



# Agricultural Journals

*Czech Journal of*

**FOOD SCIENCE**

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# **Czech J. Food Sci.**

**Němečková I.,  
Dragounová H.,**

**Pecháčková M., Rýsova J., Roubal P.:**

## **Fermentation of vegetable substrates by lactic acid bacteria as a basis of functional foods**

Czech J. Food Sci., 29 (2011): S42-S48

People suffering from lactose intolerance, cow's milk allergy or phenylketonuria, and people on low-protein diet are restricted in the consumption of dairy products. The consumers' basket should be variegated and enriched with probiotics. The main task was to evaluate important growth and metabolic characteristics of lactic acid bacteria in rice, natural rice, corn, chickpea and barley. Suspensions of the respective flours in water (8% w/w) were supplemented with glucose (1% w/w), pasteurised and fermented. Suitable combinations of cultures and substrates enable the growth of microorganisms minimally by 2 decimal

character. This is connected with a specific shape of the acidification curve pH should be higher than 4.5 after 4-h fermentation. The vegetable samples contained lower concentrations of organic acids than milk samples because of their lower content of the buffering substances. Fermentation did not result in any decrease in the concentration of protein or phenylalanine. Thus, special formulas of foods for people