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Effects of Preharvest Sprouting on Flour Pasting Viscosity in Common Buckwheat (*Fagopyrum esculentum* Moench)

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Abstract: Rain before harvest often causes buckwheat to sprout. Preharvest sprouting reduces the processing suitability of buckwheat flour. We examined the effects of preharvest sprouting on buckwheat flour quality by rapid visco-analysis (RVA) of milled sprouting grains of six buckwheat cultivars. Both artificial and natural rainfall increased the frequency of sprouting and decreased pasting viscosity. The difference in pasting viscosity between sprouting and non-sprouting buckwheat grains was not decreased by adding wheat flour. These results suggest that the mechanical characteristics of dough and boiled noodle may be affected by flour made from sprouting grains. Differing responses of the cultivars to rainfall indicate that higher pasting viscosity could be achieved by using cultivars that are resistant to preharvest sprouting caused by rain.

Keywords: Flour quality, Noodle, Pasting property, Preharvest sprouting resistance, Rain, Wheat flour

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