

# PEANUT

# POST

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VOLUME

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CONSUMPTION

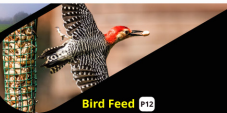
# CHINA VS INDIA



Global Markets P4



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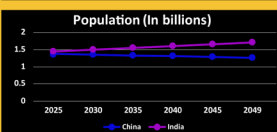
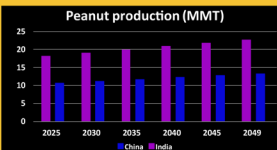
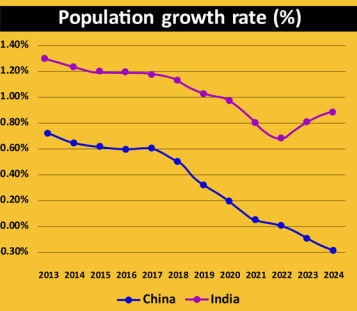
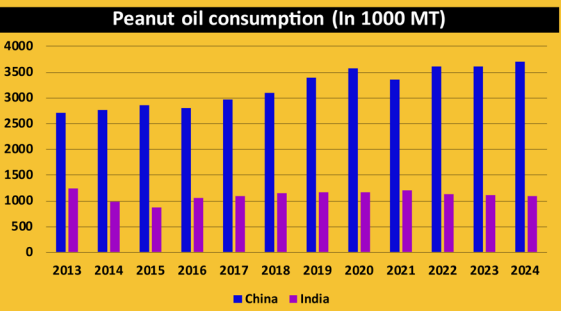
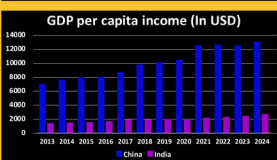
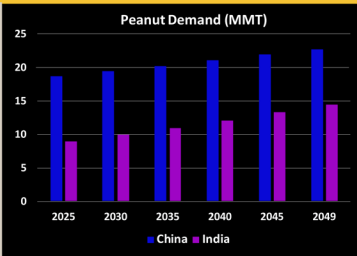
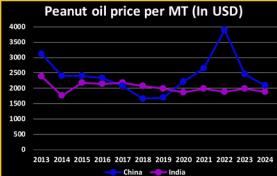
# MARKET WIZARD

As of August 2024, India and China have populations of 1.45 billion and 1.41 billion, respectively. The past population growth rate was 1.02% for India and 0.22% for China, while the compound annual growth rate (CAGR) of peanut production over the past 10 years was 0.92% for India and 0.93% for China. Per capita consumption of peanuts stands at 6 kg/year in India and 13 kg/year in China.

In the next 25 years, how might this situation change the way the world consumes peanuts?



How will these two major producers and consumers shell out" to feed the world with peanuts in the future?



## Consumption of peanut oil

Looking at the peanut oil consumption patterns in these two nations over the past 10 years reveals a compound annual growth rate (CAGR) of -1.16% for India and 2.9% for China. The primary driver for this rise in consumption is population growth. Additionally, per capita income and the average age of the population have also played significant roles in driving the demand for healthier cooking oil options. This increase in consumption has led to a corresponding rise in prices in both countries.

## Projections

Population is set to decline by 0.29% in China and grow by 0.54% in India annually for the next 25 years. Based on forecasting methodologies, our estimate, as shown in the graph, clearly highlights a significant gap between demand and supply within these countries, responding rise in prices in both countries.

## Takeaways

- A. In 25 years, China is expected to have a surplus in production with a demand-supply gap of 0.07 MMT, while India will face a shortfall, with demand exceeding production by 1 MMT.
- B. By improving production acreage by 25% for China and 36% for India, this demand can be mitigated.
- C. By enhancing yield by 20% for China and 88% for India, the demand can be addressed without significantly increasing the acreage.
- D. If B and C are not feasible or only partially achieved, the balance will need to be met through importation, which is the most likely outcome.

# Global Markets

## ARGENTINA



The peanut planted area for the 2024 crop has expanded to 430,000 hectares, marking a 25% increase compared to the 2023 crop. With an average yield of 4 tons of in-shell peanuts per hectare, this results in a total production of 1.72 million tons of in-shell peanuts. Current market offers remain strong, with prices at \$1,700 FOB for 38/42 raw kernels and \$1,850 for blanched peanuts. Crushing grades are available between \$1,100 and \$1,300. As much of the main stock has already been sold, most deals are now focusing on by-products and value-added products like peanut oil.

