Breeding Science Special Issue: Rice genetic resources

Rice was the first staple crop in which the genome sequence was completely decoded. This gold standard information will undoubtedly pave the way to a new era of rice research, including the evaluation of germplasm. This special issue of Breeding Science is dedicated to the importance and indispensability of rice genetic resources for rice research and breeding. The contents comprise reviews and original articles on current advances in the generation and collection of chemically induced or biologically transformed mutants, on the development of new genetic materials by the incorporation of natural variations, on development of a platform of single nucleotide polymorphism (SNP) analysis, and genome libraries, and on databases with up-to-date analytical data. The review papers are grouped into five topics: the National Bioresource Project (NBRP) in Japan, rice mutant resources, stocks of the genus Oryza, genetic resources derived from intersubspecific and interspecific crosses, and databases. A key concept covered in each review article is supported by original research articles. The editorial board members of this special issue wish to stimulate more innovative research and further investment in the breeding in other crops, in addition to rice.

Members of the JSB and several non-member contributors were invited to contribute to this special issue. Manuscripts were peer-reviewed by a number of local and international scientists; 12 review and 11 original research papers were finally accepted. We take this opportunity to thank our colleagues G. An, E.R. Angeles, M. Ashikari, K. Fujii, K. Fujino, D. Fujita, S. Fukuoka, Y. Fukuta, N. Hayashi, R. Henry, H. Hirochika, Yue-ie Hsing, R. Ikeda, T. Ishii, R. Ishikawa, M. Ishimoto, J. Itoh, Y. Iwasaki, H. Iwata, Y. Kawagoe, G.S. Khush, Y. Kishima, N. Kurata, Y. Kuroda, M. Kusaba, S. McCouch, M. McMullen, D. Muench, M. Nakazono, S. Ninomiya, K.I. Nonomura, Y. Okumoto, K. Sato, K. Toriyama, Y. Uga, D. Vaughan, D. Waters, Y. Yamagata, T. Yamamoto, M. Yamasaki, and J. Yonemaru for their participation and cooperation in the review process; their constructive comments have been invaluable in improving the quality of the articles. The editors of this special issue were H. Kitano, K. Okuno, D. Vaughan, M. Yano, and H. Yasui, and the technical editors were N. Tomooka and F. Taguchi-Shiobara. This publication was partly supported by NBRP-RICE. Finally, we would like to acknowledge to NBRP (National Bioresource Project) that is promoted by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) for sponsoring this special issue of Breeding Science.

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