agricultural University, Jorhat.

Title of paper: Efficacy of silver nanoparticles against *Colletotrichum musae* and its effect on Crown rot and Anthracnose diseases of banana.

3. Ms. W. Tampakleima Chanu, Department of Plant Pathology, College of Agriculture; Central Agricultural University, Imphal.

Title of paper: Morphological and molecular variability of *Fusarium* wilt of pea and its management in Manipur.

Ms. Mridusmita Deori, and Ms. Rupsikha Goswami, AAU, Jorhat were recommended by the judges for their participation in the final competition in M.J. Narsimhan Merit Award

and Ms. W. Tampakleima Chanu for APS Student Travel Award in the final competition to be held at IPS Annual Meeting, 2019.

**Valedictory sessions:** The session was held in Auditorium Hall of College of Agriculture, Tripura, Lembucherra. The session was presided by Prof. Biblab Halder, Pro-Vice Chancellor, ICFAI University, Tripura as Chief Guest, Dr. M. Datta, Ex. OSD and Principal, College of Agriculture, Tripura, Lembucherra & Ex. Prof. (Dr) K. N. Bhagavati, AAU, Assam as Guest of Honor. Other dignitaries on the dais were Dr. Dinesh Singh, Secretary, IPS and Convener, Dr. Rakesh Pandey, ICAR-CIMAP Lucknow as Guest of Honor, Dr. D. Sen, Principal In-charge, College of Agriculture, Tripura as Chairman of Organizing Committee, Dr. Amar Bahadur, Asstt. Professor (Plant Pathology) College of Agriculture, Tripura as Organizing Secretary of the symposium and Zonal President IPS, Keynote address was delivered by Ex. Prof. (Dr) K. N. Bhagavati, AAU, Assam, To encourage young scientists, researchers and Scientists, 4-5 Best Presentation Awards was recommended by the judges for each Poster Session to the winners.

Local hospitality including breakfasts, lunch and dinner, lodging and local transportation were offered to Invited lead Lectures in the conference by the organizers.



Group photograph of the delegates during National Symposium at College of Agriculture, Lembucherra, Agartala on January 19, 2019.

# Delhi Zone Symposium

Zonal President: Dr. D. Bahukhandi  
Zonal Councillor: Dr. Lakshman Prasad

## National Symposium on 'Microbes for Integrated Plant Disease Management and Bio-prospecting, at Division of Plant Pathology, ICAR- Indian Agricultural Research Institute, New Delhi on 13th December, 2018.

The Delhi Zone Meeting of the Society and one day National Symposium on *Microbes for Integrated Plant Disease Management and Bio-prospecting* was held on 13<sup>th</sup> December, 2018 in the Division of Plant Pathology, ICAR- Indian Agricultural Research Institute (IARI), New Delhi. The Chief Guest and Guest of Honour of the occasion were Dr. C.L. Jandaik, Former Professor & Head, Department Mycology and Plant Pathology, Dr. YS Parmar University of Horticulture & Forestry, Nauni, Solan (HP) and Dr. P.K. Chakrabarty, Assistant Director General (Plant Protection & Biosafety), Indian Council of Agricultural Research (ICAR), Krishi Bhawan, New Delhi.

It was one day programme, starting from inauguration session, followed by presidential address, lead lectures, Prof. MJ Narsimhan award contest, APS travel award contest, Poster presentation and valedictory-cum-

prize distribution session. Abstracts of all the sessions were published in "Abstracts and Souvenir". Total 98 delegates participated in the symposium.

The inaugural session started with lightening of lamp by the dignitaries. Dr. Rashmi Aggarwal, Head, Plant Pathology welcomed the guests and participants; Dr. D. Bahukhandi (Organizing Secretary & Convener) addressed the gathering about the theme of the Symposium followed by Dr. Dinesh Singh, Secretary IPS, expressed about the Society. Guest of Honour Dr. P.K. Chakrabarty, Assistant Director General (Plant Protection & Biosafety), ICAR, delivered his talk in detail about the theme of the symposium, use of microbes for present and future farming, application of microbes for enhancing the farm products and microbes as biocontrol agents. The Chief Guest of the occasion Dr. C.L. Jandaik, Former Professor & Head, Department



Group photographs of the delegates in Delhi Zone National symposium at Division of Plant Pathology, ICAR- IARI, New Delhi on December 13, 2018



Mycology and Plant Pathology, Dr. YSP UHF, Nauni, Solan, elaborated in details the theme of the symposium, implementation of integrated crop management, bioprospecting of fungi especially utility of mushroom cultivation, problems faced by farmers during mushroom cultivation, diseases of mushrooms and their management. At the closing of the inauguration session Dr. D. Bahukhandi - conveyed vote of thanks.

**Prof. M J Narsimhan Academic Merit Award** Contest was chaired by Dr. G.P. Rao, Principal Scientist, Co-Chair Dr. TK. Bag, PS, and Rapporteur Dr. RP. Pant, PS, Division of Plant Pathology IARI. Total 3 candidates participated in the contest namely, Mr. Jagmohan Singh, who spoke on Identification and expression analysis of pathogenicity-related genes in *Tilletia indica* inciting Karnal bunt of wheat, Ms. Pankhuri Singhal, talked on Detection and characterization of viroids infecting grapevine and Mr. Prashantha ST, whose topic of presentation was on Understanding the interactions of anastomosis groups (AG) of *Rhizoctonia solani* with rice (*Oryza sativa* L.).

Out of the 3 contestants, the names of two contestants as follows were recommended for national level contest.

1. **Mr. Prashantha ST**, Division of Plant Pathology, ICAR-IARI, New Delhi.
2. **Mr. Jagmohan Singh**, Division of Plant Pathology, ICAR-IARI, New Delhi.

The APS travel award contest chaired by Dr Bikas Mandal, Principal Scientist, Division of Plant Pathology, IARI, Co-Chaired by - Dr. M.S. Saharan, P S and Rapporteur: Dr Malkhan S. Gurjar, Scientist SS, Division of Plant Pathology, I A R I. Two contestants participated namely, Ms. Shweta Meshram and Mr. Abhijeet S. Kashyap. Ms. Shweta Meshram presented on Mechanism behind disease resistance in maize inbred lines against maydis leaf bight disease and Mr. Abhijeet S. Kashyap presented on Indigenous Rhizobacterial isolates ability to promote growth and induction of defense against bacterial wilt of Chilli.

These candidates were further recommended for national level contest.

Total 21 posters were received out of which 20 were

presented. Poster evaluation committee evaluated the posters and the following posters were adjudged for the best poster awards in different theme areas.

Apart from the best three awards, other presenters awarded with commendation appreciation awards for their poster presentation.

**Theme area: 1. Microbial Technology in relation to Agriculture**

1. Mr. Rubin Debbarma, 2. Mr. Krishna Kumar, 3. Mr. R. Sudeep Toppo

**Theme Area: 2. Molecular plant pathology:**

1. Mr. ST. Prashantha, 2. Mr. R. Gangaraj, 3. Mr. Jagdish Yadav

**Theme Area: 3. Biological and integrated plant disease management:**

1. Ms. Shaily Javeria, 2. Dr. Dinesh Singh, 3. Ms. Sunaina Bisht

**Theme area: Viruses and Phytoplasma and their management :**

1. Mr. Saurabh Kumar Dubey, 2. Mr. Manish Kumar, 3. Ms. Hemavati Ranebennur

**The 6<sup>th</sup> and last and session was valedictory-cum-prize distribution session** addressed by Dr. Dinesh Singh, Dr. G.P. Rao and Dr. D. Bahukhandi. The - proceedings were read by Dr. D. Bahukhandi, Convener & Organizing Secretary, National Symposium. At the closing of the event, vote of thanks was given by Dr. D. Bahukhandi.

**Recommendations**

With the presentations of one day symposium following recommendations have emerged:

1. Emphasis on use of microbial products and development of enabling policies for popularizing use of IPM for ecofriendly management of plant diseases.
2. Bio-prospecting of microbes and development of smart formulations for efficient and sustainable management of biotic stresses.
3. Bioprospecting fungi with greater emphasis on domestication of edible/ medicinal fungi / mushrooms.

# Southern Zone Symposium

Zonal President: Dr. R. Selvarajan  
Zonal Councillor: Dr. R. Thangavelu

## National Symposium on 'Cutting edge approaches for sustainable plant disease management and ensuring farmers' profit" at NRCB, Tiruchirapalli during 21-23 December 2018.

Indian Phytopathological Society (Southern Zone Chapter) and the ICAR-National Research Centre for Banana have organized jointly a three days National Symposium on 'Cutting edge approaches for sustainable plant disease management and ensuring farmers' profit' during 21-23 December 2018 at ICAR NRC Banana, Tiruchirapalli. The Indian Phytopathological Society is the third largest society of Plant Pathologists in the world and is a professional forum for promoting the science of plant diseases. The symposium offered a platform for the exchange of knowledge, expertise, innovative ideas, development and views among scientists and academia related to plant diseases. Deliberations on different themes viz., emerging and re-emerging plant diseases, diagnostics, pathogen detection, management of diseases using biocontrol agents along with advanced fields like nanotechnology, mushroom cultivation, integrated disease management for crops were delivered.

The role of information and communication technologies and internet of things among stake holders like Pathologists, Farmers, Seed and Pesticides manufacturers was emphasized for early identification of diseases and their efficient management. The conference called for close association of KVK's in technology assessment and dissemination related to disease management and held an open session of doubling the farmers' income. Around 288 agricultural scientists of Plant Pathology and Breeders, academicians, progressive farmers, representatives from industries related to plant protection and scholars from state agricultural universities and colleges of southern states viz., Tamil Nadu, Pondicherry, Kerala and Karnataka, have participated in the symposium. The symposium had 9 key note lectures, 19 lead talks and 63 oral presentations and 137 poster presentations. There were four concurrent sessions held on 11 different themes. On the third day, Professor M.J.Narashimhan award contest was



Release of the abstract book in the inaugural function



held and seven presentations were made in front of a five member jury. Two were shortlisted as nominees for the IPS annual meet. Three nominees were shortlisted for APS travel grant contest based on the applications received. In addition, a special interactive workshop on Careers in plant pathology was organized for the benefit of the undergraduate students who aspire to become Plant Pathologists. A panel consisting of academicians, scientists, private fungicides company representatives, entrepreneurs depending on Mushrooms, AGM of reputed Bank and personnel from tissue culture industry have interacted with students for 4 hours long interaction and then they were trained to use dipstick kit to detect banana virus and were also taken into the Virology and Pathology labs. Around 178 students participated in the one-day special interactive workshop conducted on 22<sup>nd</sup> December 2018.

