

Spicy Lima Bean Crisps

(Source: Home Economics Department, Indonesian Vegetable Research Institute)



Ingredients

8 shallots, finely ground
 5 cloves garlic, finely ground
 100 g chilli pepper, finely ground
 shrimp paste, finely ground
 1 tsp salt, finely ground
 1 tsp sugar
 ½ glass of water
 1 broth cube
 1 tamarind
 3 salam leaves (Indonesian bay leaves)
 3 slices galanga
 1 kg lima beans, shelled, split and fried until crispy
 cooking oil

Procedure

- Heat oil in a pan and fry ground ingredients until fragrant.
- Add sugar and stir in ½ glass of water, broth cube, tamarind, salam leaves, and galanga.
- Cook over low heat until thickened.
- Reduce heat and mix in beans.
- Remove from heat and serve.

Other ways of food preparation

- Fresh young, shelled lima beans are boiled and used in soups, stews and as side dishes.
- Young pods are steamed.
- Young leaves are steamed.
- Immature sprouts, leaves, and pods are used (Asia).
- Sprouts are cooked and used in dishes (China).
- Beans are fermented and made into tempeh kara (Japan).
- Shelled green beans are canned or frozen as vegetables (USA).
- Dry seeds are ground into powder and used as a thickener for soups, or mixed with cereal flours to make bread.
- Dry seeds are processed into bean flour to fortify bread and noodles with protein (Philippines).

Know Your IVs



Lima bean



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Introduction

Lima bean or *Phaseolus lunatus* is commonly grown for its edible seeds. It is one of the more important vegetable legumes in the United States, Madagascar, and Peru, where it is produced on a commercial scale.

However, it is a marginalized and underutilized crop in the tropics, where it is usually grown in homegardens or as an intercrop with cereals, root and tuber crops.

Because of its hardiness and tolerance to drought, lima bean offers great potential for production in adverse conditions, where other vegetable legumes are unable to thrive.

Local Name

English — *lima bean, Madagascar bean, butter bean, Sieva bean*

Bangladesh — *rukuri*

Indonesia — *Java bean, kratok, keratok*

Malaysia — *kacang China, kacang Jawa, kekara kratok*

Philippines — *patani, zabache, sibatse simaron*

Thailand — *thua rachamat*

Vietnam — *dâu ngu*

Biodiversity

Lima bean is of Neotropical origin, with two centers of domestication: Central America (Mexico, Guatemala) for the small-seeded types and South America (Peru) for the large-seeded types. It spread throughout America, and was introduced by the Spaniards across the Pacific to the Philippines, Asia, and Mauritius. Lima bean spread from Brazil to Africa through the slave trade. At present, it is grown throughout the tropics.

Lima bean is a perennial herb grown as an annual. Leaves have three leaflets.



- Growth habit — bushy or climbing. The bushy type can reach up to 0.9 m and the climbing type; from 2-4 m.
- Flowers — small, hood-shaped, with white, yellowish, pale green or violet petals.
- Pods — about 5-12 cm, curved and sometimes shaped like a hook on top.
- Pods contain 2-4 seeds.
- Seeds shape — kidney-shaped, rhomboid, or round.
- Seed color — uniform or speckled or mottled, ranging from white, cream, green, yellow, brown, red, black and purple.
- 100 seed weight — 45 to 200 g.

Cultivation

- Lima beans are grown from sea level to 2400 m in the tropics.
- The plants prefer well-drained, well-aerated, neutral (pH 6-7) soils.
- Their viny growth require support (that is, on other crops, trees, poles, trellises, wires, fences, or walls).
- Suggested spacing
Bushy type: 10-20 x 50-100 cm
Pole type: 40-50 x 50-100 cm
- For green shelled beans harvest when skins of lima beans inside the pods are still green not white.

Nutritional value

The green beans contain 1.3 g protein, green seeds; 8.4 g, and green leaves; 0.6 g per 100 g edible portion. Seeds contain cyanogenic glucoside linamarin which may cause poisoning, when eaten raw.

Cooking destroys the harmful compound. Table shows nutritional value per 100 g edible portion of dry seeds.

Nutrition Value (per 100 g edible portion of dry seeds)	
Water	13.2 g
Protein	14.4-26.4 g
Fat	1.5 g
Carbohydrates	58.0 g
Fiber	3.7 g
Ash	3.4 g
Energy value	1450 kJ/100g

Utilization

Aside from its use as food, lima bean is also utilized in various ways.

- Seeds and leaves are said to have astringent properties,
- Used as a dietary food for those with fever.
- Vines are used as cattle feed (Malaysia and Indonesia).
- Young leaves are used to prepare hay (Madagascar).
- It is used as a cover crop or green manure (Malaysia).
- Immature dried seeds can be made into flour.

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