

# PEANUT

Sri Lanka and Thailand joined the Aflatoxin party

### **Aflatoxin Party**

For a long time, aflatoxin standards and thresholds have been more of a formality than a fully enforced protocol in many Southeast Asian importing countries. In the past year, the EU has issued 20 rapid alerts regarding aflatoxin contamination in peafrom India. India's share of aflatoxin-regu-

lated markets, such Iapan the 0.3% and spectively.

land

increase

Sri Lanka and Thaihave started enforcing aflatoxin testing protocols similar to Malaysia and Japan, priori-Recently.

As fellow shippers, we see the there has been a sigin peanut rejections from

However, major markets like Indonesia and India lag behind. For example, rapid alerts from India's FSSAI or inspections at Indonesian ports are almost non-existent. This absence likely reflects weak enforcement rather than acceptable aflatoxin levels.

The Indian peanut industry, both in agriculture and processing, has yet to fully address the challenge of aflatoxin contamination by adopting comprehensive packages of practices (PoPs) or advanced processing technologies.

### Aflatoxin Exporters

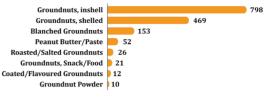
With 6 million hectares in peanut acreage, 9 producing states, 10.000+ processing units and more than 600+ peanut shippers in the country. the pressing questions remain: How many truly understand the complexities of peanut quality? How many are aware of aflatoxin and its implications? More importantly, what tools, technologies, or measures do they have in place to detect, evaluate, and reduce aflatoxin contamination effectively?

Indian peanut shippers have much to improve on aflatoxin management, with reliance on superficial documentation rather than sustainable prac-

Advanced technologies like spectrometric processing, biometric sorting, and high-precision equipment are rare in Indian peanut processing, with few factories capable of in-house aflatoxin testing.

challenges. With profitability often prioritized, aflatoxin management remains superficial. Addressing these gaps is vital for sustainability and global competitiveness.

### Global Distribution of RASFF notifications from EU for Groundnuts and Products reported from 2011 to 2021.



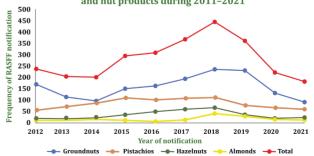
### **Mycotoxin Notifications by RASFF for Peanuts and its Products** Exported to the EU

China	ARG	Egypt	India	USA
60	20	8	40	6
47	5	9	8	8
36	3	10	9	6
92	8	10	7	4
43	17	31	5	25
77	22	24	19	12
38	62	35	18	17
32	67	32	11	53
12	35	5	25	28
4	15	25	11	16
	60 47 36 92 43 77 38 32	60 20 47 5 36 3 92 8 43 17 77 22 38 62 32 67 12 35	60 20 8 47 5 9 36 3 10 92 8 10 43 17 31 77 22 24 38 62 35 32 67 32 12 35 5	60 20 8 40 47 5 9 8 36 3 10 9 92 8 10 7 43 17 31 5 77 22 24 19 38 62 35 18 32 67 32 11 12 35 5 25

Aflatoxin levels in major importing countries

Major Importers	ALFA Limits (in PPB)		
	B1	B1+B2+G1+G2	
EU	2	4	
Russia	5	5	
Ukraine	2	4	
Indonesia	15	20	
Philippines	10	15	
Vietnam	8	15	
Thailand	20	20	
Malaysia	10	15	
Singapore	5	5	
China	20	20	
Mexico	20	20	

Number of RASFF notifications from EU for mycotoxins per year in nuts and nut products during 2011-2021



Peanut cultivars in the central central-southern regions of Córdoba are developing well, supported by favourable rainfall and strong planting conditions. While slight delays in vegetative growth are noted in some areas, with short internodes on the central axis, the number of nodes aligns with the cultivar cycle. These delays are likely due to lower-than-usual minimum temperatures and the ongoing stress caused by persistent winds. Overall, the outlook remains positive.



