

**PROCEEDINGS OF THE ANNUAL REVIEW MEETING OF PHYTOFURA
HELD AT CENTRAL POTATO RESEARCH STATION SHIMLA FROM 9-11 APRIL
2013**

The Annual review meeting of the Outreach project on *Phytophthora*, *Fusarium* and *Ralstonia* diseases of Horticultural and Field crops –PHYTOFURA was held at CRRI Shimla from 9-10 April 2013. The meeting was inaugurated by Honorable DDG Horticulture Dr. N. K Krishnakumar. Dr. B P Singh, Director, CPRI Shimla, Dr. M Anandaraj, Director, IISR, Kozhikode and coordinator PHYTOFURA and Dr. P. Chowdappa, Co-coordinator, ALCOCERA were present to review the programmes.

Dr. B P Singh, Director, CPRI Shimla welcomed the gathering and honored the guests in traditional way and the meeting started with the introductory address by DDG. In his talk he gave importance for development of disease resistance in crops based on short term and long term strategies. He wanted to take up research on *Agrobacterium* infecting Apple, *Xanthomonas* infecting Pome granate and *Zyella* infecting grapes. Also stressed the importance of field pathologist to work on disease management of major crops. He also suggested to have net work project on virus diseases. The session continued with the appraisal of work done in PHYTOFURA and ALCOCERA by the coordinators Dr. M Anandaraj and Dr. P. Chowdappa.

Review meeting on PHYTOFURA was chaired by Dr. B P Singh and Dr. M. Anandaraj. The review started with the presentation of progress reports from eight *Phytophthora* centers (IISR Kozhikode, CPCRI Kasaragod, CPRI Shimla, CTCRI, Trivandrum, Dr.YS PUHF, Kullu, ICAR RC NEH Umam, NBAII Bangalore and NRCC Nagpur), eight *Fusarium* centers (CISH Lucknow, DOR Hyderabad, IARI, New Delhi, IIPR Kanpur, IIVR, Varanasi, NRCB, Trichi, NBAIM, Mau and NBAII Bangalore and six *Ralstonia* centers (IISR Calicut, ICAR RC Goa, ICAR RC NEH, Umam, IARI, New Delhi and IIHR Bangalore) . Scientists from all net work institutes attended and presented the work done during 2012-13 on Diversity, Diagnostics, genomics , Host pathogen interaction, Disease resistance and Disease management. Three new proposals were also presented, one each from IIHR, Bangalore, SBI Coimbatore and RRII Kottayam.

The decisions taken are listed below.

1. NRC Citrus has to work in collaboration with ICAR RC NEH. When more species are involved in collection, its importance in epidemiology and its relation to disease management has also to be worked out.
2. ICAR RC NEH, Umam is advised to adopt the technology from NRC Citrus and to test it and recommend to farmers.
3. CPCRI is advised to group the *Phytophthora* isolates collected and test for epidemiological importance. The cocoa line that showed resistance may be tested against all other *Phytophthora* isolates collected from Cocoa . Other areas like Goa should also be surveyed for the isolation of *Phytophthora* from Coconut and Cocoa. It is also recommended to study the mechanism of resistance in MGD coconut.

4. NBAIL- It is recommended to convert the sm 1 protein specific to *T. viride* identified by Dr. S. Sriram from NBAIL Bangalore to a protein product. Similarly it is suggested to utilize the cultures and products developed by other institutes and due credit should be given to the actual workers.
5. At NBAIM Dr. Sudheer Kumar is asked to concentrate on conservation and cataloguing of different organisms deposited and to keep the reference cultures. He need not take up diversity analysis.

The Sub project- on Fusarium was chaired by Dr. Pratiba Sharma and Dr. P Chowdappa and **Sub project- on Ralstonia** was chaired by Dr. Indu Sawant and Dr. Chowdappa.

The decisions taken are listed below

- a) CISH Lucknow – Since diverse etiology of Guava wilt is observed, it is recommended to study the incubation period for *Fusarium*.
- b) Fly ash is not advisable for disease management
- c) Since disease caused by *Fusarium* is only 10% more, investigation is required to establish the correct etiology.
- d) IIPR Kanpur- Saff flower infection by *Phytophthora* is observed for the first time.
- e) The work on use of non-pathogenic *Fusarium* for biocontrol was discouraged since non-pathogenic *Fusarium* can cause disease under certain conditions.
- f) The use of Chitin synthase gene for identifying virulence in pathogens has to be worked in detail.
- g) Haplotype displacement study has to be taken up at Uttarakhand and also develop markers from QTL.

The new proposals submitted from SBI Coimbatore and IIHR Bangalore on *Fusarium* diseases of Sugarcane and ornamental plants are accepted. RRIL can be part of Phytofura without major non-recurring expenditure.

General Recommendations

1. For Annual Review meetings, all pathologists from Horticulture division may be invited.
2. All the *Phytophthora*, *Fusarium*, *Ralstonia* cultures collected at different PHYTOFURA centers has to be deposited at IISR National Repository.
3. Genome data including ITS sequences from all the centers should be deposited in the database
4. It is requested to forward the result of evaluation of *Trichoderma* cultures (coded as PHYTOFURA 1-15) from different centers to coordinator for further analysis and decoding.
5. Dr. Sriram is advised to take up work on *Fusarium* diseases of Gladiolus and Carnation at IIHR giving more emphasis on the production of disease free planting material.

The meeting PHYTOFURA came to an end by 10th Noon and Dr. Johnson George, principal Scientist, IISR, Kozhikode proposed vote of thanks. On 11-4-2013, CPRI Shimla. Organized Laboratory visit and also field trip to their Experimental Farm at Kufri and Fago. At Kufri, the newly inaugurated Potato chips production unit was also demonstrated.

LIST OF PARTICIPANTS

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