

Since 1941

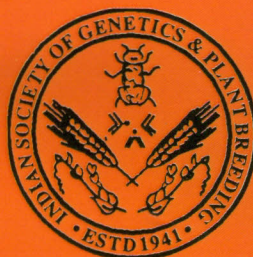
112



# The Indian Journal of *Genetics and Plant Breeding*

An International Journal of Genetics,  
Plant Breeding & Biotechnology

Volume 82  
Number 3  
August 2022



[www.isgpb.org](http://www.isgpb.org)

LB  
12/12/22

The Indian Society of Genetics & Plant Breeding  
New Delhi, India





RNI No. DELENG/2001/7316

The Indian Journal of

ISSN Print : 0019-5200

ISSN Online : 0975-6906

Impact Factor\* : 1.339

\*Journal Citation Report Thomson Reuters

Volume 82

Number 3

August 2022

# Genetics and Plant Breeding

An International Journal of Genetics, Plant Breeding and Biotechnology

**ABSTRACTED IN:** Plant Breeding Abstracts, Plant Genetic Resources Abstracts, Plant Growth Regulator Abstracts, CAB International, Review of Plant Pathology, Review of Agricultural Entomology, Seed Abstracts, Wheat, Barley and Triticale Abstracts, Maize Abstracts, Soybean Abstracts and Indian Science Abstracts.

## Contents

### Review Article

Recent trends in crop breeding, the varietal induction in seed chain and its impact on food grain production in India  
*J. S. Chauhan, P. R. Choudhury, K. H. Singh and Ajay Kumar Thakur* ... 259

### Research Articles

Identification of efficient learning classifiers for discrimination of coding and non-coding RNAs in plant species  
*Priyanka Guha Majumdar, A. R. Rao, Amit Kairi, P. K. Meher and Sarika Sahu* ... 280

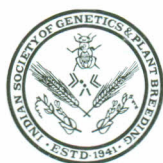
Studies on effects of terminal heat stress on yield stability, grain iron and zinc contents in wheat (*Triticum aestivum* L.)  
*Sourav Panigrahi, Yaswant Kumar Pankaj, Vishnu Kumar, Rajeev Kumar and Santosh Kumar Singh* ... 289

Identification and validation of genetic locus linked to flavonoid and anthocyanin content in rice using Bulk Segregant Analysis  
*M. Almas Fathima, S. Geetha, M. Hemalatha, K. Amudha, L. Ananda Lekshmi, G. Ariharasutharsan, N. Devasena and D. Uma* ... 299

Genetic characterization and comparative assessment of response of biparental and multi-parental populations to northern corn leaf blight in maize (*Zea mays* L.)  
*Shrikrishna P. Desai, H. C. Lohithaswa and N. Mallikarjuna* ... 304

Assessment of salt tolerance potential at the germination and seedling stages in pigeonpea (*Cajanus cajan* L.)  
*Rekha Joshi, Naleeni Ramawat, Rameswar Prasad Sah, Anita Gogia, Akshay Talukdar, Shraddha Sharma, Arun Kumar, R.S. Raje, A.N. Patil and Kumar Durgesh* ... 311

Assessment of agro-morphological traits and yield-based tolerance indices in sesame (*Sesamum indicum* L.) genotypes under drought stress  
*Mohammad Amin Baghery, Seyed Kamal Kazemitabar, Ali Dehestani, Pooyan Mehrabanjoubani and Hamid Najafi Zarrini* ... 324



www.isgpg.org



Official publication of  
The Indian Society of Genetics and Plant Breeding,  
New Delhi

Indian J. Genet. Plant Breed., 82(3): 259-380 (August 2022)

Induced polyploidization in buckwheat ( <i>Fagopyrum esculentum</i> Moench) <i>Akanksha Srivastava and G. Kumar</i>	... 333
Utilization of within location non-replicated multi-locational yield trials and GGE biplot methods for testing adaptability of tea [[ <i>Camellia sinensis</i> (L.) O. Kuntze]] over diverse environments <i>J. Dananjaya Kottawa-Arachchi, Mahasen A.B. Ranatunga and D. Sumith de Z. Abeysiriwardena</i>	... 342
Development of competitive allele specific PCR based SNP genotyping assays for breeding applications in castor <i>Manmode Darpan Mohanrao, M. Sujatha, S. Vanisri, B. Vidya Sagar, Y. Rushwanth Reddy, K. Divya Sravanthi and S. Senthilvel</i>	... 350
<b>Short Research Articles</b>	
Comparative analysis of gamma rays and electron beam in altering rice ( <i>Oryza sativa</i> L.) grain size <i>P. Arunachalam, R. Lalitha, C. Vanniarajan and J. Souframanien</i>	... 355
Influence of G x E interaction on heterobeltiosis, combining ability and stability of multiple cross derivatives of cotton ( <i>Gossypium hirsutum</i> L.) amenable for HDPS <i>K. G. K. Murthy and T. Pradeep</i>	... 359
Adhesive bud method: A novel crossing technique in sesame ( <i>Sesamum indicum</i> L.) <i>A. B. M. Sirisha, S. K. Haseena Banu and Tulasi Lakshmi Thentu</i>	... 361
The complete chloroplast genome of the endangered species garra de león [ <i>Bomarea ovallei</i> (Phil.) Ravenna] from Chile <i>Roberto Contreras Díaz, Wilson H. Mamani, Liesbeth van den Brink, Maria N. Fuentes and Mariana A. Aburto</i>	... 365
Molecular marker assisted confirmation of hybrids in coconut ( <i>Cocos nucifera</i> L.) <i>R. Sudha, K. Samsudeen, M.K. Rajesh and V. Niral</i>	... 369
Notification and germplasm registration	... 373