Plant Breeding in the Omics Era

Rodomiro Ortiz Ros
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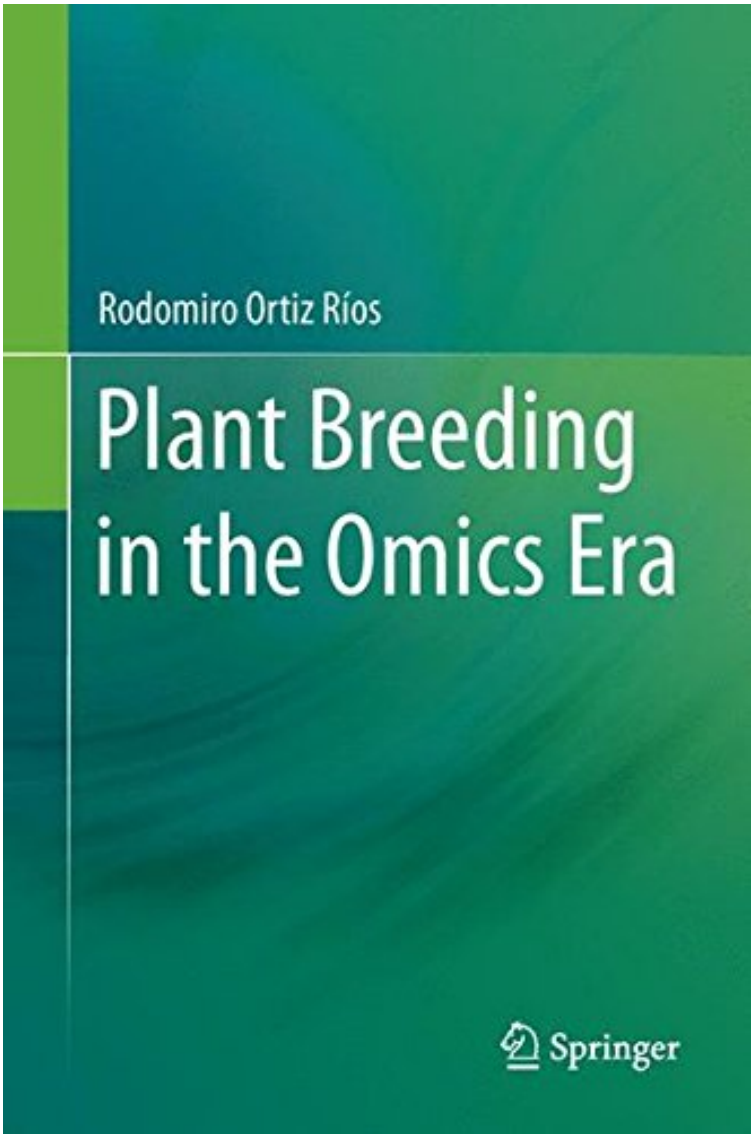

#5786127 in Books 2015-09-17Original language:EnglishPDF # 1 9.21 x .63 x 6.14l, 1.20 #File Name: 3319205315249 pages | File size: 17.Mb

Rodomiro Ortiz Ros : Plant Breeding in the Omics Era before purchasing it in order to gage whether or not it would be worth my time, and all praised Plant Breeding in the Omics Era:

The field of plant breeding has grown rapidly in the last decade with breakthrough research in genetics and genomics, inbred development, population improvement, hybrids, clones, self-pollinated crops, polyploidy, transgenic breeding and more. This book discusses the latest developments in all these areas but explores the next generation of needs and

discoveries including omics beyond genomics, cultivar seeds and intellectual and property rights. This book is a leading-edge publication of the latest results and forecasts important areas of future needs and applications.

From the Back CoverThis book provides analysis of plant breeding and its role for producing high-yielding cultivars that increase farming profitability and sustainability. This workanalyzesthe past and present of plant breeding,while providing research that investigates the future of crop improvement. Plant breeding today, as it was before, depends on crop biodiversity and its sustainable use, which can be further facilitated by advances in omics and bioinformatics. It starts with assessing plant genetic resources (wild species, landraces, obsolete cultivars, genetic stocks) variation aiming to enhance the cultigen pool. Research on geneticsaided by current omic tools should lead to designing a knowledge-based plant breeding, which could bring further genetic gains in the breeding pools. Plant breeding, however, will increasingly require pursuing a holistic interdisciplinary approach based on integrated system-oriented thinking.About the AuthorRodomiro Ortiz is Professor of Genetics and Plant Breeding at the Swedish University of Agricultural Sciences (SLU) in Alnarp, Sweden. He worked as geneticist at Universidad Nacional Agraria La Molina (UNALM), Centro Internacional de la Papa (CIP, Lima, Per), Rutgers University (Chatsworth, New Jersey, USA) and International Institute of Tropical Agriculture (IITA, Ibadan, Nigeria), held a Nordic professorship in plant genetic resources at the Danish Royal Veterinary and Agricultural University (merged now with the University of Copenhagen, Denmark), served as Director at the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT, Patancheru, Telangana, India), IITA, and the Centro Internacional de Mejoramiento de Maz y Trigo (CIMMYT, El Batn, Mxico), and independent free-lance consultant for international, regional and national organizations engaged in agricultural research-for-development. CGIAR awarded IITA in 1994 the prestigious King Baudouin Award for the multidisciplinary research of the team working in plantain and banana improvement, in which Ortiz was both a hands-on researcher and program leader. His professional expertise includes genetics, genetic resources, germplasm enhancement, plant breeding, agro-biotechnology, biosafety, intellectual property rights, and developing agro-ecosystem and livelihood system approaches aiming sustainable intensification of agriculture in the developing world. His h-index was 44 according to Google Scholar at end 2014.