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Exploring the effect of cereal cell wall against different chronic diseases

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Humans consume calories from the food from which half calories are provided by cereal grains. Along with this, cereals comprise crucial components advantageous for human health. Oats (*Avena sativa* L.) are main cereals owing to the presence of high content of phytochemicals, dietary fibres and beneficial nutritional value. In this research, an outline has provided about nutritional and health benefits delivered by oat brans its values added products. Two indigenous oat varieties DN-8 and S-20000 were characterized physico-chemically and nutritionally. Oat bran variety S-20000 showed higher values of protein (15.8%), ash (3.13%) and fiber (14.26%) while the highest proximate components shown by DN-8 was Moisture (8.4%), Fat (8.6%) and NFE (57.59%) respectively. Oat bran variety S-20000 were moderately higher in potassium (626 mg/100g), phosphorus (844 mg/100g), magnesium (271 mg/100g), zinc (8.23 mg/100g) and iron (3.43 mg/100g). Though DN-8 had higher values of calcium (56 mg/100g), Sodium (9.1 mg/100g) and copper (0.25 mg/100g). Vitamin E content of variety S-20000 showed higher value (0.85 mg /100g) while highest value provided by DN-8 was riboflavin B2 (0.68 mg /100g). Oat bran variety S-20000 showed highest soluble (6.31%) and insoluble dietary fiber (7.46%). The highest β -glucan (7.76%) content was also showed by variety S-20000. The totality of essential amino acid is 11.98mg/100g- 21.7 mg/100g of both varieties DN-8 and S-20000. The sum both varieties DN-8 and S-20000 of non-essential amino acid contents of the cultivars was 25.08 and 35.68 mg/100g. Conclusively, Oat bran variety S-20000 is showing better results comparatively DN-8 among most of the parameters chemical, nutritional, vitamin and amino acids respectively.

Biography

Tabussam Tufail is currently working as Assistant Professor in University Institute of Diet & Nutritional Sciences, Faculty of Allied Health Sciences, The University of Lahore, Lahore, Punjab, Pakistan. He completed his PhD Food Science & Technology, MS Food Science & Technology from Government College University Faisalabad. He has completed 25 International and national trainings as well as courses from different organizations. He has published 70 peer-reviewed research/ review papers, 14 book chapters, 1 Book and Presented in 25 International and National Conferences as well as attended a number of conferences, seminars, workshops and webinars. Tabussam Tufail is serving as an editorial board member in Acta Scientific Publications. He is a frequent reviewer of several reputed journals in the area of Food & Nutrition as well as Food Science and Technology. He is Life time member of Life-Time Member of "Scientific and Technical Research Association (STRA)", Life-Time Member of Healthcare & Biological Sciences Research Association (HBSRA), Life-Time Member of Teaching and Education Research Association (TERA), Life-Time Member of Social Science and Humanities Research Association (SSHRA), Life-Time Member of Pakistan Society of Food Scientists & Technologist (PSFST)..