## BRAZIL



Seed production and commercialization for the next crop season are underway, with an expected area increase of 10-20%, though conservative estimates stick to 10%. This growth is driven by low soybean prices. While São Paulo is expected to maintain its current planting areas, states like Paraná, Minas Gerais, Mato Grosso, Mato Grosso do Sul, and Goiás are likely to see the increase.

July exports were down, with peanut exports at 15.5 thousand MT and peanut oil at 4.4 thousand MT. This marks a decline from the previous year when peanut exports ranged between 25.5 and 31.6 thousand MT. The total export volume for 2024 reached 119K MT, significantly lower than the 161.7K MT during the same period in 2023. The decline is most notable in Algeria, down by 2.4K MT, contributing to 70% of the overall decrease. Russia saw a slight increase, while EU exports remained steady. Peanut oil exports fell by 1K MT in July to 4.4K MT, a 31% drop from July 2023, bringing the 2024 total to 31.5K MT, down from 60K MT in 2023, largely due to reduced demand from China.

## USA

The USDA's August Crop Production Report forecasts 2024/25 peanut production at 6.8 billion pounds (3,392,250 short tons), a 15 per cent increase from the previous year due to higher acreage and yields. The U.S. is expected to harvest 1.7 million acres of peanuts, nearly 11 per cent more than in 2023/24, with increases across all states. The national average yield is estimated at 3,890 pounds per acre, 4 per cent higher than last year's yield.



## PEANUT SPOTLIGHT

### CHINA

The peanut market is facing a downturn due to an oversupply of old crop stocks and weakening prices. With final consumption struggling and procurement cautious, demand for new crop peanuts is low, pushing prices down further. As new crop moisture improves, stockists are expected to increase selling, which may further depress prices. The upcoming September holiday has driven some demand, but overall market conditions remain weak, with economic depression and sluggish consumption providing limited support.

This year's increased planting area, along with annual

disasters affecting cultivation, means that while disaster impacts should not be exaggerated,

the quality of peanuts is subpar due to adverse weather. Consequently, there may be a higher proportion of oil-type peanuts and a lower proportion of food-type peanuts.

Current FOB prices are: Blanched 25/29 at USD 1,420 per metric ton, 29/33 at USD 1,420, 41/51 at USD 1,400, & 51/61 at USD 1,380. Sudanese peanuts of good quality are priced at RMB 8,300 per metric ton at Huangdao Port, and first-grade peanut oil averages RMB

14,500 per metric ton. The local USD to RMB exchange rate is 7.1 and declining.



In Gujarat, recent rainfall has been beneficial, though a red alert is issued in some growing regions. Peanuts are growing well, with arrivals already starting in Halvad/Rajkot; more local varieties are expected within 15 days if the weather stays favourable. Premium quality crops are also performing excellent. Summer crops are nearly complete, featuring a mix of Bengal and Manipuri qualities, while premium qualities are sold out. About 15% of the winter crop 2023 remains in carry-over stock.

In Rajasthan, crops are thriving, with a potential bumper harvest amid favourable rainfall. Farmers still hold

In Tamil Nadu, only previously harvested stock is available until next month, with new crops expected within two months. Karnataka's outlook is average, with harvests starting next month. Andhra Pradesh and Telangana report daily arrivals of 4,000 bags, with dry weather stabilising oil rates below 150. Overall market in India is subdued and weak. The festival demand will kick off in the first week of September and remain strong until mid-January.

## AFRICA



**Tanzania** The crop is nearing its final stages, with quality slightly below standard. The estimated remaining quantity is under 4,000 MT, and current prices are around \$950 FOB.

**Sudan** The crop is now nearly a year old, with current prices ranging from \$1,000 to \$1,100. Heavy rains are currently impacting Sudan, and the new crop is anticipated to arrive by the end of November.

**South Africa** The crop is harvested and processed, with more 70/80s and 80/100s; the market is slow, contracts delivered, and imports cover the shortfall.

## INDIA



around 20% of 2023 winter's crop.

# DEMAND & SUPPLY

## China

Southern new crop peanuts remain high at RMB 10,200/mt but are declining due to low downstream demand. Northern crop arrivals are expected to increase in September.

## Argentina

With a 25% increase in planted area compared to the 2023 crop, estimated production is 1.72 million tons of in-shell peanuts.

