

Benefits of indigenous pulses

Pulses are annual leguminous crops that are grown for their dried seeds. Pulses are regarded as one of the crops that play a major role in alleviating hunger for future global food security and environmental challenges it also contributes to balanced and healthy diets (FAO, 2016). The introduction of exotic pulses (beans, peas, lentils, chickpeas) resulted in Africans embracing more of the newly introduced pulses and moving away from their ancient foods, hence neglecting the indigenous pulses. The newly introduced pulses have replaced the indigenous pulses because peoples have associated the consumption of indigenous pulses with the inability to afford meat, resulting in the consumption and production of indigenous pulses to decline. The production of indigenous pulses in South Africa is currently on a small scale, in the rural areas where they are consumed. The indigenous pulses have been regarded as less economically important on the global market, yet they have nutritional and health benefits, have long shelf life, easily adapt to the local agro-ecological conditions and also have the potential to prevent malnutrition (FAO, 2016). The common indigenous pulses are cowpea, Bambara groundnuts, mung beans and marama bean.



Cowpea (*Vigna unguiculata*)



Bambara groundnut (*Vigna subterranean*)



Mung bean (*Vigna radiate*)



Marama bean (*Tylosema esculentum*)

Nutritional and health benefits of indigenous pulses

- Excellent source of fibre
- Part of slow-release carbohydrate foods
- Good source of potassium, Zinc, Iron
- Vitamins B, E and K
- Assist to lower high blood pressure
- Rich in bioactive compounds, such as phytochemical and antioxidants
- Help manage obesity and heart diseases
- Cholesterol free
- Have low glycemic index
- Help prevent type 2 diabetes
- High in protein

Nutritional composition of four indigenous pulses (per 100g)

Crop	Fat	Protein	Carbohydrates	Fibre	Iron	Zinc	Potassium
	g	g	g	g	mg	mg	mg
Cowpea (<i>Vigna unguiculata</i>)	1,6	22,5	51,5	5,3	1,7	3,7	634
Bambara groundnut (<i>Vigna subterranean</i>)	6,6	18,3	63,5	5,2	5,9	3,38	1240
Marama bean (<i>Tylosema esculentum</i>)	33,5	34,1	24,1	4,4	4,9	6,2	776
Mung bean (<i>Vigna radiate</i>)	1,1	26,4	59,3	4,3	6,8	2,68	1032

Advantages of producing indigenous pulses

- Have potential to eradicate hunger
- Reduces the use of synthetic fertilisers, because pulses can biologically fix about 350kg/ha of nitrogen per year, reducing greenhouse gas emission
- Crop residues from pulses can also be used to feed animals
- Fix nitrogen, which improves soil fertility
- Water-efficient and drought tolerant
- Production is inexpensive

References

Food and Agriculture Organization of the United Nations. 2016. Action plan for the International Year of Pulses: "Nutritious seeds for a sustainable future".

Food and Agriculture Organization of the United Nations. 2016. Pulses contribute to food security. [FoodSecurity_EN_PRINT.pdf] <http://www.fao.org/3/a-i5525e.pdf>

<http://www.fao.org/publications/en/>. Accessed on the 24 June 2016

[http://www.wisis.unam.na/thesis/museler 2005.pdf](http://www.wisis.unam.na/thesis/museler%202005.pdf). Accessed on the 13 July 2016

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