

## A New Rice Cultivar , “Hatsushizuku” , for Sake Brewing

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### Summary

Hatsushizuku is a new rice cultivar used for brewing "sake", Japanese wine. This cultivar was selected from the progeny of the cross of Matsumae/Jou116//Hokkai 258 at the Hokkaido National Agricultural Experiment Station and was registered as Paddy Rice Norin 354 by the Ministry of Agriculture, Forestry and Fisheries in 1998.

Hatsushizuku is a moderate maturing cultivar, and its heading date of this cultivar is the same as that of Kirara 397, a leading cultivar in Hokkaido. Hatsushizuku has a 3cm-longer culm and fewer panicles than that of Kirara 397, but its panicle length and lodging resistance are similar to those of Kirara 397.

The average yield of Hatsushizuku is 5 to 8% higher than that of Kirara 397. Its 1000-grain weight is 1.5g heavier than that of Kirara 397, and its brown rice quality is slightly poor than that of Kirara 397.

Hatsushizuku has superior tolerance to low-temperature injury at the booting stage. It has also higher field resistance to rice blast than that of Kirara 397.

The amylose content of milled rice was about 23%, and 2% higher than that of Kirara 397.

The protein content of milled rice of Hatsushizuku is slightly lower than that of Kirara 397.

Milled rice of Hatsushizuku has a higher potassium and lower manganese content than that of milled Kirara 397, but the iron contents in milled rice are similar.

The results of digestion tests showed that the brix and formol nitrogens in Hatsushizuku rice are lower than those in Kirara 397. The brewing efficiency of Hatsushizuku rice was almost the same as standard brewing efficiency. The organic and amino acid contents of sake brewed from Hatsushizuku rice were lower than standard contents, and the taste seemed to be dryer and better.

Hatsushizuku was considered to be adaptable to major rice cultivating areas of Hokkaido and has been used as the first recommended cultivar for sake brewing by Hokkaido Prefecture.

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