

## Achieving sustainable cultivation of rice

Volume 1: Breeding for higher yield and quality

Edited by Professor Takuji Sasaki  
Tokyo University of Agriculture, Japan



 burleigh dodds  
SCIENCE PUBLISHING

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## New title information

# Achieving sustainable cultivation of rice Volume 1

## Breeding for higher yield and quality

Edited by: Takuji Sasaki, Tokyo University of Agriculture,  
Japan

### Endorsement:

"Rice feeds half the world population. Production of rice must continue to increase at the rate of one percent a year to maintain food security. This will require varieties with higher yield potential and better management practices. This collection summarizes the latest technologies for genetic improvement of rice and for its management under diverse environments. It will serve as standard reference for rice scientists."

*Professor Gurdev Khush, University of California-Davis, USA; formerly the International Rice Research Institute (IRRI), winner of the Japan Prize, the World Food Prize and the Wolf Prize*

### Description:

Rice is one of the most important foods in the world. As the demand for rice continues to increase, there is an urgent need to increase yields in the face of such challenges as climate change, threats from pests and diseases and the need to make cultivation more resource-efficient and sustainable.

Drawing on an international range of expertise, this collection focuses on ways of improving the cultivation of rice at each step in the value chain, from breeding to post-harvest storage. Volume 1 reviews research in physiology and breeding and its application to produce varieties with improved traits such as higher yields. It then goes on to discuss nutritional and other aspects of rice quality and the ways these can be enhanced.

*Achieving sustainable cultivation of rice Volume 1: Breeding for higher quality and yield* will be a standard reference for rice scientists in universities, government and other research centres and companies involved in rice cultivation. It is accompanied by Volume 2 which reviews improvements in cultivation techniques, pest and disease management.

### Key features:

- Reviews developments in understanding and protecting genetic diversity in rice, and how this translates into marker-assisted and other developments in breeding;
- Discusses advances in breeding varieties with enhanced properties such as high yield and drought tolerance;
- Summarises current research on understanding and improving nutritional properties such as vitamin and mineral content

### Audience:

Academic researchers in cereal science; International and national agencies supporting agricultural development; Cereal processors and companies supplying the agricultural sector

### Editor details:

Dr Takuji Sasaki is Professor at the Nodai Research Institute, Tokyo University of Agriculture, Japan. Professor Sasaki is Editor-in-Chief of the journal *Rice*, and played a leading role in the international rice genome sequencing project.

### Table of contents:

#### Part 1 Rice physiology and breeding

- 1.Ensuring and exploiting genetic diversity in rice: *Jennifer Spindel and Susan McCouch, Cornell University, USA*
- 2.Advances in molecular breeding techniques for rice: *Motoyuki Ashikari, Nagoya University, Japan*
- 3.Breeding strategies to improve rice yields: an overview: *Kshirod Jena, IRRI, The Philippines*
- 4.Advances in high-yield rice varieties: C4 rice: *Rowan Sage, University of Toronto, Canada*
- 5.Advances in hybrid rice varieties: green super rice: *Zhikang Li, Chinese Academy of Agricultural Science (CAAS), China*
- 6.Mechanisms of drought tolerance in rice: *Anuj Kumar, Supratim Basu, Venkategowda Ramegowda and Andy Pereira, University of Arkansas, USA*

#### Part 2 Rice nutritional and processing quality

- 7.Advances in understanding the role of rice in nutrition: *Melissa Fitzgerald, University of Queensland, Australia*
- 8..The nutraceutical properties of rice: *Lu Yu, University of Maryland, USA; and Margaret Slavin and Mengyi Dong, George Mason University, USA*
9. Biofortified Golden Rice: an additional intervention for vitamin A deficiency: *Adrian Dubock, Golden Rice Humanitarian Board, Switzerland*
- 10.Development of rice varieties with improved iron content in grain: *Navreet K. Bhullar, ETH Zurich, Switzerland*
- 11.Quality parameters and testing methods in rice cultivation: *Rachelle Ward, NSW Department of Primary Industries, Australia*
- 12.Agronomic and environmental factors affecting rice grain quality: *Chuan Tong and Jinsong Bao, Zhejiang University, China*