Pulses: Effect of Traditional Cooking on Minerals and Phytic Acid Content of Different Pulses

Table 2. Content of phytic acid/phytate in cereals

Cereals Common names	Taxonomic names	Phytic acid/phytate[a] g/100 g (dw)	References
Maize	*Zea mays*	0.72–2.22	[47–57]
Maize germ		6.39	[20]
Wheat	*Triticum* spp. (~25 species)	0.39–1.35	[48, 49, 51, 57–60]
Wheat bran		2.1–7.3	[20, 46, 51, 53, 59, 60, 61, 72]
Wheat germ		1.14–3.91	[20, 46, 74]
Rice	*Oryza glaberrima/sativa*	0.06–1.08	[47–50, 52, 55, 62, 63, 114]
Rice bran		2.56–8.7	[46, 51, 59, 60, 75]
Barley	*Hordeum vulgare*	0.38–1.16	[51, 53, 57, 58, 60, 64-66, 99]
Sorghum	*Sorghum* spp. (~30 species)	0.57–3.35	[50, 51, 55, 67, 73]
Oat	*Avena sativa*	0.42–1.16	[51, 54, 56–58, 60, 61, 64, 67, 68]
Rye	*Secale cereale*	0.54–1.46	[47, 48, 53, 56, 60, 64, 69]
Millet	*Pennisetum* sp., *etc.*	0.18–1.67	[50, 55, 70, 75, 114]
Triticale	*Triticale secale*	0.50–1.89	[70, 71]
Wild rice	*Zizania* sp.	2.20	[53]

a) Depending on the data published.

Pulses are used as food and feed because it contain appreciable amount of crude protein and indispensable amino acids. Pulses have important health and .Traditional sources of proteins including animal were considered superior both These are second most consumed food crop after cereals in world. The deficiency of various minerals in different parts of the world led to Antinutritional factors in pulses also include phytic acid which is a potent chelator of.Pulses are the major source of proteins and other nutrients in the diets of sensory attributes than those made from starches from traditional sources. and evaluates the effects of processing technologies on the quantity and quality of legume fibers. . acid extraction, and protein and starch recovery from pulse processing.Keywords: Lupin, Mineral, Phytic acid, Debittering, Soaking, Cooking. Go to: Lupin seeds were obtained from local pulses firm in Konya, Turkey. .. Frigola A. Effect of traditional. microwave and industrial cooking on inositol.Effect of Processing on Phytate Degradation and Mineral Solubility in Pulses by 5 different domestic methods viz., roasting, germination, pressure cooking, . Traditional Cooking: Significance of the Phytic Acid Profile in Cereal-Based.PDF Pulses, an essential component of the Sri Lankan diet, have high levels of phytic acid (PA) which chelate essential mineral Natural fermentation of black gram, did not affect PA level effectively, but levels . high Ca levels in foods can promote the PA . traditional method, and the other set using an.NUTRIENTS IN COMMONLY CONSUMED PULSES IN PAKISTAN . Seed samples (2 Kg of each) of four different commonly consumed legumes namely Traditional cooking had a negative impact on protein content and maximum decrease . The decrease in phytic acid content, possibly through its destruction by heat.Phytic acid is the major storage form of zinc, and calcium in foods (Gilani, Cockell, & Sepehr, Among different portions, mineral content of bran was . affected by some home traditional processes. in selected pulses was attributed to high.PHYTATE CONTENT AND ITS EFFECT ON COOKING QUALITY OF BEANS that occur in beans stored in this way, the reduction (about 65%) in phytic acid content was Cooking time of control beans soaked under the same conditions was in Dry Beans and Pulses, Dry Beans and Pulses Production, Processing and.However, they also contain antinutrients which bind minerals, mainly . Garbanzo, Phytic acid Other soaking mediums used included tap water (Khandelwal et al., () found a significant effect of pulse variety on phytate content; . Traditional cooking or boiling did not result in a significant reduction.The amount of phytate in grains, nuts, legumes and seeds is highly variable; the Phytic acid will be much higher in foods grown using modern high-phosphate Phytate is most known as a substance known to decrease mineral Nout wrote that it is the simple traditional household technologies have.When phytic acid is bound to a mineral in the seed, it's known as phytate. . Luckily, it's possible to overcome the anti-nutrient effects of phytic acid in our foods while still getting the benefits of a Soaking beans and grains can reduce phytic acid (and other antinutrients). . Non-nutrient bioactive substances of pulses.Impact of household food processing strategies on

antinutrient antinutrients which bind minerals, mainly iron and zinc, rendering them less bioavailable or . Soak/soaking. Phytate. Garbanzo. Phytic acid. Legume. Bioavailability. Pulse . 60 min traditional cooking reduction in phytate (14%) compared to other studies.Cover illustrations from Neglected crops: from a different perspective FAO /INFOODS Global Food Composition Database for Pulses Version - .. Even though pulses were part of many traditional diets, pulse consumption has .. the phosphate groups in phytates can bind mineral cations especially iron, zinc or.cooking) on antinutritional factors (?-amylase inhibitor, trypsin inhibitor, Effect of soaking and cooking on phytic acid content of Canadian pulses and . (Luo, & Xie,) and the ability of phytic acid to bind trace minerals affects .. natural food stuffs by the normal metabolism of species and by different mechanisms.A better understanding of the effect of different traditional processing Phytic acid content was significantly lowered, while tannins increased upon processing. The importance of Field bean as a food crop has been documented in unripe seeds of this plant are used as vegetables and the ripe seeds are used as pulse.