Editorial Vol. 73 (4) December 2020

B. N. Chakraborty^{1,2}

© Indian Phytopathological Society 2020

Dear Readers,

The fourth issue, volume 73 of Indian Phytopathology for October–December 2020 is ready. In this issue there are thirty two articles including three review articles, seventeen research articles, nine short communications and three new reports.

Climate change and climatic variability are impacting the agriculture and allied sectors including host–pathogen system. The first review article by Dr. Suseelendra Desai and his group have emphasized the impact of climate change on *Fusarium* species and its variability on plant diseases along with the adaptation strategies for their management. In the second review article on “Defense signaling in plants against micro-creatures: do or die” Sanjula Sharma and Sneha Gupta have highlighted that engineering plants with resistance (R) gene could ensure an array of defense response towards developing plant immune system. Third review article by Dr. M.R. Khan and R.K. Shrama on “*Fusarium*-nematode wilt disease complex, etiology and mechanism of development” has discussed in depth the role of nematode as a biopredisposing agent in promoting infection of plants by *Fusarium* species.

Using rhizobacteria, bacterial and root endophytic fungus *Piriformospora indica*, suppression of bacterial wilt and growth promotion in tomato plant have been presented. *Pantoea agglomerans* isolates could suppress growth of *Ralstonia solanacearum* and promote plant growth. *Streptomyces* isolated from vermicompost soil have been explored as plant growth promoting and biocontrol agents. A rapid and efficient loop mediated isothermal amplification (LAMP) assay based molecular detection of *Fusarium graminearum* causing head blight of wheat and nano-diagnostic technique for

detection of rice blast pathogen (*Pyricularia oryzae*) were developed. Screening for resistance of *Mentha arvensis* cultivars against charcoal rot and rice germplasm against sheath blight diseases were carried out. Inheritance of leaf rust resistance in durum wheat cultivars and sources of resistance to fusarium wilt in chickpea were characterized. The genomes of seven isolates of *Tilletia indica* inciting karnal bunt in wheat were compared and genetic diversity of *Magnaporthe oryzae*, the blast pathogen of rice was determined by SSR markers. Modern combination fungicide molecules against sheath blight of rice, different substrate supplements on growth and yield of oyster mushroom and impact of AM fungi on glomalin-related soil protein distribution were assessed. Prevalance of pigeonpea sterility mosaic virus, occurrence of cucumber mosaic virus subgroup I in new hosts and decrease in the dissemination of bean common mosaic virus in bean genotypes have been reported. Efficiency of polypropylene row covers for excluding virus vectors (aphid and white fly) in potato and the extent of protection from viruses they transmit were evaluated.

Microsatellites composition in bipartite *Ralstonia solanacearum* genomes and production of antifungal metabolites by *Pseudomonas resinovorans* isolate B11 have been described. Associations of *Candidatus phytoplasma aurantifolia* with *Narcissus tazetta* in Iran and *C. phytoplasma asteris* with *Mussaenda erythrophylla* in India were identified. Bioactivity of *T. harzianum* isolates against dry root rot pathogen of mungbean and efficacy of *Purpureocillium lilacinum*, *T. harzianum* and *T. viride* bio-formulations against *Meloidogyne incognita* were demonstrated.

New records on the occurrence of races 1 and 2 of *Fusarium oxysporum* f. sp. *niveum* infecting watermelon, leaf spot disease of banana cultivar Nendran caused by *Alternaria alternata*, binucleate *Rhizoctonia* AG-E causing root rot of *Cedrus deodara*, *Orobanche crenata* destroying *Cajanus cajan*, monopartite begomovirus and papaya leaf curl betasatellite infecting *Mirabilis jalapa* in India have been discussed.

Authors, reviewers, editorial board members, executive council members of Indian Phytopathological Society and

✉ B. N. Chakraborty
bncnbu@gmail.com

¹ Indian Phytopathological Society, New Delhi, India

² Department of Biological Sciences, Aliah University, Kolkata, India

business manager who have put in lot of efforts to bring out this publication on time are gratefully acknowledged. Authors are requested to submit the best research/review articles to *Indian Phytopathology* to maintain its quality and high standards.

Prof. B. N. Chakraborty
Chief Editor, *Indian Phytopathology*

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.