The peanut crop is now fully planted, with an estimated 20% increase in acreage. While some anticipate a higher rise, the average aligns with 20%. So far, crop development is progressing well, and there are no significant weather-related issues. However, January typically poses a higher risk of rain shortages. Encouragingly, forecasts predict consistent rainfall across all peanut-growing regions over the next two weeks, providing favourable conditions for continued crop growth and development.



# Global Markets

The latest USDA crop report presents an optimistic outlook for the peanut industry, with estimated production reaching 3.2 million farmer stock short tons—an 11% increase compared to last year. This strong performance highlights a successful production season driven by favourable conditions and expanded cultivation efforts. Total acreage has risen by 12%, reflecting growing confidence in peanut farming as a profitable option for many farmers. Despite the increase in production, the average yield is projected at 3,700 pounds per acre, a slight decline of 50 pounds compared to 2023. This variance in yield highlights the influence of local conditions on production outcomes, as different peanut-growing regions report mixed results. While some areas benefited from ideal weather others faced challenges such as rain shortages or uneven soil conditions. Looking ahead, new crop planting is slowly approaching, and peanuts remain a compelling alternative for farmers seeking sustainable and profitable crops. The market for peanuts continues to perform

distorting prices down, further complicating remains the market.

Gujarat: Stock South India: In Karnataka, levels in Guiarat arrivals in regions like are varied, with around Hiriyur, Sira, and Chitradurga 70-80% remaining in Junagadh, are declining, with weekly Keshod, and Porbandar, and arrivals between 200 to just 10-15% in Kutch (Java). 5.000. Prices in Karur and Other regions like Pathawada. Dindigul range from ₹70-80 Rajasthan, MP, and UP show to ₹104, driven by sowing declining stock levels. Local demand. Andhra Pradesh is demand is strong, but export seeing steady arrivals in activity is low. Government areas like Jadcherla, with procurement is significant, prices stable at ₹99-100 for and ₹70-80 grades. Tamil Nadu reducing market activity, has no local arrivals and is Around 75% of factories are relying on Guiarat supplies South East Asian market closed or operating at due to delays in the demand seen for 8090 tj at reduced capacity due to low agricultural season, with 800-820\$/ton, while \$1000demand and government peak activities expected in 950 are on the way to the purchases. Oilseed prices are March and April. The market active inter-state cargo flows.



price sensitive markets. This with market is historically one of the weakest on record.

Sudan Due to the civil war, the export situation is uncertain. The farm and its goods are located near the war zone. Initial reports

indicate that the harvest is good.

**Senegal** Peanut exports remain banned to prioritize domestic buyers, but the export of peanut oil is allowed, with a total limit of 100,000 tons.

strongly, with consistent demand for their

versatile applications in food and oil

production. Meanwhile, corn prices have risen

slightly, now hovering in the mid-450s, but peanuts maintain their appeal as a high-value crop with significant growth potential in the current agricultural landscape.

The peanut market remains sluggish, with stockers more active in selling, but downstream demand weak. Traders are hesitant to stock more goods, and most prices are stable with minor adjustments in some areas. Farmers and traders resist selling at low prices, causing a dilemma in purchasing and selling. It's difficult to buy low and sell high, and the consumption environment is poor, leading to a cautious mood among traders. Oil factories continue steady purchases, maintaining appropriate arrivals based on their needs, but some have released negative news, which has reduced their enthusiasm for buying and may impact traders' sentiment.

Peanut seed demand is significantly lower than last year, and the demand for Chinese New Year is average. Moisture-stable cargo prices are steady, while high-moisture cargo prices are weaker, fluctuating by 100-200 RMB/MT. Farmer-side stock sales are under 30% this year, compared to 50-60% sold last year due to farmers' reluctance to sell at low prices.