The symposium was inaugurated by Dr. N. Kumar, Vice-Chancellor, Tamil Nadu Agricultural University, Coimbatore, with Dr. W. S. Dhillon, ADG (Horticultural Science), Indian Council of Agricultural Research, New Delhi as the Guest of Honour. Dr. S. Uma, Director, ICAR-NRCB; Dr Dinesh Singh, Secretary, IPS, New Delhi; Dr M Anandaraj, Former Director, ICAR-IISR and former President, IPS; Dr A.S.Krishnamoorthy, Director, CPPS, TNAU and Dr R.Selvarajan, President Southern zone IPS / Organizing secretary of the National Symposium were the dignitaries in the function. Dr Selvarajan briefed about the genesis of the Indian Phytopathology Society and the objectives, various activities of the Society for the cause of farmers and researchers. He also mentioned on the conceptualization of Symposium and the workshop. Dr. Uma, the Director, ICAR-NRCB spoke on the need of information technology and App's to reach to the farmers and convergence of engineering and basic sciences for the effective management of the diseases. Dr. Dhillon talked about the increased production of horticultural crops from mere 15 to 370 million tons in the last three decades which was possible due to minimizing of losses of crop produce due to diseases management. He said, the maximum loss of horticultural produce, which are mostly perishable and short-term storage in nature, is due to post harvest loss partially due to of diseases in the post harvest period, which pathologists should find solution to bring down the loss thus increasing the income to the

producers and farmers. The chief guest of the function Dr Kumar, Vice Chancellor, TNAU released Souvenir and two ready to use ELISA kits for the detection of CMV and BBrMV. Dr Kumar in his address requested the plant pathologists in the country to work for tackling the emerging diseases and emphasized the role of disease surveillance and forecasting, use of microbial consortium the elimination of the pathogens in the initial stage itself and work for newer generation of chemicals and biochemicals for management of diseases in crops. Dr. R. Thangavelu, Principal Scientist; Councillor of Southzone IPS and co-organizing secretary welcomed the gathering and Dr. M. Loganathan, Principal Scientist, proposed vote of thanks.

### Recommendations

1. Based on the number of papers presented on the use of bioagents, it is recommended that there is a wide scope for the exploration of wide range of microbial bioagents and endophytes for plant health improvement. Plant pathologists must make attempts to explore very effective bioagents/endophytes and develop consortium against serious diseases of crop plants occurring in India
2. Citrus greening disease management adopted by a progressive grower from lower Palani hills was exceptional. The formalities to popularise the technology must be given due importance
3. Total Bio-safety compliance need to be taken care in all biocontrol experiments, wherever the formulations are taken to the field for application.
4. Identity of the biocontrol agents to be established beyond doubt, before being carried forward for formulations.
5. Soil application as well as foliar application of bio-agents is a necessity to tackle the pathogens in soil and on aerial parts of plants.
6. Extreme care should be taken to distinguish the symptoms caused by pathogens and deficiency of nutrients.
7. There is an urgent need to integrate the various disease management strategies and its large-scale field validation.
8. The specifications prescribed by ISTA may be strictly followed while conducting experiments on seeds.



9. Creation of awareness and ensuring participation of farmers may be given highest priority while recommending new strategies for disease management.
10. A diseases map on the emerging and reemerging plant diseases must be prepared based on the literature and with the consultation of specialists. There are new diseases of quarantine importance are reported in India like Foc TR-4 for which domestic quarantine must be implemented to avoid the spread to other parts of the country.
11. The *Bacillus* based biocontrol agents can be applied before planting followed by continuous application in different stages of the crop to reduce the disease incidence.
12. The pathogenicity of the *Fusarium* isolate from Banana Research Station, Kerala should be tested in Cavendish cultivar Grand Naine before being claimed as Foc.
13. Phytosanitary measures should be taken to prevent further spread of the *Foc* isolate TR4. The materials used for inoculation should be sterilized to prevent further spread.
14. The survey and surveillance data of the plant diseases incidence should be mapped with the GPS data.
15. Whole genome sequencing must be carried out to confirm the exact etiology of the new viral disease in ginger. The transmission by whiteflies may be carried out and tissue culture approach may be followed to produce virus free plants.
16. The time of application/stage of spray of endophytes in greater yam against anthracnose caused by *Colletotrichum gloeosporioides* should be standardized.
17. Lime can be applied in the bio-formulation of endophytes instead of dolomite to maintain the soil pH.
18. Interception of exotic pathogens by quarantine departments and NBPGR is very important for the plant biosecurity. Open General License (OGL) issued for import might allow the exotic pathogen to enter India and cause a huge problem for the farmers. It is proposed to educate the policy makers over the possible rules and regulation to make the OGL more stringent.
19. On-site diagnostics developed for many viral pathogens in India must be commercialised and the product should be put under use to eliminate the viral diseases especially for those vegetatively propagated high value horticultural crops including sugarcane.
20. Efforts should be made to disseminate the technical details about the chemical name of the new molecules to the farmers
21. Fungicide/pesticides companies must come out with the strategic plan for unscrupulous selling of chemicals irrespective of various acts in place by the Government and efforts should be made by the companies not to inflate the price of the chemicals and supply the best products with reasonable cost, not affecting the farmers
22. Long term observations should be pooled to get more meaningful data and to make predictive models for the future and development of disease forecasting system. Efforts must be made to develop user-friendly disease forecasting system and strengthen the decision support system for plant health management
23. Technology interventions and refinement made in the research institutions must be transferred to farmers through demonstration and trainings by KVKs and NGOs, in order to achieve the better adoption of technologies which would help the farmers to double their farm income.
24. Educating farmers on timely diagnosis of the diseases based on the symptoms; Availability of the complete package of practices for each diseases; Awareness on the use of bioagents must be created among the farmers for which demonstrations to be organized in farmers' fields; Farmer Producer Organization (FPOs) should be involved in the technology dissemination and adoption and it is essential to assess the impact of technologies deployed.
25. Young plant pathologists must ideate and innovate new technologies for the effective disease management using IoT and ICT. Regular workshops must be conducted to impart the skills on the plant protection aspects.

# International Conference at Bangkok

**International Conference on "Role of Soil and Plant Health in Achieving Sustainable Development Goals" at Hotel Rama Gardens, Bangkok, Thailand, during November 21-25, 2018.**

The Indian Phytopathological Society, Asia-Pacific Association of Agricultural Research Institutions (APAARI), Bangkok, Thailand, Council of Agriculture (COA), Taiwan, Australian Centre for International Agricultural Research (ACIAR), International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), India, International Rice Research Institute (IRRI), Philippines, and Department of Agriculture (DOA), Bangkok, Thailand jointly organized International Conference on "Role of Soil and Plant Health in Achieving Sustainable Development Goals" at Hotel Rama Gardens, Bangkok, Thailand, during November 21-25, 2018. The conference was inaugurated by chief guest H.E. Luck Wajananawat, Deputy Minister of Agriculture and Cooperatives, Thailand; H.E. Chen Yuang Tung, and the other dignitaries, namely, Louise Whiting, FAO RAP, Thailand, Yuxin Tong, FAO HQTR, Italy, R.K. Khetarpal, APAARI, Thailand and R.N. Pandey, IPS, India. Total 118 delegates from different countries participated in the conference. In nine technical sessions, several lead lectures on various aspects were presented followed by oral and poster presentations.

The conference began with a warm welcome of dignitaries and delegates by Dr. Ravi Khetarpal, Executive Secretary, Asia-Pacific Association of Agricultural Research Institutions (APPARI), Bangkok, Thailand. While introducing the topic of Soil and Plant Health, being unique and also being addressed for the first time together, he highlighted the significant role the soil and plant health play in achieving the Sustainable development Goals (SDGs). He emphasised that deteriorating soil health, emerging pests and development of nutritional disorders and other factors causing ecological imbalances cannot be dealt in isolation. The environmental concerns include overuse of chemicals for pest management, climate change and poor soil conditions through natural causes or mismanagement. He informed that FAO has initiated a number of global and regional programs to ensure soil and plant health. Further, he said that soil and plant health-related issues being highly location-specific; hoped that the deliberations will contribute to set the regional priorities on research, development, extension and policy in the Asia-Pacific involving various stakeholders. The objective of the conference is to



Release of books in the inaugural session of the International Conference at Hotel Rama Gardens, Bangkok, Thailand, during November 21, 2018.



develop a regional knowledge platform to access new technologies within and outside the region to enhance soil and plant health. He placed on record his gratitude to all the sponsoring organisations and members of APAARI, for their help in organising the conference.

Louise Whiting, FAO RAP, Thailand presented an overview of food insecurity and informed that approximately 33% of our global soils are degraded, leaving agriculture vulnerable and food security at risk. Policy makers around the world are exploring opportunities to embrace sustainable development via the SDGs. About 99% of the world's food supply comes ultimately from land-based production with about 50-70% of the land devoted to agriculture. Modern agricultural methods increased the reliance on external inputs to maintain productivity, which in the long run is unsustainable. Agriculture must, literally, return to its roots by rediscovering the importance of healthy soil, drawing on natural sources of plant nutrition, and using mineral fertiliser wisely. The unique role of soils in influencing the management and use of other resources such as water, land, nutrients and biodiversity validate the efforts of the scientific community towards integrated resource management. Agriculture, and consequently, soils are at the heart of the SDGs (SDG 1, 2, 3, 6, 13, 15 and 17) and are fundamental towards achieving them. It has been agreed upon that cross-sector integrated work is imperative towards achieving the SDGs implying that soils also have an indirect presence in achieving the remaining goals.

Yuxin Tong, FAO, Rome congratulated the organisers for conducting this conference and very briefly narrated the importance and relevance of this regional conference. Later he detailed the technical aspects in his keynote address.

RN Pandey, President, Indian Phytopathological Society (IPS) welcomed the participants and highlighted the importance of plant pathology in diagnosis and management of plant diseases for robust plant health to achieve the optimum yield of the plants and sustainability of agriculture. He discussed the emerging threats of plant diseases in the wake of climate change and transboundary movement of the pests. He also introduced the IPS (<http://www.ipstdis.org>) which has

completed 72 years in the service of plant pathology and is the 3<sup>rd</sup> largest society of the world. The society has eight zonal chapters spread all over India and has also collaborations with 'The American Phytopathological Society, USA (<https://www.aps.net>) and Asian PGPR Society for Sustainable Agriculture (<http://asianpgpr.com>), USA. He informed about the activities of IPS for the benefit of plant pathologists, students, farmers, corporate houses and other stakeholders. He offered the services of expert scientists available with the society for the benefit of member countries of APAARI.

HE Luck Wajananawat, Deputy Minister of Agriculture and Cooperatives, Thailand was the Chief Guest in the Inaugural Session. On this occasion, he released some of the publications brought out by the APAARI. In his inaugural address he highlighted the role of soil and plant health in achieving the SDGs. He lauded the efforts of APAARI to organise a regional conference on such an important topic which is directly linked with hunger and the food security of the people. The world population is likely to be 11 billion by 2050 and we have to feed a large number of people against the threats of climate change. The only option is to increase the agricultural productivity. Soils are fundamental to increase the food production and productivity and hence their careful management is essential for sustainable agricultural production and empowerment of women. Similarly, plant health, he said, is the key to the sustainable intensification of agriculture to feed the growing global population by 2050. Global efforts are being made to save colossal crop losses from the ravages of insect pests and diseases but the approach towards this endeavour has to be pragmatic and environmental concerns are to be kept in mind. SDGs 1, 2, 3, 13 and 17 can be addressed by ensuring sound plant health. FAO has initiated a number of global and regional programs to ensure soil and plant health. This has to catalyse the national programs and priorities in the region. He further said that there is a need to obtain systematic information on soil and plant health, water quantity and quality on a regional basis and bring out a series of recommendations to achieve the SDGs.

#### **Consolidated Recommendations of Sessions**

A big group of soil and plant protection scientists made



a large number of presentations in nine technical sessions spread over three days covering a range of subjects within the ambit of soil and plant health under the changing climatic scenario focussing on achieving the SDGs in the Asia Pacific. There were several intense sessions followed by comprehensive discussions. All these discussions were translated into recommendations as detailed below. The recommendation on soil and plant health was prepared separately and plant health recommendations has been presented over here.

### Research

Enhanced research on Plant Growth Promoting Rhizobacteria, biocontrol agents, endophytes, Arbuscular Mycorrhizal Fungi and other microbial wealth - bio resource characterization and conservation.

