Tosti G, Guiducci M, Boldrini A, Quaranta F, Melloni S, De Vita P, and Li Destri Nicosia O. 2007. Durum wheat - legume temporary intercrop, the effects on weed control, nitrogen supply and wheat quality. In: Proc Internat Conf on Organic Agriculture and Food Security, FAO, Roma, Italy, 3–5 March. pp. 83-85.

Vaccino P, Corbellini M, Cattaneo M, Negri S, Pasquini M, Cionini PG, Caceres E, Vittori D, Ciofo A, and De Pace C. 2007. Analysis of genotype-by-environment interaction in wheat using aneuploid lines with chromatin introgressed from *Dasypyrum villosum*. *In:* Proc 51st Ann Cong S.I.G.A., Riva del Garda, Settembre. ISBN 978-88-900622-7-8.

Vaccino P, Banfi R, Corbellini M, Caceres E, Cionini PG, Pasquini M, Bizzarri M, and De Pace C. 2008. Wheat breeding for responding to environmental changes: enhancement of modern varieties using a wild relative for introgression of adapted genes and genetic bridge. *In:* Proc 52nd Italian Soc Agric Genet Ann Cong, 14-17 September, 2008, Padova, Italy. Abstract 4.05, ISBN 978-88-900622-8-5.

ITEMS FROM JAPAN

NATIONAL INSTITUTE OF CROP SCIENCE (NICS) – NATIONAL AGRICULTURE AND FOOD RESEARCH ORGANIZATION (NARO)
Tsukuba, Ibaraki 305-8518, Japan.

Kannon lines Nos. 1–51 with high flour yield, Japanese common wheat germ plasm for udon noodles.

Hiro Nakamura.

I report here the release of 51 germ plasm lines (Kannon No. 1–No. 51) of a Japanese common wheat used for udon noodle production. Kannon Nos. 1–51 are full-season, common wheat lines with a high grain and flour yields that have excellent milling and good udon noodle-making qualities. By using wheat flour particle size distribution measurements, I selected high flour yielding breeding materials among Japanese and Chinese wheat germ plasm, lines, and cultivars for breeding the udon-quality wheat lines with a high flour yield. The Kannon wheat lines were bred by crossing the selected Japanese and Chinese breeding materials with high flour yield with Japanese udon cultivars with high grain yield.

Japan produces about one million tons of wheat a year, maintaining ~15% self sufficiency in udon-quality wheat in a country of low overall food self-sufficiency, except for rice, which is near 100% self-sufficiency, or about 10 million tons/year. To improve the international competitiveness of the udon wheat grown in Japan, enhancing grain quality and developing cultivars with a higher flour yields are important in order to satisfy the demands of local milling companies. Therefore, breeding udon-quality wheat lines with excellent milling is the most important in the Japanese udon wheat-breeding program.

Wheat has been the staple food of Japan since ancient times, and it still makes frequent appearances on the dining table. The roots of a soft noodle such as udon lie in China, however, udon as we know it today developed independently in Japan. Of the many ways to eat wheat flour, it is the main ingredient in udon noodles. The kind of flour used has a great impact on the flavor and texture, therefore udon noodles are made of soft flour and not a hard bread flour. Each chef has his or her own unique formula; some blend several types of wheat flour, whereas others mix in other kinds of flour to give the udon noodles a chewier texture. Udon are popular with young and old alike, the cost of one bowl is low, and udon shops can be found nationwide. Some people in Japan eat udon almost every day.

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