## Brazil

Plantings are expected in September-October, with plans to increase the area by about 10%.

## India

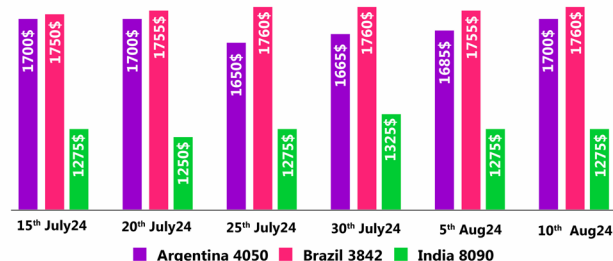
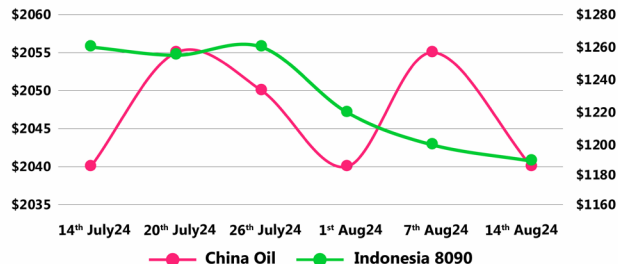
In Gujarat, summer crops are nearly complete, and in Rajasthan, a bumper harvest is expected, with 20% of winter 2023 crops still held by farmers.

## Indonesia

This September-November harvest is expected from 650,000 hectares, which were already harvested in May.



## Peanut Price Trend



## ECONOMICAL IMPACT

### Argentina

Peanut production costs will decrease as import taxes drop from 17.5% to 7.5% in 2024 and to 0% in 2025.

### Brazil

Soybean prices remain low, boosting peanut acreage by 10-20%, but exports slump amid weak demand.

### India

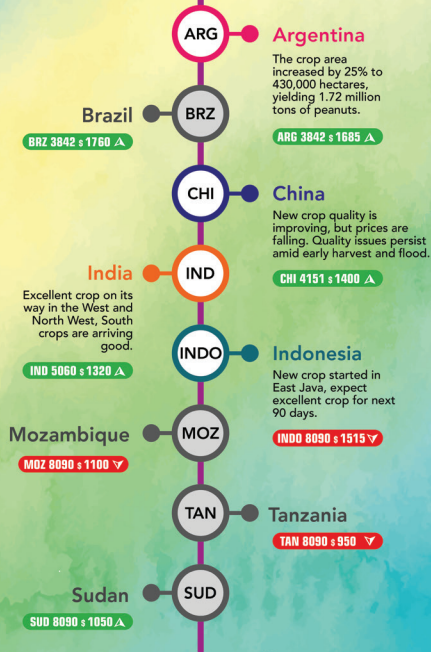
Festive demand to begin in September, government plan to rise the import duties of edible oils.

### Indonesia

Cash and quality crisis dominate local deals. Plenty of mouldy peanuts came in via imports pushing the market into bargain hunting.



# Current Crops



## PEANUT VOICE

“I’m a Nutrition Scientist and Director of Research & Nutrition at The Peanut Institute, specializing in plant-based nutrition to prevent and treat chronic diseases.”

**Ms. Samara Sterling**  
PhD, RD  
The Peanut Institute

**What are your thoughts on the role of peanuts in the growing nutraceutical sector, and could the fact that peanuts are an incomplete protein pose a challenge in developing peanut-based nutraceuticals?**

Peanuts are pivotal in the nutraceutical sector, offering bioactive compounds like resveratrol and p-coumaric acid that reduce disease risk and promote health. Resveratrol has anti-inflammatory and anti-cancer effects, while p-coumaric acid supports cognition and mental health. Arginine enhances vascular health, potentially lowering blood pressure. Ongoing research may see peanuts becoming a common recommendation in medical settings.

## Sustainable Energy Storage from Peanut Shells Transformed into High-Efficiency Graphene

Peanut shells, typically considered agricultural waste, are being repurposed to produce high-efficiency graphene, known for its exceptional electrical and mechanical properties. This innovative method involves carbonizing the shells to create a carbon-rich material, which is then activated to form a porous structure ideal for chemical reactions. Following this, the activated carbon undergoes mechanical exfoliation using sound waves to produce graphene with a honeycomb lattice structure. The resulting peanut shell-derived graphene (PS-FLG) exhibits six times higher energy density and 3.75 times higher power density compared to graphene from other waste sources, such as coconut shells. This sustainable process not only recycles agricultural by-products but also significantly enhances supercapacitor performance, marking a significant advancement in energy storage technologies.