- Developing efficient delivery mechanisms including standardization of nano particles for biological agents on integrating soil, water and nutrient management for plant health.
- Regional collaboration for disease resistance breeding of crops and diseases relevant to the region.
- Combination of bio and chemical pesticides and consortia for enhancing trade with acceptable residue levels and plant health indicators development and DSS. The response of pests and diseases to climate variation and extreme events be investigated as a proactive step.
- Validation of ecofriendly/traditional plant health management practices.
- Scientific assessment of prioritised crop losses in the region.
- Diagnostic tools development for races/pathotypes and complex species prioritised for the region.
- Phytosanitary treatments (alternatives to Methyl Bromide, bulk consignments).
- Scientists may focus on the biosecurity needs of the region.

- Integrating soil, water and nutrient effects on plant health.

### Capacity-building/ Development

- Strengthening taxonomy of fungi and other microbes in APR as relevant to SDGs based country and region-specific modules for soil and plant health to be developed
- Massive Open Online Courses (MOOCs) and other Information and Communication Technology (ICT) modules to be developed in regional languages
- Create partnerships for knowledge dissemination
- New Knowledge Management APAARI Platform
- Efforts be made to integrate plant health professional societies of India into one common platform at the national level and to plan activities for International Year of Plant Health 2020
- Farmer champions and Farmer Field Schools Centre of Excellence for diagnostics and certification (Citrus greening disease and viruses-ICAR-National Research Centre for Citrus); exotic viruses – ICAR-National Bureau of Plant Genetic Resources (NBPGR); Banana and orchid viruses – ICAR Indian Agricultural Research Institute (IARI) to help the region in preventing transboundary movement of pests
- Access/ develop Containment/ Biosecurity facility for research on exotic pests
- Regional capacity building in the field of biosecurity and biosafety

### Policy

- Upscaling of biocontrol agents such as *Trichoderma* and bio-pesticides in APR modifying as per local needs including capsule technologies involving youth as entrepreneurs
- Review guidelines particularly for biopesticide registration, commercialization of microbial technology relevant to the region
- A database of proven technologies in soil and



- plant health management be developed
- Based on specific needs of a group of countries development projects for upscaling of prioritised technologies
- Pest surveillance (lack of human resource, use of latest technologies). Recently introduced pests (Fall armyworm, wheat blast, *Wheat streak mosaic virus*) diagnostics and eradication to prevent their further spread be prioritized.
- Pest categorisation in the region for biosecurity.
- Regional cooperation for pre-export inspection.
- A roster of experts on soil and plant health be made.
- Networking of regional referral laboratories.
- Asia Pacific Plant Pests Diagnostic and Certification Network be developed
- Developing Policy Briefs for the identified countries.

#### **Development of Regional Knowledge Platform on Soil and Plant Health**

APAARI should take initiative for developing a 'Regional Knowledge Platform on Soil and Plant Health' in the APR by FAO to access and share the new knowledge and technologies within and outside the region. The major objectives of the Regional Knowledge Platform are:

- To create awareness on soil and plant health management towards achieving SDGs
- To bring players of research, development, extension and communications on one platform for complementing the activities of existing global and regional partnerships and networks
- To document and share the success stories of soil and plant health management for the benefit of countries in the region and its eventual scaling up and scaling out
- To regularly share the latest information on research, development and technologies on soil and plant health management among the members.
- To identify, promote and facilitate capacity development in various important areas of soil and plant health management
- To identify and reward champion farmers in soil and plant health management in the region
- To influence the governments to have appropriate policies for soil and plant health management
- To promote partnerships and networking for the cause of soil and plant health management

#### **Governance**

- To appoint a Coordinator for the Platform/ Consortium. Tenure can be three years at a time and preferably a staff of the hosting Institute.
- To have members from among National Agricultural Research System, Higher education sector, FAO of UN, related Networks, International organizations viz. Consultative Group on International Agricultural Research (CGIAR), Association of International Research and Development Centers for Agriculture (AIRCA), etc. Associations, NGOs, CSOs, Private sector etc.
- Members may be beyond the Asia-Pacific also
- Membership fee
- Host Institute/ Country to be identified

#### **Action Points for APAARI**

- Facilitate creation of knowledge platform of soil and plant health in association with FAO.
- Bring awareness on the issue of crop residue management technologies to avoid burning that causes soil and environmental pollution.
- Develop focused capacity building modules and policy briefs in collaboration on different aspects of soil and health management directed to all levels of stakeholders including policy makers.
- Facilitate workshops/meetings to promote partnerships/networks with the private sector and related to international funding opportunities for promoting soil and plant health.



- Facilitate studies on impact assessment of successful technologies on soil health and document the same to promote the use of those technologies that contribute to achieve SDGs in the APR.
  - Facilitate regional linkages with the Centre of Excellence for Soil Research in Asia (CESRA).
  - Explore funding for collaborative projects in the region on soil and plant health.
- ii) New networks to protect and for sustainable use of soil and plant health be developed including efforts to create a 'Diagnostic network for plant pathogens identification for the Asia Pacific'.
  - iii) Member countries priorities need to be revisited, outlined and documented to help in developing a roadmap to sustainably use soil resources and effectively deal with emerging plant health concerns.

#### Major Recommendations

- i) A regional knowledge platform need to be developed to access new technologies within and outside the region to enhance soil and plant health.
- iv) Need-based capacity development modules and policy briefs for each sub region or a country for dealing with soil and plant health to be developed.



Group photograph of the delegates

# National Symposium 2018-19

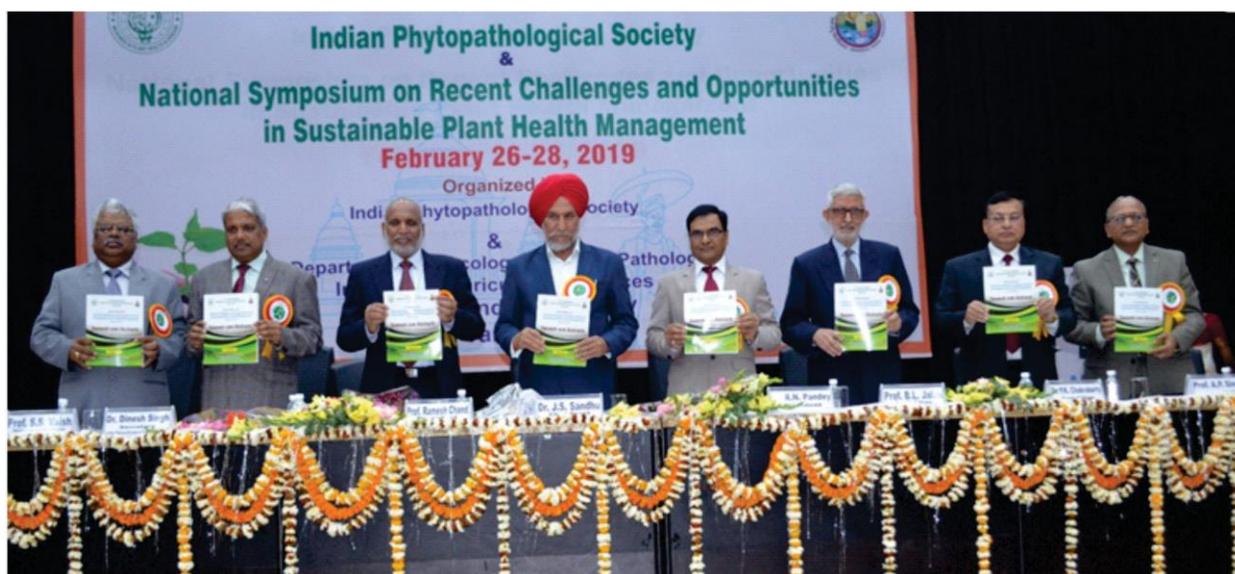
IPS 71<sup>st</sup> Annual Meeting of the Society and National Symposium on “Recent Challenges and Opportunities in Sustainable Plant Health Management” organized in collaboration with Institute of Agricultural Sciences, Banaras Hindu University (BHU), Varanasi, Uttar Pradesh during February 26-28, 2019.

The symposium was inaugurated by Dr. J. S. Sandhu, Hon. Vice Chancellor, NDUAT, Faizabad. Dignitaries Prof. Ramesh Chand, Director, Institute of Agricultural Sciences, BHU, Prof. R. N. Pandey, President, IPS, Dr. B. L. Jalali, Former Director of Research, CCS HAU, Dr. P. K. Chakrabarty ADG Plant Protection, ICAR, Prof. A. P. Singh, Dean, Institute of Agricultural Sciences, BHU, Dr. Dinesh Singh, Secretary IPS, and Dr. S. S. Vaish, Organizing Secretary shared the dais. In this symposium, Keynote Lectures, Award Lectures, Invited and Oral presentations have been delivered. Besides these, an IPS-APS joint Satellite Workshop on “Decision Support System in Crop Disease Management”, was also organized on February 27, 2019.



The chief guest remark by Dr. J. S. Sandhu, Vice Chancellor, NDUAT, Kumarganj, Ayodhya, U.P.

The Chief guest Dr. J. S. Sandhu, Vice Chancellor, Narendra Deva University of Agriculture and Technology, Kumarganj, Ayodhya and Former Deputy Director General Crop Science-ICAR, during the inauguration session focused success story of stem rust resistance of wheat due to collaborative work of plant pathologist and plant breeders. He also emphasized on preparedness against Ug99 in our country. In addition to this importance of organic farming,



Release of the abstract book in the inaugural function on National Symposium at Institute of Agricultural Sciences, B.H.U. Varanasi on February 26, 2019



resource conservation technologies, disease scenario under climate change, need of developing tactics under changing pattern of agriculture. He extended greetings for the success of the said Symposium.

Dr. P. K. Chakrabarty, Guest of Honour, ADG (Plant Protection and Biosafety) ICAR, emphasized that no branch other than plant protection in general and plant pathology in particular of agriculture plays its decisive role to meet out food security. He stressed on new challenges to plant health viz., phytoplasma, plant viruses and plant parasitic nematodes. He also suggested that issues of taxonomy and biosecurity must be given due importance and told panama disease of banana and wheat blast as emerging threats and their significance. He also showed his concern about plant quarantine, domestic quarantine (Leaf curl virus,



Remarks by Guest of Honour, Dr. P. K. Chakrabarty, ADG (Plant Protection and Biosafety) ICAR, New Delhi

potato cyst nematode, etc.), post-harvest losses which are 5-6 times higher than that of Australia to the tune of 60 million tonnes. He also put his views on unification of all the societies related to plant pathology and plant protection to have a big umbrella. Eventually, he stressed that the IPS must play its major role to plug in industry, academy and policy makers to meet out ultimate objective of the national food security. He was of the view that many of such issues be discussed during the scientific sessions of the symposium.

Prof. B. L. Jalali, Guest of Honour, Former Director of Research, CCS HAU, Haryana shared his views on importance of emergence of new diseases with respect to climate change, business incubator for production of biocontrol agents of plant pathogens viz., *Trichoderma*, *Pseudomonas*, *Mycorrhizal* fungi. He also emphasized that a lot of research has been done but still there is a need of technology dissemination followed by its assessment and execution at



Remarks by Guest of Honour, Prof. B. L. Jalali, Former Director of Research, HAU, Hisar

demonstration field for their adoption at farmers' field. He also focused on cloning resistance gene, biotechnology, nanotechnology and classical and molecular taxonomy. He ended with his best wishes for the success of the symposium.



Presidential remarks by Prof. (Dr.) R. N. Pandey, President, IPS

Dr. R. N. Pandey, President, Indian Phytopathological Society, emphasized about the success of different zonal symposia attended by good number of students and scientists from the different part of the country and their contribution in the form of presentation and publication of books for the cause of plant pathology. He also focused on use of biological control agents and plant growth promoting rhizobacteria for sustainable management of plant diseases of various crops.

