

Abstract

The current study was conducted to evaluate nutritional facts and antioxidant potential of various varieties of buckwheat. Buckwheat (*Fagopyrum esculentum*) varieties named Local, Xian, Mancan and Tisar was first analyzed by their physical characters which shows that buckwheat's varieties was triangular in shape with sharp edges having different colors. The moisture and ash content in buckwheat varieties was varied between 11.8 to 13.07%, 0.4 to 1.02% respectively. Buckwheat is high source of protein except gluten protein. In local buckwheat variety highest protein was measured (Local > Tisar > Mancan > Xian). In buckwheat crude Fiber content also measured in the range of 8.78% to 12.50% and Xian have high crude fibre content. In Tisar high (67.01%) carbohydrate content was calculated than other varieties of buckwheat. Low values of fats depicted that Buckwheat also source of low cholesterol food. Xian has total Energy more than other Buckwheat's varieties. Total Energy was calculated as Xian > Tisar > Mancan > Local. Buckwheat is loaded sodium, potassium and many other minerals except calcium. In Tisar high content of sodium was calculated. Total phenolic content was high in methanolic extract. Maximum TPC was observed in local variety of buckwheat and calculated in ($\mu\text{g/g}$). Antioxidant potential of buckwheat varieties was tested through the 2,2-diphenyl-1-picrylhydrazyl method. Methanol extracts had much higher DPPH values than the other extracts. Buckwheat is a grain that is naturally gluten-free. Aflatoxins of types B1, G1, B2, and G2 are most prevalent in food but buckwheat does not support *Aspergillus* growth for aflatoxin infectivity under typical temperature and humidity conditions.