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## Varietal Difference of Polishing Characteristics and Suitability for Sake Brewing in "Hattan-Type Varieties" of Rice Suitable for Brewing Original Hiroshima Sake

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**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. The varieties were improved inheriting the flavor of Hattan-type sake, and Hattan-nishiki No.1 and No.2 were bred in 1984. However, neither variety was suitable for brewing high-grade sake such as Ginjoshu and Daiginjoshu, which require high-degree polishing of rice grains. Therefore, their parent cultivar, Hattan No. 35, is attracting attention for the production of high-grade sake. We have been trying to breed a new variety, which retains the sake-brewing suitability of Hattan-type varieties but can endure high-degree polishing. In this study, to establish a guideline for further breeding, we examined the polishing characteristics and suitability for sake brewing of six Hattan-type varieties derived from Hattanso. In the process of breeding of "Hattan-type varieties" of rice, grain size, white-core size and % of white-core grains increased resulting in an increased suitability for sake brewing, such as water absorptivity and digestibility, in Hattan No.35, Hattan-nishiki No.1 and Hattan-nishiki No.2. However, Hattan-nishiki No.1 and No.2 had many ellipsoidal-white-cores with large white tissue, which cause the grains to be easily broken during high-degree polishing. On the other hand, Hattan No.35, having grains with relatively

many lined-white-cores with small white tissue, was superior for high-degree polishing. In the future, breeding of a new variety, which has the superior cultivation characteristics of Hattan-nishiki No.1 and No.2, but with improved white-core characteristics, is expected.

**Keywords:** [Brewer's rice](#), [Hattan-type varieties of rice](#), [Polishing](#), [Suitability for sake brewing](#), [White-core grain](#)



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