Dr. Dinesh Singh, Secretary of IPS, enlightened the audience about the various activities and initiatives being taken by the society. He emphasized that the IPS is the third largest society of the world having more 2000 member, APS travel grant and showed his willingness for online voting in future. Prof. Ramesh Chand, Director of the institute, President of the Inaugural Session addressed the gathering and emphasized on problem of plant diseases in and around Varanasi. He also suggested for discussion on major



Remarks by Dr. Dinesh Singh, Secretary

diseases of the different parts of the country and their sustainable management during the symposium. He thanked the society for providing opportunity to organize the IPS National Symposium after a gap of 50 years at BHU, Varanasi.

The organizing secretary, Prof. S.S.Vaish delivered a welcome address and presented the theme of the symposium before the delegates. Prof. A.P. Singh, Dean, Faculty of Agriculture presented vote of thanks and the inaugural session ended with National Anthem.

During the inaugural session, souvenir cum abstract book of the symposium was released. In addition to this, two very important books, viz., Diseases of Medicinal and Aromatic Plants and their Management and Wilt diseases of crops were also released.

**Plenary lectures** by **Prof. Robert Park**, University of Sydney, Australia; **Dr. Ravi Singh** Distinguished Scientist and Global Head- Wheat Improvement Programme, CIMMYT-Mexico and **Prof. A. N. Mukhopadhyay**, Former Vice Chancellor, Assam Agricultural University have been a point of attraction and attention of delegates.

The presentation of the symposium started with presidential address by Prof. R. N. Pandey, President IPS on “Bio-agents in Plant Health Management for



(a)



(b)

Plenary lectures by (a) Prof. Robert Park, University of Sydney, Australia, (b) Prof. A. N. Mukhopadhyay, Former Vice Chancellor, AAU, Jorhat, Assam

Sustainable Agriculture and Rural Prosperity: The task ahead for Societies and Institutions”.

All the seven awards lectures of the society remained unique source of knowledge to delegates and students. There were 15 M.J. Narasimhan Academic Merit Award Contest presentations by young researchers from the different part of the country which was the very attractive, energetic and packed with recent information. During the course of symposium, IPS- APS Joint Workshop- on Decision support system for plant disease management at IRRI South Asia Regional Center Varanasi. This workshop covered 15 presentations by renowned experts of International repute on the various aspects of the aforesaid theme.



Release of books “Diseases of medicinal & aromatic plants and their management” and “Wilt diseases of crops”



The symposium was witnessed of 36 lead lectures, 43 invited lectures, 74 oral and 218 poster presentations by the delegates of different parts of the country. These lectures and presentations were of high value to research scholar, post graduate students, scientists and teachers working in the field of plant pathology/ botany and agriculture.

The Chief guest Prof. A.N. Mukhyopadhyay, Former Vice Chancellor AAU, Assam, Guest of Honor Prof. G.S. Dubey Former Director, Professor Akhtar Haseeb former Vice Chancellor, NDUAT, Ayodhya Guest of Honour of the day, Prof. Ramesh Chand, Director, Institute of Agricultural Sciences, BHU, Prof. R. N. Pandey, President, Indian Phytopathological Society, and Dr. Dinesh Singh, Secretary of IPS to grace the valedictory function.

In this symposium, 410 abstract were received, out of which 350 registered participants presented oral and poster presentation. Total 12 technical sessions have been conducted in three days event on the thematic areas like Integrated diseases management for sustainable agriculture; Impact of climate change and epidemiology and forecasting, Survey and surveillance, detection and diagnosis, current status, biological management of plant diseases, host pathogen interaction, Nematode diseases of plants and their management, Mushroom production, extension plant pathology and so forth and so on. Three thought provoking scientific plenary lectures by scientists of international repute namely Prof. A.N. Mukhopadhyay on *Trichoderma*: The most powerful arsenal of plant disease management, Prof. Robert Park on Pre-emptive breeding for rust resistance in cereals and Dr. Ravi P Singh on Sustainable control of wheat rusts and other foliar diseases through genetic resistance were delivered.

#### Important recommendations emerged from the symposium after deliberations:

1. Bio-agents are good for Plant Health Management and Sustainable Agriculture for doubling the farmers INCOME
2. The focus to be given on genetic resistance for Sustainable control of plant diseases
3. Pre-emptive breeding strategy is must to control rust or other air borne diseases of cereals
4. Integrated management is important for diseases like, guava wilt, panama wilt of banana, papaya wilt, chili leaf curl, papaya ring spot virus, phytoplasma diseases and diseases caused by plant parasitic nematodes and so forth and soon.
5. It is better to manage nematode diseases through use of biological control agents
6. Strengthening of Quarantine measures
7. Exploration of new sources of resistance for major diseases
8. Development of rapid and easily accessible diagnostic kits for major pathogens
9. Research programs related to disease management should be strictly formulated focusing on ultimate beneficiary
10. Time series studies on pathogen population dynamics in relation to climate change should be conducted
11. Effect of Nano particles on beneficial microbes should be investigated
12. Research on PR proteins for biotic stresses should be intensified



Group photograph of delegates in the national symposium at Institute of Agricultural Science, B.H.U. Varanasi on February 26, 2019

# IPS-APS joint workshop

Chairman	: Prof. Anupam Varma
Co-Chairman	: Dr. B.L. Jalali
Convener	: Dr. Dinesh Singh
Co-convener	: Dr. Vaibhav Kumar Singh
Rapporteurs	: Dr. V.Celia Chalam, Dr. Bishnu Maya Bashyal and Dr. M.S. Yadav

IPS-APS joint workshop on “Decision support system for plant disease management” was organized at IRRI South Asia Regional Centre (IRRISARC), Varanasi, U.P. on February 27, 2019 during the IPS 71<sup>st</sup> Annual Meeting and National Symposium on “Recent challenges and opportunities in sustainable plant-health management” held at Banaras Hindu University, Varanasi, U.P. during Feb. 26-28, 2019. Total 40 delegates participated in the satellite workshop.



Delegates attending IPS-APS joint workshop

## Resource Persons:

- 1. Dr. M. Anandaraj**- Implementing decision support systems for disease management- need for synergy.
  - a) Crop health depends upon soil health scientific management of both soil and crop needs a concerted efforts.
  - b) There must be synergy in collecting data and collating the crop requirements and giving to the farmers as a ready to use recipes through mobile apps.
- 2. Dr. C.S. Kousik**-Developing sustainable strategies for managing watermelon diseases in southern united states, president, south region and APS representative in workshop.
  - a) A combination of silver plastic mulched bed covers and insecticide sprays helped in managing whitefly-transmitted watermelon vine decline. During the past decade USDA-ARS has developed and provided various IPM strategies to watermelon growers to manage powdery mildew, Phytophthora fruit rot and watermelon vine decline.
- 3. Dr. K.P. Singh**- Apple disease control advisory, a decision support system for management of scab in India.
  - a) Decision support systems (DSSs) are nowadays widely available for larger apple growers.
  - b) Apple disease control advisory for managing scab are tested over 10 years in five fruit vallies of Garhwal Himalayas of India.
  - c) New generation DSSs are important for integrated pest management of apple scab.
- 4. Dr. A.K. Chowdhury**- wheat blast in South Asia
  - a) Due to poor effective genetic resistance the sole means of control is either by the application of fungicides or adoption of beneficial culture practices.
  - b) A coordinated efforts on breeding for disease resistance, fungicidal management, fore warning system based on pathogen monitoring and capacity building of scientists and stake holders are required.



5. **Dr. Someshwar Bhagat**- Decision support system in crop disease management
  - a) "E- National pest reporting and alert system in pulse crops is a unique ICT based decision support system which is very effective and easy to operate through a centralized server system at ICAR-NCIPM, New Delhi connected with internet and mobile phones.
  - b) This system is quite useful for bottom to top-level officials or policy makers, involved in E-pest surveillance programme.
6. **Dr. M. Krishna Reddy**- DSS for management of viral diseases of horticultural crops.
  - a) Described the frame work for the implementation of IPM.
  - b) There is a need to provide instant expert agro advisory services in horticultural crops.
7. **Dr. Gautam Saha**- DSS for climate change.
  - a) Emphasized on web-based change.
  - b) Baseline information for major field and horticulture crops may be developed.
8. **Dr. S.C. Bhardwaj**- Success in wheat rust management
  - a) The success of the wheat rust management strategy can be envisaged from the fact that there are no wheat rust epidemics for the last 50 years.
9. **Dr. M. Srinivas Prasad**-DSS for rice disease management
  - a) The DSS in rice provides system that helps rice farmers to maximize the efficiency of their disease management strategy by enabling well informed decisions.
10. **Dr. Sanjeev Sharma**-Models and DSSs for forecasting late blight of potato in India
  - a) These models are being used to forecast

appearance of late blight across agro-ecologies and accordingly advisories are being issued to respective regions using electronics and print media there by containing the losses by fore warning the farmers and reducing fungicide load by applying fungicides judiciously.

11. **Dr. Ashok Bhattacharyya**- DSS for management of diseases of fruit crops in India.
  - a) Emphasized on both international and domestic quarantine.

#### Chairman Remarks

1. DSSs for plant disease management may be disseminated through KVKs.
2. Integration for disease of national importance.
3. Crop losses due to diseases should be assessed.

#### Co- chairman remark

1. Baseline information for major field and horticultural crops may be developed.

#### Recommendations of the IPS-APS joint workshop "Decision support system for plant disease management"

1. Need to develop decision support system with expert-interface.
2. Baseline information for the diseases of national importance should be generated under altered climate change conditions by active participation and collaboration.
3. App-centric workshop on all apps developed across the country should be organized, so that all the apps can be demonstrated.
4. KVKs should be involved in assessing the disease situation in India for proper application of Decision Support System.
5. IPS and APS should have more active interactions.

# Awards Presentation

**IPS Award Felicitation 2018-19:** The following awardees were felicitated during the Inaugural session of IPS 71<sup>st</sup> Annual Meeting of the Society and National Symposium on “Recent Challenges and Opportunities in Sustainable Plant Health Management” organized at Institute of Agricultural Sciences, Banaras Hindu University (BHU), Varanasi, Uttar Pradesh during February 26-28, 2019.



**A.P. Misra Lifetime Achievement Award :**  
Dr. M.N. Khare, Jabalpur

## IPS Recognition Award



Dr. Kamal, Gorakhpur



**K.C. Mehta & Manoranjan Mitra Award:**  
Dr. M.P. Thakur, IGKV, Raipur



Dr. Udit Narain, Retd. Professor (Plant Pathology),  
CSAUAT, Kanpur, UP



Dr. S.M. Reddy, Kakatiya University, Warangal, Andhra Pradesh



Dr. U.P. Singh, Retd. Professor, BHU, Varanasi, U.P.



