

Contents

1	Use of Alien Genetic Variation for Wheat Improvement	1
	P.K. Gupta	
2	Quantitative Trait Loci Mapping in Plants: Concepts and Approaches	31
	Deepmala Sehgal, Richa Singh and Vijay Rani Rajpal	
3	Developing and Deploying Abiotic Stress-Tolerant Maize Varieties in the Tropics: Challenges and Opportunities	61
	B.M. Prasanna	
4	Harnessing Apomixis for Heterosis Breeding in Crop Improvement	79
	Sazda Abdi, Shashi, Anuj Dwivedi and Vishnu Bhat	
5	Status and Opportunities of Molecular Breeding Approaches for Genetic Improvement of Tea	101
	Rahul Kumar, Kuldip, Paramvir Singh Ahuja and Ram Kumar Sharma	
6	Molecular Cytogenetic Approaches in Exploration of Important Chromosomal Landmarks in Plants	127
	Santosh Kumar Sharma, Maki Yamamoto and Yasuhiko Mukai	
7	Technological Advances in Studying Gene Pool Diversity and Its Exploitation	149
	Sapinder Bali, Shailendra Goel and Soom Nath Raina	
8	Introgression and Exploitation of QTL for Yield and Yield Components from Related Wild Species in Rice Cultivars	171
	Kumari Neelam, Kishor Kumar, Harcharan Singh Dhaliwal and Kuldeep Singh	

9	A Molecular Phylogenetic Framework for Timothy (<i>Phleum pratense</i> L.) Improvement	203
	Alan V. Stewart and Nicholas W. Ellison	
10	Genetic Improvement of Basmati Rice—The Journey from Conventional to Molecular Breeding.	213
	A.K. Singh and S. Gopala Krishnan	
11	Genetic Diversity and Coffee Improvement in India.	231
	N. Surya Prakash, Jeena Devasia, Y. Raghuramulu and Ramesh K. Aggarwal	
12	Introgression and Exploitation of Biotic Stress Tolerance from Related Wild Species in Wheat Cultivars	269
	Parveen Chhuneja, Satinder Kaur and H.S. Dhaliwal	
13	Genetic Improvement of Sugarcane Through Conventional and Molecular Approaches	325
	Upendra Kumar, Priyanka and Sundip Kumar	
14	Germline Transformation for Crop Improvement	343
	Divya Mohanty, Atika Chandra and Rajesh Tandon	
15	Advances in Molecular Breeding of Pearl Millet	397
	Deepmala Sehgal	
16	Molecular Marker-Based Selection Tools in Spring Bread Wheat Improvement: CIMMYT Experience and Prospects	421
	Susanne Dreisigacker, Sivakumar Sukumaran, Carlos Guzmán, Xinyao He, Caixa Lan, David Bonnett and Jose Crossa	
	Erratum to: Use of Alien Genetic Variation for Wheat Improvement	E1
	P.K. Gupta	
	Index	475

Molecular Breeding for Sustainable Crop Improvement
Volume 2

Rajpal, V.R.; Rao, S.R.; Raina, S.N. (Eds.)

2016, XI, 478 p. 56 illus., 12 illus. in color., Hardcover

ISBN: 978-3-319-27088-3