



FOREIGN COUNTRIES' EXPERIENCES IN CULTIVATING LEGUMINOUS CROPS

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Annotation: An important factor determining the market dynamics of grains and legumes is the state of the global market, particularly the changes in supply and demand for key legumes and their processed products. In recent years, interest in cultivating these crops has grown in many countries worldwide.

Numerous types of legumes are cultivated globally. Soybeans rank first among legumes in terms of economic importance and cultivation area. Peanuts, various beans, chickpeas, mung beans, lentils, and lupins are also well-known, though some of these crops hold only local significance.

Keywords: Grains and legumes, soups, porridges, snacks, mung beans, wheat, protein.

In various regions of the world, the cultivation of legumes depends not only on soil and climate requirements but also on their importance as a source of protein. This is particularly relevant in areas where the population consumes little or no meat due to ethnic, religious, or economic reasons. Crops significant in temperate regions often play a minor role on a global scale. Although EU countries are among the largest importers of legumes, they use these crops primarily as animal feed rather than for human consumption. For instance, in the 15 member states of the European Union, the per capita consumption of legumes for direct human nutrition averaged 2.5 kg. In Sweden, it was only 0.7 kg, in Denmark - 0.8 kg, in Germany and Finland - 1.0 kg, in Spain - 5.0 kg, in Greece - 6.2 kg, and in Portugal - 5.0 kg.

Analysis and Results: Globally, legume crops are cultivated on approximately 135 million hectares. Among legumes, mung beans rank second in terms of cultivation area worldwide (about 25 million hectares), following soybeans (approximately 74 million hectares globally) and preceding chickpeas (around 10 million hectares).

In Central Asia and the South Caucasus, mung beans are widely used in the food industry. Mung beans are believed to have originated in India and are now grown in many countries, including Uzbekistan, Turkmenistan, Azerbaijan, Georgia, China, Korea, Japan, India, Pakistan, Egypt, Ethiopia, and others.



The mung bean market is divided into four main segments based on its various uses: dry beans (popular in South Asia and Kenya), sprouts (preferred in East and Southeast Asia), clear noodles/starch (in high demand in East and Southeast Asia), and paste (popular in East Asia).

In 2021, the global mung bean market generated approximately \$3.8 billion in revenue, with an expected annual growth rate of over 3.31%, reaching about \$4.8 billion by 2028. The total growth potential of the global mung bean market between 2022 and 2028 is estimated at approximately \$30.25 billion.

Mung beans are used differently in various regions, often requiring specific varieties. Globally, mung beans are mostly consumed as dry beans used in cooking. In South Asia (India, Pakistan, Bangladesh, and Nepal), mung beans are typically consumed as soups made from dried legumes. In Kenya, they are primarily used for savory pastries. In other countries, mung beans are prepared in various ways, such as cooked with rice, made into sweet soups (e.g., in China), or grilled as snacks. The sprouts, particularly widespread in East and Southeast Asia, are highly suitable for these uses.

Countries Contributing to Mung Bean Imports (96% total): Kenya (30%), followed by Mozambique (24%), the Republic of Tanzania (18%), Brazil (11%), the UAE (4%), Australia (3%), South Africa (2%), Uganda (2%), and Venezuela (2%).

Regarding mung bean export destinations, the primary countries are the USA (24%), Nepal (18%), the UK (18%), Canada (10%), Bangladesh (6%), Qatar (4%), and the Netherlands (4%), along with Australia (2%), the UAE (2%), and Malaysia (2%).

The average global yield of mung beans is relatively low, at 0.73 tons/hectare, indicating significant potential for the development of high-yield varieties.

Dried mung beans belonging to the species *Vigna radiata* (L.) R. Wilczek are traded under Harmonized System (HS) code 071331, whether cleaned, split, or with the husk intact. This HS code also applies to urad beans (*Vigna mungo* (L.) Hepper). Mung beans and urad beans can be distinguished by color: mung beans are green on the outside and yellow inside, while urad beans are black on the outside and white inside.

Mung beans are a native Indian crop and are also known as green gram or moong. In addition to being a vital food and economic crop in the rice production systems of South and Southeast Asia, mung beans are cultivated in other regions worldwide.



The average yield of mung beans is 0.72 tons/hectare, with a global cultivation area of approximately 7.3 million hectares. Of the 5.3 million tons produced globally, 30% comes from India and Myanmar. Other major producers include China, Indonesia, Thailand, Kenya, and Tanzania (Nair et al.).

In 2022, mung bean cultivation in India covered 5.5 million hectares, with a yield of 0.57 tons/hectare, producing a total of 3.2 million tons. Mung bean cultivation accounts for 10% of pulse production and 16% of the cultivated area.

Leading states in mung bean cultivation by area and production are Rajasthan (46% and 45%, respectively), Madhya Pradesh (9% and 14%), Maharashtra (9% and 8%), Karnataka (9% and 6%), Odisha (5% and 4%), Bihar (4% and 5%), Tamil Nadu (4% and 3%), Gujarat (3% and 4%), Andhra Pradesh (3% for both), and Telangana.

In the Kharif season, mung bean production accounts for 2% of the total production and cultivation area of pulses.

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