



Minoru NISHIMURA, Ph.D.

Professor

Program: Life and Food Sciences

Area: Agriculture and Bioresources

Undergraduate: Dept. of Agronomy

Professional Expertise

His professional expertise encompasses breeding, genetics and physiology of rice. He has been engaged in some institutes of MAFF (Ministry of Agriculture, Forest and Fisheries) until this March in 2013. His lab. is dealing with amylose-content or protein composition mutants in seeds and salt tolerant mutants in rice.

Research Fields of Interest

- Genetics and breeding of seed components by mutation in rice
- Physiology and breeding of stress tolerance in rice

Education

1996: Ph.D. in Agriculture, Graduate School of Agricultural Science, Kyoto University, Japan

1981: M.S. in Agriculture, Graduate School of Agricultural Science, Kyoto University, Japan

1979: B.S. in Agriculture, Faculty of Agricultural, Kyoto University, Japan

Professional Societies and Activities

1. Crop Science Society of Japan
2. Japanese Society of Breeding
3. The Ion Beam Breeding Society
4. Society of Seed Physiology and Biochemistry

Awards

1. NARO Research Prize special I (2011)
2. Award of Japanese Society of Breeding (2010)

Major Publications

Papers

[1] "Identification of the chromosomal region responsible for high-temperature stress tolerance during the grain-filling period in rice" *Molecular Breeding* (Online First) (2013)

[2] "Identification of a single nucleotide deletion causing frameshift mutation in OsDFR2A in a genic male sterile mutant of rice and its possible application to F₁ hybrid breeding" *Molecular Breeding* (Online First)(2013)

[3] "NYC4, the rice ortholog of Arabidopsis THF1, is involved in the degradation of chlorophyll - protein complexes during leaf senescence." *Plant Journal*, Vol. 74, pp.652-662 (2013)

[4] "Proteomic analysis of the flooding tolerance mechanism in mutant soybean" *Journal of Proteomics* Vol.79(21), pp.231-250 (2013)

[5] "LAX PANICLE2 of rice encodes a novel nuclear protein and regulates the formation of axillary meristems" *The Plant Cell* Vol.23(9) pp.3276-3287 (2011)

[6] "Momiroman, a new rice cultivar for feed use (in Japanese)" *Bull. Natl. Inst. Crop Sci.* Vol.11 pp.31-47 (2010)

[7] "A rice mutant sensitive to Al toxicity is defective in the specification of root outer cell layers" *Plant and Cell Physiology* Vol.50(5):976-985 (2009)

[8] "Development of PCR markers to detect the glb1 and Lgc1 mutations for the production of low easy-to-digest protein rice varieties" *Theoretical and Applied Genetics* Vol.119 (1):125-130 (2009)

[9] "Molecular characterization of mutations induced by

gamma irradiation in rice” *Genes & Genetic Systems* Vol.84(5):361-370 (2009)

[10] “Defect in non-yellow coloring 3, an α/β hydrolase-fold family protein, causes a stay-green phenotype during leaf senescence in rice” *The Plant Journal* Vol.59 (6) : 940-952 (2009)

[11]“Two short-chain dehydrogenase/reductases, NON-YELLOW COLORING 1 and NYC1-LIKE, are required for chlorophyll b and light-harvesting complex II degradation during senescence in rice” *The Plant Journal* Vol.57(1):120-131 (2009)

[12]“Utilization and molecular characterization of seed protein composition mutants in rice plants” *Japan Agricultural Research Quarterly* Vol.43(1):1-5 (2009)

Book Chapters

[1] Nishimura M. 2009. “*Seeds Science and Biotechnology*” Gakkai-Shuppan-Center 211-215