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ONLINE ISSN : 1349-1008

PRINT ISSN : 1343-943X

Plant Production Science

Vol. 8 (2005) , No. 5 586-591



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Properties of Starch and Protein of “Hattan-Type Varieties” of Rice Suitable for Brewing Original Hiroshima Sake

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(Received: December 1, 2004)

Abstract: By successive crossing using Hattan-type varieties originating from “Hattanso” as a parent, “Hattan-type varieties” of rice suitable for brewing the original Hiroshima sake have been bred. In this study, the difference in the properties of starch and protein among the Hattan-type varieties was examined. Six Hattan-type varieties, Hattanso, Hattan No.10, Hattan No.35, Hattan No.40, Hattan-nishiki No.1 and Hattan-nishiki No.2, were used. As the properties of starch, amylose content, pasting properties and gelatinization properties were examined. The pasting and gelatinization properties were examined using a rapid viscoanalyzer (RVA) and a differential scanning calorimetry (DSC), respectively. As the properties of protein, the compositional ratio of two types of protein bodies (PB-II/PB-I) was analyzed. However, no significant differences in the above properties were observed among these Hattan-type varieties. The above properties of starch and protein in Hattanso seem to be retained in all of these varieties. In these varieties, breeding might not have been aimed at improvement of the properties of starch and protein.

Keywords: [Amylose content](#), [Gelatinization property](#), [Hattan-type varieties of rice](#), [Pasting property](#), [Protein body](#)



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To cite this article:

Masahiko Tamaki, Rie Kihara, Masaki Okuda, Isao Aramaki, Zennosuke Katsuba and Takao Tsuchiya: "Properties of Starch and Protein of "Hattan-Type Varieties" of Rice Suitable for Brewing Original Hiroshima Sake". Plant Production Science, Vol. **8**, pp.586-591 (2005) .

doi:10.1626/pps.8.586

JOI JST.JSTAGE/pps/8.586

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