

Jack Bean Tempeh

Indonesian Local Plant-Based Protein



Tempeh: Centuries of Tradition

Tempeh is Indonesia's centuries-old fermented bean heritage, yet currently relies on 2.3 million tons of imported soybeans (USD 1.53 billion), an industry related to deforestation and the displacement of small farmers and indigenous communities.

About the Program

GAIN Indonesia is partnering with **3 small businesses** and **350 farmers** in **11 districts**.



Producing **2 tons** of jack bean & mixed bean tempeh for **3.200** consumers*

Generating demand-based on consumer and market research.

*data by October 2025

Why Jack Bean Tempeh?

- GAIN Indonesia's study on four local beans identified jack beans as a **strong alternative** for soybean tempeh.

Dietary Shift to Local Legumes

- Jack bean: Climate-resilient, eco friendly local crop
- Reducing environment impacts: no deforestation, more biodiversity
- Increasing local production and supply chain resilience



Local and Nutritious, Planetary Diet Solution

- High-nutrition, plant-based protein
- Lower carbon prints, improving soil health
- Reduces soybean import

Jack Bean and Mixed Bean Tempeh
by GAIN Indonesia and Partners



Now Available at

AEON GrandLucky THE FOODHALL and Aceh Traditional Markets

Contact Us

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74 hectares with regenerative agriculture and intercropping technique
cultivated land

59%
of beneficiaries are
women



Agronomic and Environmental Benefits



Soil Fertility Improvement

Jack bean enriches soil nitrogen levels, reducing the need for synthetic fertilizers

Weed Suppression

Its dense canopy and allelopathic properties help suppress aggressive weeds like *Pennisetum spp*

Companion Planting

Used effectively under fruit trees and in agroforestry systems to support young trees and improve soil health

Green Manure

Adds organic matter and nutrients to the soil, enhancing microbial activity and soil structure

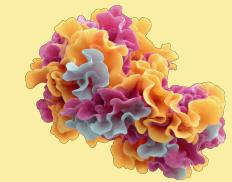


Nitrogen Fixation Capacity



- Fix **75-93 kg N/ha** when used as a cover crop or green manure
- In monoculture systems, especially when inoculated with effective strains of *Rhizobium* and mycorrhizae, biological nitrogen fixation (BNF) ranged from **59 to 72 kg N/ha**

Biochemical Role



Jackbean produces **cavanine**, a non-protein amino acid that may serve as a **nitrogen storage compound**, supporting nitrogen metabolism within the plant

Scan here to watch a video about our program



bitly