Sudanese peanuts at Huangdao Port are priced at 7,600 RMB/MT. The average price for first-grade peanut oil is 14,500 RMB/MT. Big oil factories are buying the new crop at 7,200-7,800 RMB/MT. Blanched peanut prices reduced by \$50-75/ton, Ramadan demand is nearby, but the price uptick is not to be seen.

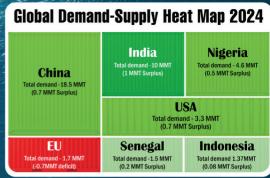
### **GLOBAL PEANUT SUPPLY** IN 2024 India **11 MMT** China SOUTH AMERICA 18.7% 19.2 MMT OTHER COUNTRIES Argentin: 1.66 MM Indonesia **Other** 1.45 MMT 0 Mvanmar Brazi 1.75 MMT **Countries** 8.68 MMT Nigeria 14.8% **USA** 5.1 MMT 8.7% **4 MMT** Guinea Tanzania **1 MMT** Senegal Sudan 1.7 MMT 1 MMT

ATRICA.

06

**WORLD TOTAL** 

58.64 MMT



### **Peanut Price Trend Nov- Dec 24**



07

### Current **Argentina** ARG 100% sowing with record breaks ARG 4050 s1550 🗸 Brazil BRZ 90% sowing completed with good rains China BRZ 3842 s1550 🔻 CHI CHI 4151 s1270 🔻 India IND Harvest set to being in the South regions with the Javas IND 5060J s950 🗸 INDO Indonesia INDO 8090 s1375 ▼ Sudan SUD Arrivals begins with complex supply chain SUD 8090 s750 🔻 SEN Senegal Good arrivals, continuous

U.S.A

USA \$NA

**QEANUT VOICE** 

66 I have 15 years of experience in the peanut industry, specialising in trading. Currently, I serve as the manager of the company



Ms.Zhang LinLin TianJin HongLiangDao Trading

### What could be the future of consuming peanut?

Peanuts stand out among oilseeds like soybeans or rapeseeds. In China, peanut consumption remains steady, with peanut oil being a household staple. Unlike soybean, rapeseed, or palm oils that compete based on price, peanut oil enjoys a loyal consumer base. Peanuts also dominate snacks, like the popular "peanut drunkard," highlighting their irreplaceable role. This ensures peanut demand remains stable, even as market dynamics shift, making them a reliable choice for the future.



### Reducing Peanut Allergy Risk: The Benefits of Early Introduction

Peanut allergy affects about 2% of the population, often beginning in childhood and persisting for life. Early introduction of peanut products has proven to be a highly effective strategy to reduce this risk. Studies show that introducing peanuts to infants reduced the risk of developing peanut allergy by 81% by age 5. Follow-up research found that this early exposure continued to lower the risk by 71% into adolescence.

While many parents remain cautious about introducing peanuts early, if this approach were widely adopted, it could reduce the overall prevalence of peanut allergy by more than 50%. Early peanut introduction is a safe and effective way to significantly lower the risk of this common and potentially life-threatening condition.

harvest

SEN 8090 sNA

Organic certification serves as a critical tool in promoting sustainable and regenerative agricultural practices. It ensures compliance with globally reconized standards that emphasize environmental protection, soil health, and reduced dependency on synthetic inputs. As consumers grow more conscious of their food choices, organic certification not only safeguards the environment but also empowers farmers with better economic opportunities, improved resilience, and long-term productivity.



### Impact of Organic Certification on Sustainability and Benefits for Farmers in Regenerative Agriculture

### **Environmental Sustainability**

Organic certification prioritizes environmentally friendly practices, including crop rotation, green manuring, and composting. These techniques help maintain soil fertility, prevent erosion, and reduce water contamination caused by chemical runoff. By avoiding synthetic pesticides and fertilizers, organic farming minimizes pollution and promotes the health of surrounding ecosystems, including beneficial insects, birds, and soil microorganisms. Such approaches ture, which emphasizes restoring degraded lands and enhancing biodiversity.