(iii) **Presentation of the award lectures:** The following awards lectures were delivered during the national symposium at BHU, Varanasi, UP:

**1. Presidential Lecture** was delivered by **Prof. (Dr.) R. N. Pandey**, Former Professor & Head, Department of Plant Pathology, BA College of Agriculture, AAU, Anand on the topic - *Bio-agents in Plant Health Management for Sustainable Agriculture and Rural Prosperity: The task ahead for Societies and Institutions.*



Presidential Lecture by Prof. (Dr.) R. N. Pandey

**2. Mundkur Memorial Award Lecture** was delivered by **Prof. Mujeebur Rahman Khan**, Professor & Chairperson, Department of Plant Protection, Aligarh Muslim University, Aligarh- 202 002, India on the topic - *Nematode infestation, a potential threat Indian forests.*



Mundkur Memorial Award Lecture by Prof. Mujeebur Rahman Khan,

**3. S.P. Raychaudhuri Memorial Award Lecture** was delivered by **Dr. B.P. Singh**, Former Director, CPRI,

Shimla on the topic - *Managing Potato Late blight through forecasting and disease resistance.*



S.P. Raychaudhuri Memorial Award Lecture by Dr. B.P. Singh

**4. J.P. Verma Memorial Award lecture** was delivered by **Dr. A.K. Gupta**, Dr. YSPUH&F, Solan, Himachal Pradesh on the topic - *Biological Control of crown gall in stone fruits by using Agrobacterium radiobacter strain UHFBA-218- an ideal antagonist suitable for commercial exploitation*



J.P. Verma Memorial Award lecture by Dr. A.K. Gupta

**5. Jeersannidhi Award lecture** was delivered by **Dr. R. Selvarajan**, ICAR-NRC for Banana, Tiruchirapali,



Jeersannidhi Award lecture by Dr. R. Selvarajan

Tamil Nadu on the topic - *Recent advances in plant pathogen diagnostics and certification of disease free planting material*

**6. Sharda Lele Memorial Award** lecture was delivered by **Dr. V.K. Baranwal**, ICAR-IARI, New Delhi on the topic - *Viruses in horticulture crops and their management through virus diagnostic.*



Sharda Lele Memorial Award lecture by Dr. V.K. Baranwal

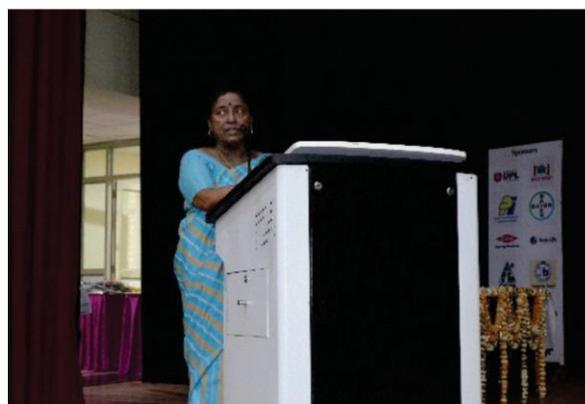
**7. S. Sinha Memorial Award** lecture was delivered by **Dr. Atul Kumar**, Principal Scientist, Plant Pathology, department of Seed Science and Technology, ICAR-IARI, New Delhi on the topic - *Sheath rot in Paddy (Sarocladium oryzae) - An emerging disease complex in India*



S. Sinha Memorial Award lecture by Dr. Atul Kumar

**8. J.F. Dastur Memorial Award** lecture was delivered by **Dr. Usha Chakraborty**, University of North Bengal, Siliguri, West Bengal on the topic - *Insights into plant responses towards abiotic and biotic stresses and enhancing stress tolerance by the use of rhizospheric*

*bacteria with multiple beneficial traits.*



J.F. Dastur Memorial Award lecture by Dr. Usha Chakraborty,

#### Declaration of IPS Awards for the year:2019-20

The following names has been recommended by the Award Recommendation Committee and approved by the EC as well as GB.

- A.P. Misra Lifetime Achievement Award:** Dr. C. Manoharachary, Emeritus Scientist and Ex-Dean, 2-2-1144/23/1 (MCH 250), New Nallakunta, Hyderabad, Telangana.
- S.P. Raychaudhuri Memorial Lecture:** Dr. S.N. Puri, Former Vice chancellor, CAU, Imphal, Flat No. 402/502, Plot 84/85, Kusum Residence, Vidya Sagar Colony, Near Salisbury Park, Pune Maharashtra.
- Mundkur Memorial Award:** Dr. M.K. Naik, Vice Chancellor, University of Agricultural & Horticultural Sciences, Shivamogga, Karnataka.
- S.N. Dasgupta Memorial Award:** Dr. Govind Pratap Rao, Principal Scientist, B-707, MOD Apartment, Vasundhara Enclave, New Delhi.
- M.K. Patel Memorial Young Scientist Award :** Dr. Malkhan Singh Gurjar, Scientist (Senior Scale), Division of Plant Pathology, ICAR-Indian Agricultural Research Institute, New Delhi.
- J.F. Dastur Memorial Award:** Dr. Dilip Kumar Ghosh, Principal Scientist (Plant Pathology-Virology), ICAR-Central Citrus Research Institute, Amravati Road, Nagpur.



7. **Sharda Lele Memorial Award: Dr. Satish Kumar Gupta**, Professor and Head, Department of Plant Pathology, Dr. Y.S. Parmar University of Horticulture and Forestry, Solan, HP.
8. **K.C. Mehta and Manoranjan Mitra Award: Dr. M.S. Saharan**, Principal Scientist, Division of Plant Pathology, ICAR-Indian Agricultural Research Institute, New Delhi.
9. **D.P. Misra and R.N. Pandey IPS Best Women Scientist Award: Dr. Om Gupta**, Dean, College of Agriculture, Jawaharlal Nehru Agricultural University, Jabalpur Madhya Pradesh.
10. **B.N. Chakraborty and Usha Chakraborty IPS Best Teacher Award: Dr. S.J. Kolte**, Professor (Plant Pathology, Retd.), Flat No. 8, Anuprita Apartment, S.No. 78, Plot 160, Left Bhusari Colony, Near Telephone Exchange, Paud Road, Kothrud, Pune.
11. **A.K. Sarbhoy Memorial Award: Dr. R.N. Kharwar**, Professor, Centre of Advanced Study in Botany, Banaras Hindu University, Varanasi.

#### IPS Recognition Award

1. **Dr. R.K. Khetarpal**, Executive Secretary, Asia-Pacific Association of Agricultural Research Institutions (APAARI), 4th Floor, FAO Annex Building, 202/1 Larn Luang Road, Klong Mahanak Sub-District, Pomprab Sattrupai District, Bangkok 10100, Thailand.
2. **DR. U. N. Saikia**, Retd. -Director of PG Studies-, Laheswar Khound, South Bongal, Pukhuri, Na-Ali, Assam, Jorhat, Assam.
3. **Dr. B.L. Puttoo**, 408 Angelina 'B', Raheja Gardens, Wanowari, Maharashtra, Pune, Maharashtra.
4. **Dr. G.S. Dubey**, Former DRI-cum-Dean PGS, Birsa Agricultural University, Kanke, Ranchi-834008, Jharkhand, gaurishankardubey32@gmail.com,
5. **Dr. R.B. Somani**, Retd. -Dean, PGS, Head, Plant Pathology), Opp. Kavita Tilak Park, Near Sanmitra Urban Bank, Ramdaspath, Maharashtra, Akola.

#### Declaration of Awards of 'Fellow of Indian Phytopathological Society'(FPSI):

1. **Dr. Meena Shekhar**, Principal Scientist (Plant Pathology), Division of Plant Quarantine, ICAR-National Bureau of Plant Genetic Resources, Pusa Campus, New Delhi.
2. **Dr. R.R. Pandey**, Professor, Department of Life Sciences, Manipur University, Canchipur, Imphal, Manipur.
3. **Dr. Anuja Gupta**, Principal Scientist, ICAR-Indian Agricultural Research Institute, Regional Station, Karnal, Haryana.
4. **Dr. Ashwani Kumar**, CSKHPKV, Palampur, Principal Scientist (Plant Pathology), CSKHPKV Hill Agricultural Research & Extension Centre, Dhaulakuan, H.P.
5. **Dr. Abrar Ahmad Khan**, Professor, Department of Botany, Aligarh Muslim University, Aligarh, U.P.
6. **Dr. D.K. Jha**, Professor, Microbial Ecology Laboratory, Department of Botany, Gauhati University, Guwahati, Assam.
7. **Dr. Archana U. Singh**, Project Coordinator (Nematodes), IARI, New Delhi
8. **Dr. V. Ambethgar**, Professor (Entomology), Horticultural College Research Institute for Women, Navalur Kuttapattu, Tiruchirappalli, TN.
9. **Dr. Yogendra Singh**, Professor, Department of Plant Pathology, G.B. Pant University of Agricultural & Technology, Pantnagar, Uttara Khand.
10. **Dr. M. Srinivas Prasad**, Head (Plant Pathology) & Principal Scientist, ICAR-Indian Institute of Rice Research, Rajendranagar, Hyderabad, Telengana.
11. **Dr. V. Celia Chalam**, Principal Scientist, Plant Quarantine Division, ICAR-National Bureau of Plant Genetic Resources, Pusa Campus, New Delhi.
12. **Dr. Srikanta Lenka**, Senior Scientist (Plant



Pathology), Crop Protection Division, ICAR-National Rice Research Institute (formerly CRRI), Bidadharpur Odisha, Cuttack.

13. **Dr. M. Santha Lakshmi Prasad**, Principal Scientist (Plant Pathology), ICAR-Indian Institute of Oilseeds Research, Rajendranagar, Hyderabad, Telangana.
14. **Dr. Kamal Khilari**, Associate Professor, Department of Plant Pathology, S.V.B.P. University of Agricultural & Technology, Modipuram, Meerut, UP.
15. **Dr. M.K. Biswas**, Assistant Professor (Plant Pathology), Department of Plant Protection, P.S.B., Sriniketan, Visva- Bharati, Birbhum, Santiniketan, West Bengal.
16. **Dr. S.K. Singh**, Scientist "E", National Fungal Culture Collection of India (NFCCI), Biodiversity and Paleobiology, Agharkar Research Institute, Pune, Maharashtra.

#### **MJ. Narasimhan Medal for Best Research Paper published in *Indian Phytopathology* (2017)**

1. "Detection of new Yr1-virulences in *Puccinia striiformis* f. sp. *tritici* population and its sources of resistance in advance wheat lines and released cultivars" authored by O.P. Gangwar, Subodh Kumar, S.C. Bhardwaj, Pramod Prasad, Hanif Khan, Siddanna Savadi and S.K. Sharma (Vol 70, No 3 (2017): 307-314)
2. "Postharvest application of fungicides, antagonists and plant products for controlling storage scab and rots of apple fruits" authored by K.P. Singh, Amitabh Singh, R.K. Prasad and J. Kumar (Vol 70, No 3 (2017): 315-321)

#### **Prof. M.J. Narasimhan Academic Merit Award 2018-19**

The evaluation committee has recommended with following names for Prof. M.J. Narasimhan Academic Merit Award:

Ms **Sahana N Banakar**, Ph.D Scholar, Dept. of Plant Pathology, UAS, GKVK, Bengaluru was recommended by the evaluation committee presentation of her paper entitled "*Investigations on role of seaweed*

*bioformulations in management of fungicidal stress and blast disease in rice*" for Prof. M.J. Narasimhan Academic Merit Award and the following 6 candidates were -awarded with the commendation certificate.

