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## ALTERNATIVE GRAINS IN NUTRITION

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Celiac disease is a genetically based autoimmune disorder of the gastrointestinal system and characterized by intolerance to the gluten. Celiac disease has different clinical symptoms such as malabsorption, diarrhea, weight loss, osteoporosis, iron and folic acid deficiency, arthralgia, fatigue, and abdominal discomfort. Sorghum (*Sorghum bicolor* L.) and millet (*Panicum miliaceum* L.) are the fifth and sixth most important cereal crops worldwide. Gluten-free grains, therefore persons with coeliac disease could consume them without any problems. Moreover, they have a lot of positive effects due to their phenolic compounds (phenol acid, flavonoid, tannin). Fiber, mineral contents, total phenol content and antioxidant activity are high in these cereals. The protein contents is higher than in standard cereals. Sorghum use as: starch, glucose, syrup, oil. In addition, it can be used in preparing whole grain products, bread, pancake, dumpling, mush, cake, pasta and beer. Broom and forage are also can be prepared from them. Millet used such as mush, steamed food, cake, bread, alcoholic and non-alcoholic beverages. Our aim was to compare literature data about the chemical compositions to the results of grains grown in Hungary.

## PURIFICATION OF MODEL DAIRY WASTEWATER BY ADVANCED OXIADATION PROCESSES COMBINED WITH MEMBRANE FILTRATION

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The dairy industry generates wastewaters characterised by high biological and chemical oxygen demand. They contain high levels of dissolved or suspended solids including fats, oils and grease, nutrients such as ammonia or minerals and phosphates. Among available technologies for wastewater treatment, membrane technology, especially ultrafiltration (UF) yields a high permeate flux, but its permeate is not reusable due to its high lactose content and the concentrate also needs further treatment. Advanced oxidation processes (AOPs) are widely used in the fields of water and wastewater treatment. The aim of the present work was to investigate how Fenton-reaction and ozonisation combined with membrane filtration changes the wastewater characteristics and as a pretreatment how it changes the biogas yield and the biodegradability of the concentrate of model dairy waste waters made from 0.3% milk powder.

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