**Shelled Facts**

# Managing Leaf Miner Pests in Groundnuts

Leaf miners, scientifically known as *Aproaeroma modicella*\* (Gelechiidae: Lepidoptera), are pests that impact groundnut, soybean, and red gram crops across India, Pakistan, Sri Lanka, Burma, and South Africa.

## SUSTAINABILITY

### Damage Symptoms

Leaf miners favour rainfed groundnut crops, particularly bunch varieties. The newly hatched green caterpillars burrow into leaflets, feeding on green tissues and causing brown, dried-up patches. As they grow, the caterpillars fold the leaves and feed from within, giving the plants a burnt appearance. Infested plants often have visible caterpillars or pupae inside the folded leaves.

### Bionomics

Adult moths are dark brown with a white spot on each forewing, and the small hind wings have fringes of minute hairs. Females lay 150-200 shiny, transparent eggs on the undersides of leaves, which hatch in 2-3 days. The larvae are pale brown and grow to 6-8 mm. They pupate in white silken cocoons within the webbed leaflets, with the pupal stage lasting 5-7 days. The complete life cycle takes about 20-25 days, and severe damage is most common from September to November in rainfed crops and from March to April in irrigated crops.

### Economic Threshold Levels (ETL)

- ▲ Seedling Stage (up to 30 days after emergence): 1 larva per synchronised row or 5 or more active larvae per plant.
- ▲ Mid-Season (50 days after emergence): 10 larvae per plant.
- ▲ Late Season (75 days after emergence or later): 15 larvae per plant.

### Control Measures

Grow resistant cultivars like ICGV 86031 and ICGS 156. Early and synchronised sowing during rainy and rabi seasons is advisable. Intercropping groundnut with pearl millet (4:1 ratio) can reduce pest impact. Use light traps between 8 and 11 PM, mulch soil with straw within 10 days of germination, and maintain weed-free fields. For pest control, apply endosulfan 4D or carbaryl 10 D at 25 kg/ha, or spray with insecticides like endosulfan 35 EC or dichlorovos 76 SC.

### Key Points:

- ▲ Regular monitoring and effective pest management are crucial.
- ▲ Use resistant cultivars and adopt proper field management techniques.





# BIRD FEED

## The Royal Spanish Debate: Spanish or Runner Peanuts Which is Better for Bird Feed?

Selecting the right peanut variety for bird feed is essential to meet the specific nutritional needs of different bird species. Peanuts are high-energy foods that offer vital nutrients like protein, fat, and minerals. Among the different types of peanuts, Spanish and Runner peanuts are the most commonly used. This article compares these varieties based on their nutrient content, mineral composition, shelf life, and versatility to identify the most suitable option for bird feed.

### MINERAL COMPARISON

#### POTASSIUM (K)

Spanish peanuts contain approximately 744 mg of potassium per 100 grams, which is vital for maintaining electrolyte balance in birds. Runner peanuts have slightly less potassium, with variations depending on growing conditions.

#### CALCIUM (Ca)

Spanish peanuts contain about 106 mg of calcium per 100 grams, which is important for bone health and eggshell formation in birds, while Runner peanuts provide 71 mg per 100 grams.

#### IRON (Fe)

Spanish peanuts have a slightly higher iron content approximately 3.91mg/100g compared to Runner peanuts 1.29mg/100g, making them a marginally better source of iron for bird feed, which is essential for oxygen transport and overall health in birds.

#### SHELF LIFE AND STORAGE

Spanish peanuts had slightly higher saturates ranging from (18.7 - 20.6%) and lower unsaturates (74.7 - 76.6%) thus, it has longer shelf life and less susceptible to the development of rancidity than runner and Virginia types.

#### VERSATILITY IN BIRD FEED

Spanish peanuts, with their smaller size and higher fat content, are particularly suitable for a wide variety of bird species including smaller bird species and for creating high-energy bird feed mixes.

In contrast, Runner peanuts are larger in size and are better suited for larger bird species.

### NUTRITIONAL COMPARISON

#### PROTEIN CONTENT

Spanish peanuts contain approximately 26.2 grams of protein per 100 grams, making them particularly beneficial for birds, especially during breeding seasons when protein needs are higher. In comparison, Runner peanuts have a slightly lower protein content at around 25 grams per 100 grams, but they still provide a substantial protein source.