1. **Mr. Prashantha ST**, Division of Plant Pathology, ICAR-IARI, New Delhi on the paper *Understanding the interactions of anastomosis groups (AG) of Rhizoctonia solani with rice (Oryza sativa L.)*
2. **Mr. Jagmohan Singh**, Division of Plant Pathology, ICAR-IARI, New Delhi on the paper *Identification and expression analysis of pathogenicity-related genes in Tilletia indica inciting Karnal bunt of Wheat.*
3. **Dr. Ziaul Haque**, Department of Plant Protection, Faculty of Agricultural sciences, AMU, Aligarh on the paper *Host resistance and biocontrol as alternative approaches for pesticides against rice root-knot nematode, Meloidiogyne graminicola.*
4. **Dr. Ruchi Tripathi**, Department of Plant Pathology, College of Agriculture, GBPUAT, Pantnagar on the paper *Exploration of different methods for detection of Clavibacter michiganensis subsp. michiganensis (Smith) Davis, the cause of bacterial wilt and canker of tomato (Lycopersicon esculentum M.) and its management.*
5. **A. V. Shitole**, Dept. of Plant Pathology, Dr. PDKV, Akola on the paper *Detection of antifungal potency of weed extract against phytopathogenic fungi.*
6. **Rupsikha Goswami**, Department of Plant Pathology, Assam Agricultural University, Jorhat on the paper *Efficacy of silver nanoparticles against Colletotrichum musae and its effect on Crown rot and Anthracnose diseases of banana.*

#### **APS Travel Sponsorship for the year: 2018-19**

The evaluation committee has recommended with following names for APS Travel Grant Sponsorship:

**Shweta Meshram**, Division of plant Pathology, ICAR-



Indian Agricultural Research Institute, Pusa, New Delhi for presentation her paper on “*Mechanism behind disease resistance in maize inbred lines against maydis leaf bight disease*”

**Mr. Abhijeet S. Kashyap**, Division of plant Pathology, ICAR-Indian Agricultural Research Institute, Pusa, New Delhi for presentation her paper on “*Indigenous Rhizobacterial isolates ability to promote growth and induction of defense against bacterial wilt of Chili*”

#### **KPV Menon Best Poster Award**

The judging committee recommended the following posters for Prof. KPV Menon Best Poster Award presented during the symposium:

**Winner** : Microbe-Mediated Modulation of Physio-Biochemical Properties and Induced Systemic Resistance against *Rhizoctonia Solani* in Maize (*Zea Mays* L.) authored by Udai B. Singh, Shailendra Singh,

Mala Trivedi, Deepti Malviya, Manoj Kumar, Pramod K. Sahu, Manish Roy, H.V. Singh, Anil K. Saxena

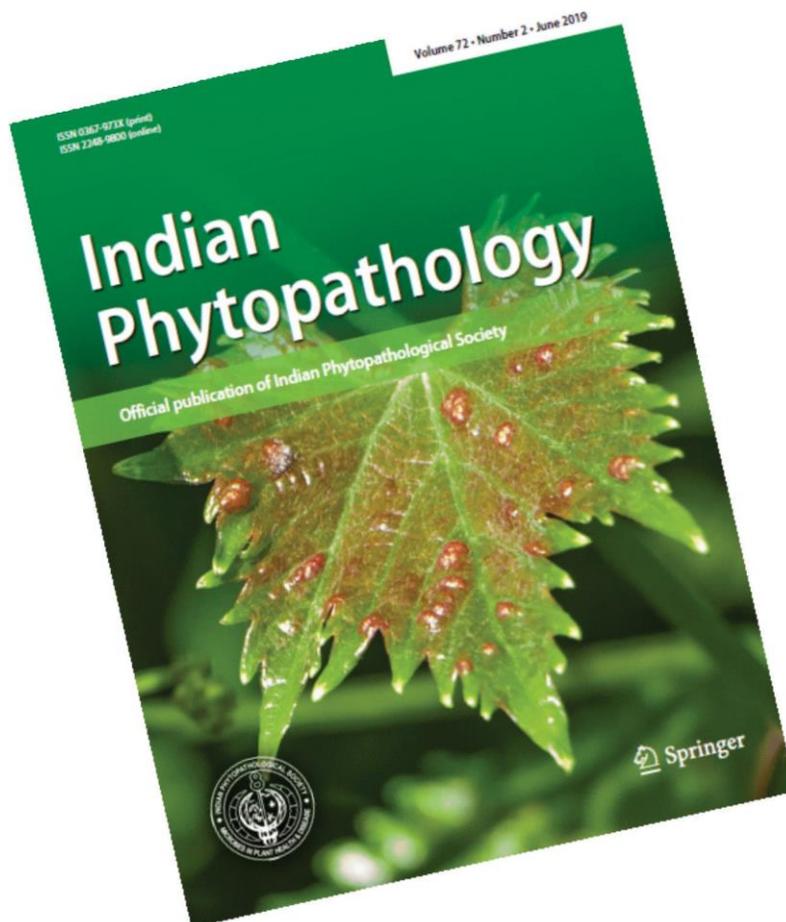
#### **Commendation award:**

1. “Characterization of *Trichoderma* spp. Isolated from Rhizosphere of Different Crops” authored by **Raja M.**, R.K. Sharma., P. Jambhulkar and Pratibha Sharma
2. “Biological Management of Dry Root Rot of Chickpea by Employing Bacteria Isolated from Drought Stressed Sites of Bundelkhand Region of Uttar Pradesh” authored by **Ratul Moni Ram** and H.B. Singh
3. “Studies on conditions favouring sclerotial propagules infection and effect of botanical extracts on its production and growth in *Sclerotium oryzae*” authored by **Vandana Sahu**, Raina Bajpai and V. S. Thrimurthy

## Chief Editor's Report: (2018-19)

Dr. M. Anandaraj, Chief Editor, *Indian Phytopathology* presented the editorial report and informed that in 2018, all the four issues have been published and the March issue Vol 72, No. 1 (2019) is also available online. He informed that for proposed **Special issue on "Advances in Fusarium Research"**, total 54 manuscripts received for special issue out of which, 8 accepted, 22 rejected and 24 are in process.

He also informed that 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 and he also appreciated the efforts rendered by Editors, especially helped rendered in refereeing and evaluation of the manuscripts.





# Editorial Board: Indian Phytopathology

New Editorial Board for the period 2017-19 has been constituted and is functioning well and their details are also available on IPS website.

## Chief Editor

Dr. M. Anandaraj, Former Director, (ICAR-Indian Institute of Spices Research, Calicut), Bangalore, Karnataka, India

## Senior Editors

1. Dr. S.C. Dubey, Head, Division of Plant Quarantine, ICAR-National Bureau of Plant Genetic Resources, New Delhi, India
2. Dr. V.K. Baranwal, Principal Scientist, ICAR-Indian Agricultural Research Institute, New Delhi, India

## Ex-officio

Dr. Dinesh Singh, Secretary, IPS, & Principal Scientist, ICAR-Indian Agricultural Research Institute, New Delhi, India

## Editors:Fungal Pathology

1. Dr. David B. Olufolaji, The Federal University of Technology, NIGERIA
2. Dr. H.B. Singh, Banaras Hindu University, Varanasi, Uttar Pradesh, India
3. Dr. Jing Lan, Inner Mongolia Agricultural University, China
4. Dr. Laetitia Willocquet, Castanet-Tolosan, Université Toulouse, France
5. Dr. Mousa Najafiniya, South Kerman Agricultural and Natural Resources Research and Education Center, Jiroft, Iran
6. Dr. M.S. Saharan, ICAR-Indian Agricultural Research Institute, New Delhi, India
7. Dr. Naresh Mehta, Haryana Agricultural University, Hisar, Haryana, India
8. Dr. Radha Raman Pandey, Manipur University, Imphal, Manipur, India
9. Dr. Serge Savary, Castanet-Tolosan, Université Toulouse, France
10. Dr. Shrishail S. Navi, Iowa State University, Iowa, USA
11. Dr. Tusar Kanti Bag, ICAR-Indian Agricultural Research Institute, New Delhi, India
12. Dr. Urmil Bansal, The University of Sydney, Australia
13. Dr. Usha Chakraborty, University of North Bengal, Siliguri, West Bengal, India
14. Dr. V.B. Nargund, College of Agriculture, Bheemrayanagudi, Karnataka, India

**Bacteriology**

1. Dr. Dhruva Kumar Jha, Gauhati University, Guwahati, Assam, India
2. Dr. Gomathinayagam Subramanian, University of Guyana, Guyana, South America
3. Dr. Kalyan K. Mondal, ICAR-Indian Agricultural Research Institute, New Delhi, India
4. Dr. Mehdi Azadvar, South Kerman Agricultural and Natural Resources Research and Education Center, Jiroft, Iran
5. Dr. Ramesh Chand, Banaras Hindu University, Varanasi, Uttar Pradesh, India
6. Dr. Sanjay Swarup, National University of Singapore, Singapore
7. Dr. Yulmira Yanti, Andalas University, Padang, Indonesia

**Mycology**

1. Dr. B.F. Rodrigues, Goa University, Goa, India
2. Dr. Hesham Ali Metwally Ali El-Enshasy, Universiti Teknologi Malaysia-
3. Dr. M. Srinivas Prasad, ICAR-Indian Institute of Rice Research, Hyderabad, Telangana
4. Dr. N.K.B. Adikaram, University of Peradeniya, Sri Lanka
5. Dr. Sanjay Kumar Singh, Agharkar Research Institute, Pune, Maharashtra, India
6. Dr. Vijai Kumar Gupta, National University of Ireland Galway, Ireland

**Virology**

1. Dr. P.N. Sharma, C.S.K.H.P. Agricultural University, Palampur, Himachal Pradesh, India
2. Dr. R. Selvarajan, ICAR-National Research Centre for Banana, Tirchirapalli, Tamil Nadu, India
3. Dr. Savarni Tripathi, ICAR-IARI, Regional Station, Pune, Maharashtra, India
4. Dr. V. Celia Chalam, ICAR-National Bureau of Plant Genetic Resources, New Delhi, India

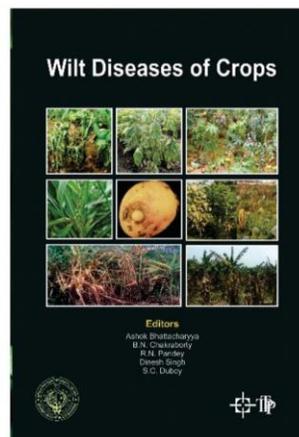
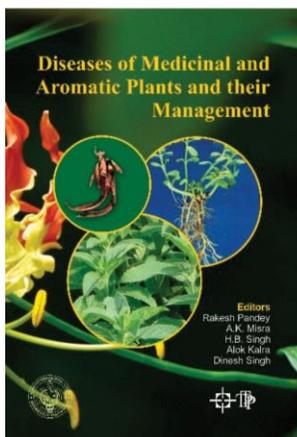
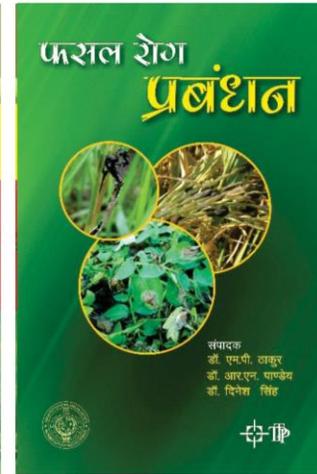
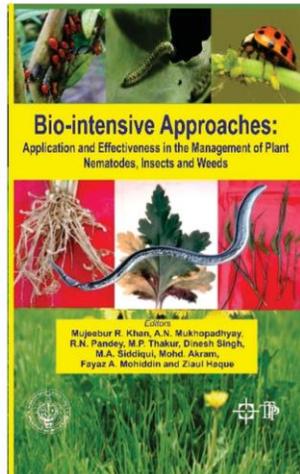
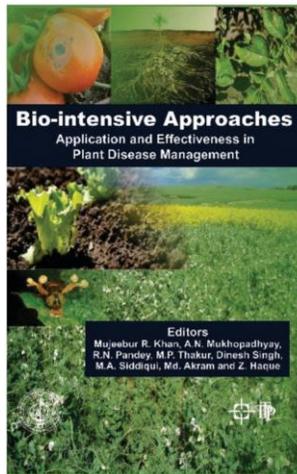
**Nematology**

1. Dr. Ali Anwar, SKUAST-Kashmir, Srinagar, Jammu & Kashmir, India
2. Dr. D.J. Patel, Anand Agricultural University, Anand, Gujarat, India
3. Dr. M.R. Khan, Aligarh Muslim University, Aligarh, Uttar Pradesh, India
4. Dr. N.G. Ravichandra, University of Agricultural Sciences, Bangalore, Karnataka, India

# Publications: Books

- The following books were published:

1. **Bio-intensive Approaches, Application and Effectiveness in Plant Protection** (Eds. MR Khan et al.) published in two volumes and released .
2. फसल रोग प्रबंधन (संपादक : डॉ. एम.पी. ठाकुर, डॉ. आर.एन. पाण्डेय, डॉ. दिनेश सिंह). published and released in the Special symposium at IGKV, Raipur.
3. **Diseases of Medicinal and Aromatic Plants and their Management** (Eds. - Drs. Rakesh Pandey, A.K. Misra, Alok Kalra, H.B. Singh and Dinesh Singh) – published and released in the national symposium at BHU, Varanasi on 26<sup>th</sup> Feb. 2019.
4. **Wilt Diseases of Crops and their management** (Eds. - Drs. Ashok Bhattacharyya, B.N. Chakraborty, R.N. Pandey, Dinesh Singh and S.C. Dubey) - published released in the national symposium at BHU, Varanasi on 26<sup>th</sup> Feb. 2019.
5. **IPS Annual Report (2017-18)** has been compiled and published and is available on IPS website.



