**Effect of exopolysaccharides on the processing properties of Einkorn wheat**

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Ancient grain varieties such as Einkorn (*Triticum monococcum*) have gained significant importance in recent years due to their nutritional properties and suitability for people suffering from non-coeliac gluten sensitivity. However, the underutilization of Einkorn wheat has been mainly attributed to its low cultivation yields, as well as its poor processing properties, limiting the industrial bread production. Up to now, Einkorn bread continues to be produced manually and blended with other ingredients, due to its high dough stickiness and low kneading and fermentation tolerance. To address these challenges, the main aim of this study was to investigate the influence of two exopolysaccharides (dextran, water kefir grains) on the dough rheology and baking properties of Einkorn wheat. First results showed that increasing dextran concentration significantly reduced dough firmness, stickiness, and stability, while enhancing water absorption, dough softening, and elasticity. In contrast, doughs prepared with water kefir exhibited a higher dough stability, firmness and yield point compared to those with dextran. In terms of bread quality, the highest dextran concentrations yielded breads with highest specific volume, whereas breads containing water kefir had smaller volumes but similar pore properties. While further research is needed, the findings demonstrated that water kefir grains influenced dough properties, particularly improving dough handling. These results suggest that incorporating exopolysaccharides could improve the technological properties of Einkorn wheat which would benefit industrial bread production.

**Keywords**

ancient grains, dextran, water kefir grains, dough rheology, bread quality