### **Enhanced Soil Health**

One of the most significant impacts of organic certification is its focus on soil health. Organic practices, such as the use of cover crops, crop rotation, and bio-fertilizers, replenish essential nutrients and improve soil organic matter. Healthy soil not only increases crop yields over time but also enhances water retention, reduces dependency on irrigation, and mitigates the impacts of droughts or heavy rains. These outcomes are central to the principles of regenerative agriculture, which sees soil health as the foundation for sustainable food production.

### Climate Change Resilience

Organic and regenerative farming practices help mitigate climate change by increasing carbon sequestration in the soil. Techniques like minimum tillage, mulching, and agroforestry reduce carbon emissions and enhance soil carbon storage. Organic certification provides guidelines for these methods, making farmers active contributors to climate change mitigation.

### SUSTAINABILITY





#### Economic Benefits for Farmers

Organic certification often opens doors to premium markets, where certified organic products command higher prices. This price premium offers farmers better income stability and incentives to invest in sustainable practices. Furthermore, access to global markets becomes easier with organic certification, allowing small-scale farmers to connect with ethical consumers worldwide. Training and capacity-building initiatives associated with certification also enhance farmers' knowledge and technical skills.

### Reduced Dependency on External Inputs

Organic-certified farms rely on natural inputs, such as farmyard manure, compost, and bio-pesticides, reducing dependence on expensive chemical fertilizers and pesticides. This not only lowers input costs but also reduces the financial risks associated with market volatility of synthetic inputs. Over time, farmers become more self-reliant and capable of managing their farms sustainably.

#### Health and Social Benefits

By eliminating harmful chemical inputs, organic certification contributes to better health outcomes for farmers, farm workers, and consumers. Exposure to toxic pesticides and synthetic fertilizers is significantly reduced, preventing chronic illnesses and health hazards. Additionally, organic certification often emphasizes fair trade practices, ensuring better working conditions and wages for farm laborers.

### **Strengthening Farmer Communities**

Organic certification encourages collaboration among farmers through farmer producer organizations (FPOs) and cooperatives. These groups play a vital role in knowledge sharing, collective bargaining, and capacity building. Certification also creates opportunities for farmers to participate in sustainable agricultural training programs, fostering innovation and shared learning.

### Long-Term Productivity and Sustainability

While the transition to organic farming may involve initial challenges, such as lower yields during the conversion period, long-term benefits are substantial. Over time, organic-certified farms exhibit increased productivity, enhanced resilience, and reduced dependency on synthetic inputs. This long-term sustainability aligns closely with regenerative agricultural goals, creating systems where natural resources are conserved and replenished.





# **BIRD FEED**

**Selecting the Right Peanut-Based** Feed for Different Types of Birds



### **Small Birds**

Tits, Sparrows, Finches

**Preferred Peanut Feed** Chopped Peanuts or Peanut Granules

Why: Small birds have delicate beaks and prefer smaller, easily consumable pieces. Chopped peanuts provide essential nutrients without the risk of choking.

Tip: Ensure peanuts are unsalted and free from additives



**Preferred Peanut Feed** 

Why: These birds enjoy slightly larger pieces that offer a good balance of energy and protein. Blanched peanuts are easier to digest as they have their skins removed.

Tip: Offer in a ground feeder or



### **Large Birds**

Crows, Jays, Woodpeckers

**Preferred Peanut Feed** Whole Raw Peanuts or In-Shell Peanuts

Why: Larger birds have strong beaks that can crack open shells, providing a more engaging and natural feeding experience.

Tip: Hang peanuts in-shell in mesh feeders or place them on bird tables.



### **Clinging Birds**

Nuthatches, Woodpeckers, Chickadees

Preferred Peanut Feed Peanut Fat Balls or Suet Cakes with Peanuts

Why: These birds are adept at clinging and pecking at fatty, nutrient-dense foods. Suet combined with peanuts offers high energy, especially beneficial during winter.

Tip: Use mesh feeders to allow easy access for clinging birds.