# IPS Newsletter - Indian Phytopath News

All the 4 issues of the Newsletter were published in time and are available online on IPS website in pdf form.

The Newsletter consists of the following news items, viz., Research Highlights, Activities: Seminar/symposia/brain storming sessions/conferences/Trainings attended/conducted; Forth-coming events, Awards/Honours received and Miscellaneous: Promotion/ transfer/ Necrology/ Foreign visit/ important news (world-wide) related to plant pathology, disease outbreak etc.

**Editors**

 Prof. B.N. Chakraborty Chief Editor bnchb@gmail.com	 Dr. Robin Gogoi Senior Editor r.gogoi@rediffmail.com	 Dr. Dinesh Singh Ex-officio dinesh_jair@rediffmail.com	
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 Dr. Gireesh Chand gresh_76@ediffmail.com	 Dr. Chanda Kushwaha chanda.kushwaha@gmail.com	 Dr. M.R. Khan mrkhan777@yahoo.co.in	 Dr. M.A. Siddiqui masa_our_bo@yahoo.co.in
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 Dr. R. Selvasjan selvasjan@gmail.com	 Dr. R. Thangavelu rthangavelu@gmail.com	 Dr. K.D. Thakur kdthakur60@gmail.com	 Dr. S.B. Basmahkar basmahkar@gmail.com

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A Quarterly Newsletter of Indian Phytopathological Society  
http://ipsdis.org/ Volume 1 • Issue 4 • Oct-Dec, 2018

## From President's Desk

Dear members, academicians, scientists and students!

We wish you all "A Happy and Prosperous New Year: 2019". It is my privilege to express my gratitude to all of you for your whole hearted support in conducting different activities of the society. During the year 2018, our EC members in general and all the Zonal Presidents and Councilors of different zones in particular have done the commendable job of organizing international conference, zonal conferences/symposiums and meetings. Excellent presentations of papers were made by the learned scientists in these events, thus the society has been well represented all over the country as well as abroad with the efforts of all of you. It is a matter of pride for all of us that International (Regional) Conference on "Role of Soil and Plant Health Towards Achieving Sustainable Development Goals in Asia Pacific" was organized jointly by APAARI, IPS, FIO, IRRI, ICISAT, ACIAR, COR at Bangkok, Thailand under the leadership of Dr. Ravi Khetarpal, Executive Secretary, APAARI from 21 to 25, November, 2018. The conference was attended by 95 eminent Plant Pathologists of India, APAARI members and representative of 17 countries of Asia Pacific. Recommendations were consolidated and modalities for establishing a platform on soil and plant health were discussed in detail. Many issues were flagged for research, capacity development and policy by global experts in this conference for the Asia Pacific region, wherein we hope that IPS shall play the key role. The Society is progressing well in increasing the membership, timely publication of our journal *Indian Phytopathology* from Springer and publication of books. This is the fourth issue of the newsletter which has been launched for the exchange of the news & views of the Society and persons in the Fraternity of Plant Pathology. The news and information in the Newsletter will inspire all who are associated with one or the other activities for shaping up of their career and for the benefit of the people through various ways.



R.N. Pandey  
President, IPS

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## Editorial

### Mycorrhiza helper bacteria (MHB) in plant protection

B.N. Chakraborty  
Chief Editor, IPS Newsletter

The impressive diversity of the plant and fungal taxa involved in mycorrhizal symbiosis has demonstrated that colonization is a multistep, genetically regulated process. However, challenges are posed on their obligate biotrophic status, their multinuclear condition and an unexpected level of genetic variability. In addition to the well-known interactions between plants and fungi, mycorrhizal roots offer excellent ecological niches for other microbes, some rhizosphere bacteria adhere tightly to fungal hyphae, whereas others are directly associated with the root surfaces. Some species of bacterial genera [*Pseudomonas*, *Burkholderia*, *Bradyrhizobium*, *Bacillus*, *Pantoea*, *Rhodococcus* and *Streptomyces*] which help in mycorrhization and thus promote the symbiotic association between root and fungus are known as Mycorrhiza Helper Bacteria (MHB). Real-time quantitative PCR assays provide a method for directly detecting and quantifying MHB and mycorrhizal fungi in plant microcosms. MHB promote establishment of symbionts by stimulating mycelial extension, increasing root-fungus contacts and colonization, and reducing the impact of adverse environmental conditions on the mycelium





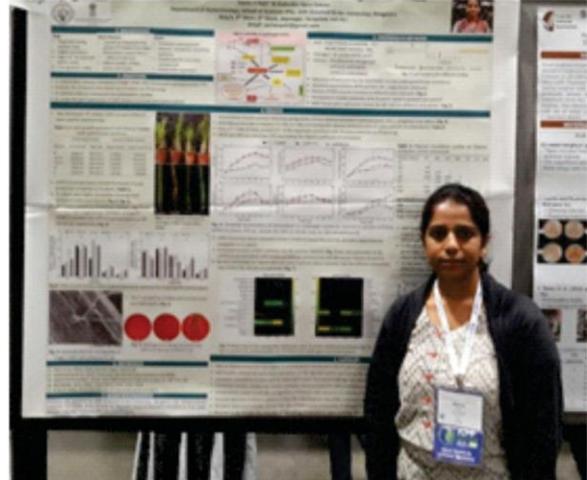
# APS-IPS Collaboration

## 2018 International Congress of Plant Pathology, Boston, MA, 31.07.2018

- Meeting called - by Krishna Subbarao, Ashok Chanda facilitated the second half of the meeting and also took notes.
- APS (American Phytopathological Society) members are encouraged to become IPS (Indian Phytopathological Society) members (IPS life membership is USD 480) and the provision for paying for IPS membership is already on the APS membership renewal form.
- APS members are encouraged to attend IPS meetings whenever possible, typical IPS meeting is a 3-day program and registration is about USD 300-400. IPS is willing to move the dates of their meeting to facilitate greater participation from the US (several IPS members offered this as an incentive).
- Set up an email list for APS-IPS working group so that everyone is on the same page.
- Set up an ad-hoc committee for APS-IPS working group-need volunteers.
- APS members to serve as science ambassadors to help navigate future APS meetings for IPS members, need volunteers for the next APS meeting depending on how many IPS members will be attending 2019 APS meeting in Cleveland, OH.
- Explore bilateral funding sources to foster collaborations between APS and IPS members, research centers and also universities.
- Funding Agencies: Dept. of Biotechnology (DBT), Dept. of Science & Technology (DST), Indian Council of Agricultural Research (ICAR), National Institute of Food and Agriculture (NIFA), Fulbright scholars (8 fellowships for agriculture), USDA- Borlaug fellowships and other fellowships offered by Govt. of India for international experience.
- APS-IPS travel award costs \$3000 per year per student – need to pursue fundraising efforts on both APS and IPS sides.
- APS-IPS travel award winners are encouraged to make a 1 minute video about their APS meeting experience and this testimonial should be posted on to the IPS website. In addition, they should give a 15-minute talk discussing their overall experience, connections established, etc. at the annual IPS meetings to encourage greater competition in future years.
- Distribute IPS newsletter to interested APS members.
- APS members to serve on editorial board or reviewer for IPS journals.
- Host webinars on diseases and topics common to APS and IPS members such as Sclerotium rots and Blast diseases, need to identify more topics.
- Molecular Plant-Microbe Interactions – online course offered previously by Dr. Rao Uppalapati, explore future offerings on a range of topics.
- National Plant Diagnostic Network (NPDN) webinars – accessibility to IPS members.
- Host workshops at IPS meetings - ideas on selected topics - Focus on a host-pathogen system or Key disease or multiple diseases of one crop - e.g., wheat rust, stem rots, Pest-risk analysis.

# APS Travel Sponsorship Award

Ms Savita V Patil, recipient of 2018 APS-Indian Phytopathological Student Travel Award (presented by APS foundation) participated in the 11<sup>th</sup> International Congress of Plant Pathology (ICPP) 2018 hosted by American Phytopathological Society (APS) and International Society for Plant Pathology (ISPP), at Boston from 29<sup>th</sup> July-3<sup>rd</sup> August 2018. She presented a paper on “Antioxidant Mediated Survival Strategy of Finger Millet against Ragi Blast” authored by Savita V Patil and Kumudini Belur Satyan, Department of Biotechnology, JAIN (Deemed-to-be University), Bengaluru-560011, Karnataka on 1<sup>st</sup> Aug, 2018 under the Plant Defense Response category.





# Financial Report

The main source of generating funds for the Society is membership fee, subscription of journal and financial assistance received from ICAR, NABARD and SERB (DST). During the year 2018-19, the Accounts of the Society are audited by Chartered Accountant (Annexures: I-III)

Annexure - I

## Receipts and Payments A/c

INDIAN PHYTOPATHOLOGICAL SOCIETY, NEW DELHI

**RECEIPT & PAYMENT ACCOUNT**  
For the year ended March 31, 2019

RECEIPT	Amount Rs.	PAYMENT	Amount Rs.
<b>Opening Balances as on 01st April, 2018</b>		<b>Symposium/Meetings</b>	
Cash in Hand	412	Brain Storming Session	70,132
Balance in Savings Bank Account	1,68,541	Delhi Zone Symposium Expenses	1,91,237
Fixed Deposits	93,54,332	MEZ Symposium 2018	16,630
International Conference Bank Account	37,001	Mid - Term EC Meeting 2018	1,27,088
<b>Financial Assitances</b>		National Symposium Expenses - BHU	3,92,766
Brain Storming Session	70,000	Special Symposium - Anand	1,98,747
Delhi Zone Symposium 2018-19	2,09,000	Special Symposium - Jorhat	4,42,051
Endowment Fund- Award	8,00,000	West Zone Symposium	5,932
Financial Assistance		<b>Printing/Publication Expenses</b>	
- ICAR - For National Symp. Jorhat 2017-18	5,00,000	Printing Expenses	4,36,731
- NABARD for Special Symp. Anand 2017-18	2,44,417	Publication Expenses	15,554
- NABARD for National Symp. Jorhat 2017-18	1,96,000	<b>International Conference Expenses</b>	
- ICAR - For publication of Journal	1,87,500	International Conference	13,49,461
SERB-DST, for National Symp BHU, 2018-19	2,00,000	<b>Administrative Expenses</b>	
Registartion & Sponsorship for Intl. Conf. Bangkok	8,70,169	APS Membership	16,800
Sponsorship National Symposium, BHU	8,74,200	Election Expenses	75,841
<b>Administrative Receipts</b>		Office Running Expenses	20,215
Membership Fees	29,50,222	Postal Expenses	15,703
FPSI Fee	85,000	Staff Salary	6,77,120
Subscription	83,040	Stationery Expenses	4,720
Interest on FD	6,36,566	Telephone / Internet Expenses	18,125
Interest on Savings Bank	42,141	Transport Expenses	16,145
		Website Designing & Developing	44,250
		Bank Charges	687
		Commision Charges	522
		Professional Fee	1,33,100
		<b>Closing Balances as on 31st March, 2019</b>	
<b>TOTAL</b>	<b>1,75,08,542</b>	Cash in Hand	4,562
		Balance in Savings Bank Account	24,38,244
		Fixed Deposits	1,07,59,178
		International Conference Bank Account	37,001
		<b>TOTAL</b>	<b>1,75,08,542</b>