#### FAT CONTENT

Runner peanuts are ahead in fat composition, containing approximately 9.35% less saturated fatty acids and 14.58% more monounsaturated fatty acids than Spanish peanuts, which is essential for birds as it supports their energy needs and overall health.

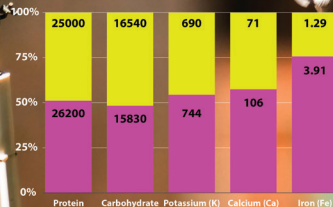
#### CARBOHYDRATE CONTENT

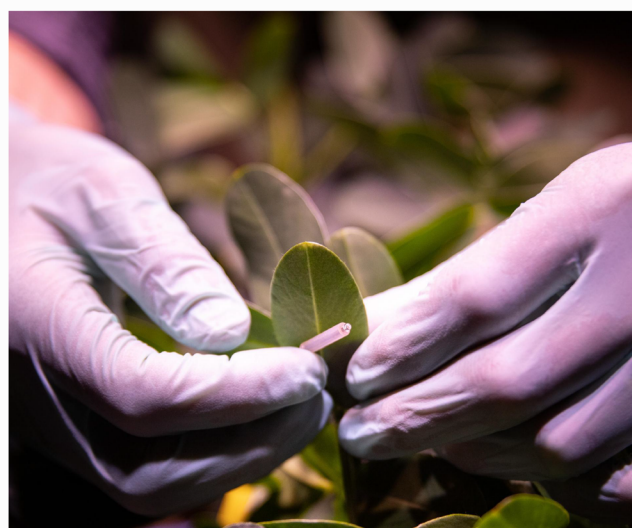
Runner peanuts are ahead with slightly more carbohydrates (16.54 g) compared to Spanish peanuts (15.83 g), providing a higher energy boost for birds.

Mineral Comparison

Values in mg per 100g of peanuts.

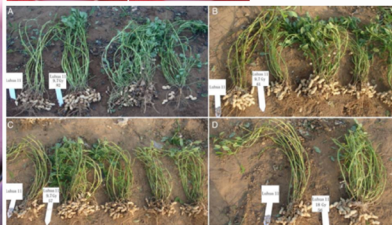
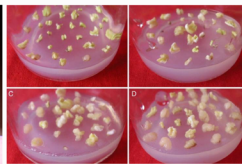
\* Certain values may differ slightly depending on growing conditions.





# PEANUT SCIENCE MUTANTS from COMIC BOOKS TO CROP FIELDS

**Fast Neutron Irradiation & Tissue Culture  
Revolutionize Peanut Breeding**



## Innovative Solutions

Fast neutron irradiation is a type of radiation that can cause changes in the DNA of plants, leading to mutations that might result in desirable traits. When combined with *in vitro* culture—a method of growing plant cells in a controlled environment—this technique can significantly increase the genetic diversity of peanut plants. This approach not only helps in creating new traits but also ensures that these traits can be stably inherited by future generations of plants.

## Research Findings

In a recent study, researchers explored the effects of fast neutron irradiation on peanut plants. They began by exposing peanut seeds to this radiation and then growing the resulting plant cells in a laboratory setting using *in vitro* culture techniques. The goal was to see how these conditions affected the plants' ability to regenerate and develop new traits.



## In the quest to develop better PEANUT varieties,

scientists are turning to innovative techniques to help address modern agriculture's challenges. One such promising method is fast neutron irradiation combined with *in vitro* culture, which has shown great potential in creating new peanut mutants that could lead to higher yields and greater stress tolerance.

## Conclusion

While the study showed that many of the new peanut mutants had significant variations in their growth and pod traits, further research is needed to understand how these changes might affect other important characteristics like seed quality and resistance to environmental stresses. However, the results are promising and suggest that fast neutron irradiation combined with *in vitro* culture could be a powerful tool in developing new elite peanut varieties that can meet the challenges of modern agriculture.

## The Challenge of Traditional Breeding

Peanuts are a vital crop for oil production. However, traditional breeding methods have struggled to produce varieties that can withstand the growing challenges of salinization, drought, and other environmental stresses. The genetic diversity within peanuts is limited, making it difficult to find naturally occurring traits that can be used to breed stress-resistant plants. This is where fast neutron irradiation comes into play.



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