



Platinum Jubilee Celebration

8th International Conference
(Hybrid Mode)

Plant Pathology: Retrospect and Prospects

March 23-26, 2022

Venue:

Sri Karan Narendra Agriculture University
Jobner-Jaipur, Rajasthan, India

ABSTRACTS & SOUVENIR

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Identification of pearl millet genetic resources having resistance against leaf blast caused by *Pyricularia pennisetigena* for hot and arid environments of Western India

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Pearl millet is an important rainfed crop cultivated to meet food and fodder requirements in hot and arid environments of Western India. Productivity of the crop has dramatically enhanced in the region by adoption of early hybrids having resistance against downy mildew disease. In recent years, incidence of blast has increased in hot and arid pearl millet growing regions of western India. Till date, Leaf blast has been reported to be caused by *Pyricularia grisea*, but in recent studies causal agent is found to be *P. pennisetigena* in hot arid parts of Rajasthan. Hybrid program depends upon

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the disease resistance levels of both seed and restorer hybrid parental lines to develop disease resistant hybrids. During rainy season of 2019, 215 pearl millet hybrids developed using 20 male sterile lines and 29 restorer parents were evaluated at Jodhpur, Rajasthan, India under rainfed conditions. The crop received more than 500 mm rainfall which created highly congenial humid environment for the expression of leaf blast disease. Disease severity was very high and uniform in the trial, data for disease severity was recorded on 0-9 standard scale at post-flowering stage in each hybrid. Based on performance of hybrids, parental potential for blast resistance was analysed. Male sterile lines ICMA 15222 and ICMA 08555 showed high resistance to the blast disease followed by ICMA 06888, ICMA 16666 and ICMA 16222, whereas ICMA 04555 and ICMA 08333 were highly susceptible. Among the restorer parents, CZI 2017/8 showed very high resistance to the blast disease followed by CZI 2014/3, CZI 2013/8 and CZI 2005/22. In the subsequent rainy season of 2020, the identified resistant parental lines and their hybrids were evaluated in rainfed conditions. Again, leaf blast incidence and severity was high, the identified resistant lines showed leaf blast resistance, confirming their genetic potential for disease resistance. These identified lines are valuable genetic resources for breeding blast resistant parents and hybrids adaptive to hot arid regions of Western India.



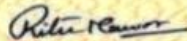
Indian Phytopathological Society, New Delhi
IPS Central Zone Satellite Symposium



24th, March 2022
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Certificate of Merit

This is to certified that **Dr. R K Solanki**, R K Kakani, S K Singh, Rajan Sharma and S K Gupta are presented their paper (Oral) entitled "**Identification of pearl millet genetic resources having resistance against leaf blast caused by *Pyricularia pennisetigena* for hot and arid environments of Western India**" and got **Best Paper Award** during the Central Zone Symposium on "**Ameliorate Resilience on Arid Crops**" in the 8th IPSCONF 2022 "Plant Pathology: Retrospect and Prospects" of Indian Phytopathological Society, New Delhi on 24th March, 2022 organized at Sri Karan Narendra Agriculture University, Jobner-Jaipur, Rajasthan, India.


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