For Tasky Associates  
Chartered Accountants

Anil Kumar Mathpal  
Partner  
Membership No. - 503011

PLACE: NEW DELHI

DATE: 15/04/2019

*even date*

Dr. Robin Gogoi  
(Joint Secretary)

**Joint Secretary**  
Indian Phytopathological Society  
Division of Plant Pathology  
ICAR-IARI, New Delhi 110012, India

Dr. Dinesh Singh  
Secretary  
Indian Phytopathological Society  
Division of Plant Pathology  
IARI, New Delhi 110012, India



# Income and Expenditure Account

INDIAN PHYTOPATHOLOGICAL SOCIETY, NEW DELHI

**INCOME & EXPENDITURE ACCOUNT**  
For the year ended March 31, 2019

EXPENDITURE	Amount Rs.	INCOME	Amount Rs.
<b>Symposium/Meetings</b>		<b>Financial Assitances</b>	
Brain Storming Session	70,132	Brain Storming Session	70,000
Delhi Zone Symposium Expenses	1,91,237	Delhi Zone Symposium 2018-19	2,10,000
MEZ Symposium 2018	16,630	Endowment Fund- Award	8,00,000
Mid - Term EC Meeting 2018	1,27,088	Financial Assistance	11,36,907
National Symposium Expenses - BHU	12,87,731	Sponsorship for International Conference	8,71,169
Special Symposium - Anand	1,98,747	Sponsorship National Symposium, BHU	10,86,326
Special Symposium - Jorhat	1,51,554		
West Zone Symposium	5,932	<b>Administrative Receipts</b>	
		Membership Fees	29,70,604
<b>Printing/Publication Expenses</b>		FPSI Fee	85,000
Printing Expenses	4,36,731	Subscription	83,040
Publication Expenses	15,554	Interest on FD	7,03,771
		Interest on Savings Bank	42,141
<b>International Conference Expenses</b>			
International Conference	19,83,909		
<b>Administrative Expenses</b>			
APS Membership	16,800		
Election Expenses	75,841		
Office Running Expenses	20,215		
Postal Expenses	15,703		
Staff Salary	6,77,120		
Stationery Expenses	4,720		
Telephone / Internet Expenses	18,125		
Transport Expenses	16,145		
Website Designing & Developing	44,250		
Audit Fees	25,000		
Bank Charges	687		
Commision Charges	522		
Depreciation	8,711		
Professional Fee	1,38,850		
<b>Total Expenditure</b>	<b>55,47,934</b>	<b>Total Receipts</b>	<b>80,58,959</b>
<b>EXCESS OF INCOME OVER EXPENDITURE CARRIED OVER TO BALANCE SHEET</b>	<b>25,11,025</b>		
<b>TOTAL</b>	<b>80,58,959</b>	<b>TOTAL</b>	<b>80,58,959</b>

For Tasky Associates  
Chartered Accountants

Anil Kumar Mathpal  
Partner  
Membership No. - 503011



Dr. Robin Gogoi  
(Joint Secretary)

**Joint Secretary**  
Indian Phytopathological Society  
Division of Plant Pathology  
ICAR-IARI, New Delhi 110012, India



Dr. Dinesh Singh  
(Secretary)

**Dr. Dinesh Singh**  
Secretary  
Indian Phytopathological Society  
Division of Plant Pathology  
IARI, New Delhi 110012, India

PLACE: NEW DELHI

DATE: *As per our Report*  
*11th date April*  
*2019*



## Annexure -III

## Balance Sheet

INDIAN PHYTOPATHOLOGICAL SOCIETY, NEW DELHI  
BALANCE SHEET AS AT MARCH 31, 2019

LIABILITIES	Rs.	Amount Rs.	ASSETS	Rs.	Amount Rs.
<b>CORPUS FUND</b>			<b>FIXED ASSETS [Schedule A]</b>		56,553
Opening Balance	93,35,053		<b>CURRENT ASSETS, LOANS &amp; ADVANCES</b>		
Less: Excess of Income over Expenditure transferred from Income & Expenditure Account	25,11,025		<b>CURRENT ASSETS:</b>		
		1,18,46,078	<b>Cash and Bank Balances</b>		1,32,38,985
<b>CURRENT LIABILITIES</b>			Cash in Hand	4,562	
TDS Payable	9,213		Cash in Bank	24,75,245	
<b>Expenses Payable</b>			Fixed Deposits	1,07,59,178	
- For International Conference	6,34,448		TDS Receivable		1,10,703
- For National Symposium, BHU	8,94,965		Other Receivables		3,463
- Other Payables	25,000	15,63,625			
		1,34,09,704			
					1,34,09,704

**For Tasky Associates**  
Chartered Accountants



Anil Kumar Mathpal  
Partner  
Membership No. - 503011

PLACE: NEW DELHI

DATE: 25.03.2019  
Dr. Dinesh Singh

Dr. Robin Gogoi  
(Joint Secretary)

**Joint Secretary**  
Indian Phytopathological Society  
Division of Plant Pathology  
ICAR-IARI, New Delhi 110012, India



Dr. Dinesh Singh  
(Secretary)

Secretary  
Indian Phytopathological Society  
Division of Plant Pathology  
IARI, New Delhi 110012, India



# Acknowledgements

I would like to thank and express sincere gratitude to Prof. R.N. Pandey, President for his guidance, advice, encouragement and support in day to day functioning of the Society and also thankful to all the Executive Council members for their cooperation, active support and suggestions in various activities of the Society. I would also like to place on record my sincere thanks to all the members of Editorial Board of the journal "Indian Phytopathology" as well as IPS Newsletter "Indian Phytopath News".

Sincere thanks are also due to the following members of the Society for organizing seminar/symposium under the banner of the Society during the year 2018-19:

**Dr. M.P. Thakur**, President-elect for organizing special symposia on "Extension Plant Pathology: Technological Backstopping to the Farmers/Other Stakeholders" at IGKV, Raipur, CG during September 25-26, 2018. **Dr. R.K. Khetarpal**, Executive Secretary, APAARI, Bangkok for organizing International Conference on "Role of Soil and Plant Health in Achieving Sustainable Development Goals" at Bangkok, Thailand during November 21-25, 2018. **Dr. Dinesh Singh**, Secretary, IPS for 'IPS-APS joint workshop on "Decision support system for plant disease management" at IRRISARC, Varanasi, U.P. on February 27, 2019. **Dr. D.P. Singh**, Principal Scientist, IIWBR, Karnal for Brain storming on "Blast Proofing in Agriculture" at IIWBR, Karnal on August 8, 2018. **Dr. Santosh Kumar** for 'Workshop on "Diseases of Makhana: Challenges towards Diagnosis and Management" at MB Agriculture College, Agwanpur', Saharsa, Bihar during January 11-12, 2019. **Dr. K.D. Thakur**, Zonal President (WZ) and **Dr. S.B. Bramhankar**, Zonal Councillor (WZ) for Western Zone National Symposium on 'Current and Emerging Trends in Plant Health Management at Goa during August 23-24, 2018. **Dr. M.R. Khan**, Zonal President (MEZ) and **Prof. Mansoor A. Siddiqui**, Zonal Councillor

(MEZ) for Mid-Eastern Zone Symposium on 'Bio-intensive Approaches in Plant Protection and their Socio-economic Impacts at Department of Plant Protection, Aligarh Muslim University, Aligarh during October 29-30, 2018. **Dr. S.K. Sharma**, Zonal President (NZ) and **Dr. Meenu Gupta**, Zonal Councillor (NZ) for Northern Zone National symposium on 'Alternative approaches in plant health management for enhancing farmers' income ' at Department of Plant Pathology, Dr YS Parmar University of Horticulture and Forestry, Nauni, Solan (HP) during 2-3, November 2018. **Dr. Gireesh Chand**, Zonal President (EZ) and **Dr. Chanda Kushwaha**, Zonal Councillor (EZ) for Eastern Zone National Symposium on New Paradigms of Plant Health Management: Sustaining Food Security under Climate Change Scenario, at BAU, Sabour, Bhagalpur, Bihar during 17<sup>th</sup> to 19<sup>th</sup> November 2018. **Dr. S. Girisham**, Zonal President (CZ) and **Dr. D. Nagaraju**, Zonal Councillor (CZ) for Central Zone National Seminar on 'Recent Trends in Plant Disease Management, at the Department of Microbiology, Kakatiya University Warangal on 28<sup>th</sup> December 2018. **Dr. Amar Bahadur**, Zonal President (NEZ) and **Dr. D.P. Awasthi**, Zonal Councillor (NEZ) for North-Eastern Zone National Symposium on 'Emerging Diseases of Agricultural Crops and their Noble Management Practices' at College of Agriculture, Lembucherra, Agartala from 19<sup>th</sup> to 20<sup>th</sup> January, 2019. **Dr. D. Bahukhandi**, Zonal President (DZ) and **Dr. Lakshman Prasad**, Zonal Councillor (DZ) for Delhi Zone Symposium on 'Microbes for Integrated Plant Disease Management and Bio-prospecting, at Auditorium of Division of Plant Pathology, ICAR- Indian Agricultural Research Institute (IARI), New Delhi on 13<sup>th</sup> December, 2018. **Dr. R. Selvarajan**, Zonal President (SZ) and **Dr. R. Thangavelu**, Zonal Councillor (SZ) for Southern Zone National Symposium on 'Cutting edge approaches for sustainable plant disease management and ensuring farmers' profit" at NRCB,



Tiruchirapalli during 21-23 December 2018. **Dr. S.S. Vaish**, Organizing Secretary of the National Symposium on “Recent challenges and opportunities in sustainable plant-health management”; Chairman, Co-chairman and rapporteurs of various technical sessions and members of organizing sub committees for their whole-hearted support in making the 71<sup>st</sup> Annual Meeting and National Symposium a grand success. The Society is thankful for co-organizing institutions viz., Indian Institute of Vegetable Research, Varanasi, U.P.; IRRI South Asia Regional Centre (IRRI-SARC), Varanasi, U.P.; ICAR-Indian Institute of Seed Science, Mau, U.P.; National Bureau of Agriculturally Important Microorganisms, Mau, U.P., and National Seed Research and Training Centre, Varanasi, U.P. for their cooperation and collaboration for organizing the symposium at BHU.

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I am also thankful to all the staff members and students for rendering their valuable help in various ways for making the symposium success. Last but not least, thanks to the staff of the Headquarter of IPS, New Delhi for their valuable support.

**Dinesh Singh**  
Secretary  
Indian Phytopathological Society



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