



# Agricultural Journals

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# **Czech J. Food Sci.**

**Grobelnik Mlakar S.,  
Bavec M., Turinek M.,**

**Davec 1..**

# **Rheological properties of dough made from grain amaranth-cereal composite flours based on wheat and spelt**

Czech J. Food Sci., 27 (2009): 309-319

The purpose of this study was to investigate the effect of the addition of amaranth wholegrain flour on the rheological characteristics of wheat and spelt flour dough. Organically produced composite flours made from basic flours of wheat (refined) or spelt (refined, wholegrain) and amaranth flour in the proportions of 10%, 20%, and 30% (flour basis) were compared to cereal flours. Dough was analysed for its amylographic, farinographic and extensographic properties. The amaranth substitution altering of the examined measures relate to a certain extent to the properties of the basic flour used. By increasing the amaranth replacement ratio, the

gelatinisation temperature, water absorption, development time, and stability increased whereas the dough softening was only slight. The amaranth addition strengthened the dough, mainly by decreasing its extensibility and, in spelt containing composite flours, also by increasing the resistance to extension. Considering the results obtained and the characteristics of the basic flour used, the amaranth substitution of 10– 20%