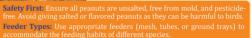


### **Medium-Sized Birds**

Robins, Thrushes, Blackbirds

**Peanut Splits or Blanched Peanuts** 

scattered on the ground to attract ground-feeding species.



Hygiene: Regularly clean feeders to prevent disease spread and ensure the feed remains fresh.

### **Birds with Sweet Preferences**

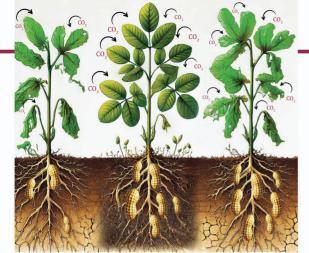
Orioles, Wrens

**Preferred Peanut Feed** Peanut Butter (Unsalted)

Why: Peanut butter is rich in calories and easy for these birds to consume. Ensure it is natural and unsalted.

Tip: Spread peanut butter on tree bark or mix with seeds for added nutrition.





G 20 G20 C76-16 Drought Condition Normal Condition Drought Condition

The Bailey Award judges commended the team for addressing a critical global issue while delivering actionable insights for peanut breeders and farmers. This achievement not only highlights scientific excellence but also reinforces the importance of innovation in securing future food production under challenging environmental conditions.

Genotypic
Differences in
Photosynthetic
Limitations to
Carbon Assimilation
in Peanut under
Drought at the
Onset of Flowering

won the prestigious 2024 Bailey Award, as announced on the Peanut Science website. This award recognizes outstanding research that advances scientific understanding in the field of peanut science.

Conducted over two years, the study explored drought tolerance among ten peanut genotypes (Arachis hypogaea L.) under controlled drought conditions. Researchers identified the genotype C76-16 as the most drought-tolerant due to its unique ability to adjust photosynthetic processes. Under mild drought (25 days of water stress), the genotype exhibited plasticity by downregulating photosynthesis to conserve water. However, during severe drought (40 days of water stress), it upregulated key photosynthetic processes, ensuring sustained carbon assimilation.

Interestingly, non-stomatal processes, such as photochemical reactions within chloroplasts, remained largely unaffected under mild drought stress. The researchers further demonstrated that stomatal conductance and electron flux to  $\mathrm{CO}_2$  assimilation could serve as reliable indicators for breeding drought-tolerant peanut varieties.

This research is hailed as a significant contribution to agricultural sustainability and climate resilience. By identifying genotypes like C76-16 and pinpointing critical photosynthetic parameters, the study paves the way for developing drought-resilient peanut crops—a vital breakthrough in mitigating the impacts of climate change on agriculture.

Therefore, stomatal conductance was considered the primary factor limiting photosynthesis in peanut. Finally, the objectives of defining the photosynthetic parameter(s) with greatest contribution to photosynthetic drought tolerance as well as determining if the given parameter(s) can be used as reference indicator of photosynthesis response to drought intensity were also addressed. Stomatal conductance and electron flux to CO2 assimilation contributed the most to drought tolerance in peanut genotypes. Moreover, these two photosynthetic component processes can be jointly used as reference indicators of photosynthetic status of peanut under different drought intensities.

The study revealed that stomatal conductance—how efficiently a plant regulates the opening and closing of stomata to control water loss and CO<sub>2</sub> intake—was the primary limitation to photosynthesis under drought conditions.

Source: Pilon, C. & Snider, J. L. & Moreno, L. & Kvien, C. & Ozi-as-Akins, P. & Holbrook, C. C., (2024) "Genotypic Differences in Photosynthetic Limitations to Carbon Assimilation in Peanut under Drought at the Onset of Flowering," Peanut Science 51(1), p.126-136. doi: https://doi.org/10.3146/0095-3679-51-PS1625

## **PEANUT SCIENCE**

2024 Bailey Award Winner: Breakthrough Research on Peanut Drought Tolerance and Effective Carbon Utilization.

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