

# Beans: An Essential Food Group for Healthy and Sustainable Food-Based Dietary Guidelines

Beans and other legumes, including lentils, chickpeas, and peas, are nutrient-dense, versatile, and environmentally sustainable. They provide high-quality plant protein, essential micronutrients, and dietary fibre. Promotion of daily consumption of legumes in FBDGs is recommended to support nutrition, chronic disease prevention, and planetary health.

## Nutrition and Health

Legumes are rich in protein, fibre, iron, folate, magnesium, potassium, and zinc, while low in saturated fat. Legumes and pulses are an important component of healthy diets (WHO 2020). According to the World Cancer Research Fund International, their consumption is associated with a reduced risk of developing several non-communicable diseases and with maintaining a healthy body weight (WCRF 2025).

Substituting legumes for animal protein reduces saturated fat and cholesterol intake. Most plant-based meat alternatives are made from beans, offering a practical way to increase consumption.



**Antinutrients:** Soaking, sprouting, fermenting, cooking, and other processing methods reduce phytates, lectins, and other antinutrients while preserving nutrients (Klapp et al., 2025).

## Environmental Sustainability

Legumes require less land and water than most animal proteins, generate fewer greenhouse gas emissions, and fix nitrogen to improve soil fertility. Promoting legumes — including plant-based meat alternatives — supports sustainable, climate-smart food systems.

**Affordability and Storability:** Legumes can be an affordable, accessible, and storable source of protein that supports food security in resource-poor settings.



## Global Examples in FBDGs

Country (Guideline)	Recommendation	Serving Size	Notes
Denmark 2021	Daily legumes	100g cooked	“Eat less meat – choose legumes and fish. Low climate footprint.”
India 2024	Daily legumes	85g/day	“Legumes are nutrient-rich foods.”
Canada 2019	Legumes or tofu daily	Not specified	Listed first in protein group; includes nuts, seeds, tofu, fish, eggs, lean meat
Qatar 2015	Eat legumes daily	Not specified	Health benefits & cultural relevance highlighted
Brazil 2014	Daily beans	Not specified	Emphasises rice and beans (feijão) as a staple
Planetary Health Diet 2025	Key component	75g dry weight/day	Legumes as a major source of protein for health & sustainability

## Policy Implications

- **Inclusive protein group in FBDGs:** Include legumes explicitly in the protein food group to promote the message that legumes are a good source of protein.
- Recommend daily consumption for **health & environmental benefits**, while reducing meat intake.
- Provide **portion size, frequency, and visual guidance** for consistent messaging. Also, clarify if the guidance is for cooked or dry beans.
- Incorporate **bean-based plant proteins** to increase intake culturally and conveniently.
- Promote legumes through **campaigns, culinary guidance, and public procurement**.
- Support legumes to reduce chronic disease, improve nutrient adequacy, and mitigate environmental impact.



## References

1. [WHO. Healthy Diet Fact Sheet. WHO, 2020](#)
2. [World Cancer Research Fund International. Continuous Update Project: Diet, Nutrition, Physical Activity and Cancer. WCRF, 2025](#)
3. [Klapp AL et al, Recommendations to address the shortfalls of the EAT–Lancet planetary health diet from a plant-forward perspective. Lancet Planet Health. 2025](#)
4. [Denmark. National Dietary Guidelines. Alt om Kost, 2023](#)
5. [India. Dietary Guidelines for Indians. ICMR, 2025](#)
6. [Canada. Canada’s Food Guide. Health Canada, 2019](#)
7. [Qatar. National Dietary Guidelines. Ministry of Public Health, 2015](#)
8. [Brazil. Guia Alimentar para a População Brasileira. Ministry of Health, 2014](#)
9. [Rockström, J. et al. The EAT–Lancet Commission on healthy, sustainable, and just food systems. The Lancet, 2025](#)