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Studies on Grain and Flour Quality of wheat in Tohoku District : IV. Relation among grain and flour qualities in domestic and foreign wheat cultivars based on the hard and soft wheats

Seiji ITO, Akiko SATO and Tsuguhiro HOSHINO
1) Tohoku National Agricultural Experiment Station
2) Tohoku National Agricultural Experiment Station
3) Tohoku National Agricultural Experiment Station

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Abstract:
Thirty Tonoku and 30 foreign wheat cultivars were grown under the same cultured condition, and grain and flour qualities were analyzed based on the hard and soft classification of wheats. Grain and flour qualities of the hard wheats were different from the soft wheats. Some factors differed between hard and soft wheats. For examination of grain and flour quality of wheat cultivar, it is necessary that cultivars be classified by hardness. It was suggested that milling characteristics were related to the ash content of grain. The relationship between milling characteristics and protein content of grain was not significant. In both the hard and soft wheats, the correlation coeffecient between flour yield and flour color was significantly positive. In is suggested that higher flour yield wheat always ameliorate flour color. In the hard wheats. the correlation coefficient between ash content and flour color of A flour was significantly negative. It is shown that the selection of low ash content wheat cultivars improved flour color. In neither group the protein content of A flour was correlated with flour color. In the hard wheats, the sedimentation tests were negatively correlated with ash content. It is suggested that there is a negative correlation between the bread quality and ash content.

Keywords:
Ash, Flour color, Hardness, Milling yield, Protein, Sedimentation value, Wheat

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