



## Finger Millet: A Super Food

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### Abstract

Finger millet is regarded as a remarkable dietary supplement due to its great nutritional value. It is largely composed of essential amino acids, dietary fibre, and minerals. Of all the grains, ragi has the highest amount of calcium as well as antioxidants and phytochemicals. For diabetic people, the finger millet grain is very helpful in regulating blood glucose levels. Additionally, people with cancer, heart disease, and other cognitive disorders might benefit from it.

**Keywords:** Dietary supplement, Ragi

### Introduction

Millets are small-seeded, extremely varied minor cereals belonging to the Poaceae family of grasses. Most of these annual cereals are suited to tropical and arid regions and are resistant to drought. The most significant tiny millet is finger millet. It is regarded as one of the most easily digested and least allergic grains. Being gluten-free, finger millet is a fantastic substitute for persons with celiac disease (Jayawardana et al. 2019). Finger millet has a high nutritional potential since it contains a considerable amount of calcium, polyphenols, and dietary fibre. Diabetic patients are advised to consume finger millet since it has a high percentage of low-glycemic carbohydrates. It contains an excellent ratio of micronutrients including calcium and vital amino acids. Finger millet has been found to be beneficial and important to human health; in particular, the seed coat of finger millet includes a high quantity of different phenolic compounds, most of which are derivatives of benzoic acid and have been shown to have antioxidant properties. Finger millet, with significant nutritional value, is becoming more and more popular as a trendy meal among those on diets who want to maintain a healthy lifestyle and avoid chronic and non-communicable ailments (Nakarani et al. 2021).

### Nutritional composition of finger millet

Finger millet grains have a high mineral content and proximate composition (Table 1), making them nutritious, although they are nevertheless mostly underutilised and highly ignored. Finger millet has 81.5% carbohydrates, 18% to 20% dietary fibre, 65% to 75% starch, 9.8% protein, 1% to 1.7% fat, 2.7% minerals, and 4.3% crude fiber. Finger millet grains are a good source of important minerals including phosphorus and calcium. When it comes to other millet species, the grains of ragi have the highest concentration of calcium. For developing youngsters, expectant mothers, the elderly, and those with obesity, diabetes, and malnutrition, calcium is crucial.

Finger millet grains are high in vitamins A and B complex and include both fat- and water-soluble vitamins. Finger millet grains are a good source of important amino acids, such

as lysine, isoleucine, leucine, phenylalanine, cysteine, and methionine, which can decrease cholesterol and lessen the risk of obesity and cancer in humans. Additionally, the important fatty acids palmitic and linolenic that are necessary for the growth of brain and neural tissue are also found in finger millet grains. Ragi grains provide dietary fibre as well, which adds to their great nutritional and physiological significance. Low fat content is crucial for delivering physiological and nutritional advantages including hypocholesterolaemic and hypoglycemia effects, together with increased levels of carbohydrates which are present in the form of non-starchy polysaccharides and dietary fibre.

Major antioxidants known for their ability to support the immune system of the body include polyphenols. Many different dietary items, like Finger millet grain, naturally contain polyphenols. The predominant polyphenols in ragi are tannins and phenolic acids, with trace levels of flavonoids being found. Notwithstanding its diverse nutritional composition, it has several anti-nutritional elements such polyphenols, phytate (0.48%), oxalate (0.27%), cyanide (0.17%), tannins (0.04-3.47%), and saponin (0.36%). The gastrointestinal system experiences chelation of dietary minerals due to the presence of these anti-nutrients, which reduces the bioavailability of the micronutrients for a balanced diet (Ramashia et al. 2019).

**Table 1:** Minerals and proximate composition of finger millet

Nutrients	Finger millet
<b>Proximate composition (g/100g)</b>	
Moisture	7.15-13.1
Protein	7.7
Fat	1.8
Minerals	2.7
Dietary Fiber	15-22
Carbohydrates	75-83.3
<b>Minerals (mg/100g)</b>	
Phosphorus	130-250
Potassium	430-490
Magnesium	78-201
Calcium	398
Sodium	49
Zinc	2.3
Iron	3.3-14.89
Manganese	17.61-48.43
Copper	0.47

(Source: Ramashia *et al.* 2019)

### Health benefits of finger millet

- Controlled blood sugar level
- Improved level of antioxidants in the body
- Aids in the removal of extra fat from the liver
- Lower cholesterol levels
- Impede the production of fat
- The risk of cardiovascular disease is reduced by lowering plasma triglycerides
- Beneficial for people with gluten sensitivity and those with celiac disease as it is gluten free
- Boosts the body's metabolism
- Aids in maintaining the balance in nitrogen levels in body

- Helps in keeping muscle and tissue recovery coordinated
- Treat malnutrition and anaemia
- Alleviate anxiety, migraines, depression, and sleeplessness thereby, aids in relaxation of body
- Advantageous for those with high hypertension, asthma, liver disease, and cardiac problems
- Reduces the risk of obesity
- Manage body weight
- Lessen constipation
- Lower the likelihood of cancer
- Anti-aging effect

### Conclusion

Finger millet is regarded as a vital, nutritious supplement. Enriched with various types of minerals, antioxidants, and fatty acids, it plays a crucial role in maintaining diet rich in nutrients that contribute to a long and healthy life.

### References

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