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ONLINE ISSN : 1349-1008

PRINT ISSN : 1343-943X

Plant Production Science

Vol. 8 (2005) , No. 3 320-325

[\[PDF \(459K\)\]](#) [\[References\]](#)**Germplasm Enhancement and Breeding Strategies for Crop Quality in Japan**[Kazutoshi Okuno](#)¹⁾

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(Received: September 1, 2004)

Abstract: Rice is the staple food for most Asians. Breeding efforts at the national and international levels have resulted in high-yielding varieties with resistance/tolerance to biotic and abiotic constraints. Consequently Asia has enjoyed rice self-sufficiency in recent years. Now in some countries over-production of rice has occurred, partly because of reduced rice consumption. For instance, in 1962 Japan had a per capita rice consumption of 118.3 kg and then this rapidly declined to about 60kg in 2003. Imbalances between production and consumption in rice and other crops have promoted a paradigm shift of breeding objectives oriented from producers to consumers. Germplasm enhancement (pre-breeding) and breeding strategies now focus on a broad range of crop and food qualities, which are closely associated with industrial and processing properties and human health and nutrition. In particular, physiological functions of chemical compounds involved in crop products are being studied as a part of breeding programs. Diverse plant genetic resources and advances in plant genome research have contributed to successful breeding strategies to improve and manage crop and food quality. Recent progress in germplasm enhancement and breeding strategies for quality improvement of rice, wheat, soybean and sweet potato in Japan is discussed.

Keywords: [Genetic improvement](#), [Rice](#), [Soybean](#), [Sweet potato](#), [Wheat](#)[\[PDF \(459K\)\]](#) [\[References\]](#)Download Meta of Article [\[Help\]](#)[RIS](#)

To cite this article:

Kazutoshi Okuno: "Germplasm Enhancement and Breeding Strategies for Crop Quality in Japan". *Plant Production Science*, Vol. **8**, pp.320-325 (2005) .

doi:10.1626/pps.8.320

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