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Genome sequencing and modern breeding

The world population is predicted to reach 9 billion within the next 40 years, requiring a 70-100% increase in food production relative to current levels. A major challenge is to ensure food production in a sustainable manner without further expanding farmland and damaging the environment, despite adverse conditions such as rapid climatic changes. Crop breeding is of primary importance for improving yield and tolerance to existing and emerging biotic and abiotic stresses. In this paper, I show you how recent development of genome sequencing is transforming crop breeding by taking examples of our approaches of rice improvement in northern Japan.

CV

Since 2008	Head, Division of Genomics and Breeding, IBRC
1997-2008	Senior Researcher, IBRC
1995-1997	Post-doctoral researcher at University of Frankfurt, Germany
1991-1995	Research associate at Department of Botany, Kyoto University, Japan
1990-1991	Post-doctoral researcher at International Institute of Tropical Agriculture (IITA), Nigeria
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