

Enhancing India's Agricultural Export Competitiveness in a Changing Global Trade Environment



NATIONAL ACADEMY OF AGRICULTURAL SCIENCES, NEW DELHI

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Preface

India's agricultural sector is at a critical juncture, facing an increasingly uncertain trade environment amid growing biotic and abiotic challenges such as the degradation of natural resources and climatic shocks. Recent changes in the global trade landscape, including volatility in tariffs, stricter sanitary and phytosanitary measures, growing emphasis on climate-related sustainability standards and supply chain disruptions due to geopolitical tensions have created new challenges for agricultural production and exports.

However, India has considerable potential to improve its agricultural exports. Its diverse agro-climatic conditions support the production of a wide range of agricultural commodities with strong export potential. Unlocking this potential requires the development of agricultural value chains, investment in processing and logistics infrastructure, improvement of quality and traceability systems, and the creation of an enabling environment to meet evolving global market requirements.

The Academy emphasizes evidence-based feedback to policymakers to effectively address emerging challenges and capitalize on the opportunities. This strategy paper is the outcome of a brainstorming session organized by the Academy. It provides a comprehensive assessment of the major global developments shaping agricultural trade, examines their implications for India's agricultural exports, and proposes actionable strategies to improve the competitiveness of agricultural exports. I thank the Convener, Co-conveners, Reviewers and Editors for bringing out the document in the present form. I am sure this document will be useful for policymakers, researchers, exporters, and development practitioners in strengthening the export competitiveness of Indian agriculture.

August 2026
New Delhi



(M.L. Jat)
President, NAAS

Enhancing India's Agricultural Export Competitiveness in a Changing Global Trade Environment

1. INTRODUCTION

Over the past three decades, reforms in the international trading system and advances in digital technologies in logistics, supply chains, traceability, communication networks, and financial systems have transformed the landscape of global trade from tariff-based protectionism to greater liberalization and market integration. The establishment of the World Trade Organization (WTO) in 1995 was a key step in this direction. Specific to trade in food and agriculture, the WTO's Agreement on Agriculture (AoA) created an enabling environment for increased market access by disciplining trade-distorting domestic support and export subsidies, enhancing transparency, and developing mechanisms for dispute settlement. Simultaneously, improvements in infrastructure for processing, storage and transportation and the emergence of digital innovations have facilitated the smooth flow of commodities across countries.

However, in recent years, the global trading environment has become uncertain, characterized by the growing use of non-tariff measures, including sanitary and phytosanitary (SPS) and technical standards, traceability requirements, and climate-related sustainability regulations. Although these measures are intended to ensure food safety and environmental health and act as barriers to market access. Furthermore, domestic political and economic considerations have led to the renewed use of tariffs and export restrictions, and geopolitical tensions have disrupted the global supply chains. These factors can potentially increase trade costs, alter trade flows, and increase uncertainty in global markets.

These challenges are particularly concerning for developing countries like India, where agriculture remains crucial for economic growth and rural livelihoods. In India, agriculture contributes approximately 16% to the gross domestic product (GDP) and employs nearly 45% of the workforce. Moreover, agricultural production systems are dominated by smallholders (<2 hectares), who comprise nearly 90% of the total farm households. These farmers often lack access to improved technologies, extension services, finance, and markets, limiting their ability to invest in quality production, certification, and traceability systems. As a result, they face significant challenges in complying with increasingly stringent international standards and regulations, constraining their participation in high-value export markets.

On the demand side, India, with a population of over 1.4 billion, is one of the world's largest food markets. The country largely meets its food demand through domestic production. However, its presence in the global market is limited to approximately 2% of the merchandise agricultural trade. Nevertheless, it plays a significant role as an exporter of certain commodities such as rice, marine products, and spices. India accounts for approximately 40% of global rice exports. Its share of global marine product exports is estimated to be approximately 15%.

At the same time, India remains the world's largest importer of edible oils and a major importer of pulses, meeting about 55-60% of its edible oil requirements and around 15–20% of its pulse requirements through imports. In addition, India is heavily reliant on imports of fertilizers, a key input in agriculture, as well as liquefied natural gas (LNG) and crude oil, the sources of energy for activities along the agricultural value chain, from production to marketing.

Changes in tariff structures and regulatory requirements, along with global supply chain disruptions, can have far-reaching implications for the efficiency, sustainability, resilience, and inclusiveness of agricultural supply chains. These factors influence the cost of production, processing, storage, logistics and transportation, thereby affecting agricultural productivity, value addition, and export competitiveness, and the ability of supply chains to respond efficiently to changes in global markets and geopolitical shocks.

Nevertheless, these evolving global dynamics also create opportunities for India to strengthen its position in the global agricultural market. India's diverse agro-climatic conditions, which support the production of a wide range of agricultural commodities, position the country to capitalize on the expanding global demand for food, feed, and value-added products. This advantage offers significant opportunities for India to strengthen its presence in the international markets (Saxena *et al.*, 2024). Furthermore, India's vast agricultural research system, led by the Indian Council of Agricultural Research (ICAR), provides strong institutional support for harnessing this untapped potential by improving productivity, reducing production costs, enhancing sustainability and resilience, and improving the quality of products.

This paper examines India's agricultural export performance and future prospects in the context of an increasingly uncertain global trading environment. It specifically explores the implications of tariff uncertainty, sanitary & phytosanitary (SPS) measures, climate-linked sustainability regulations, trade fragmentation, and supply chain disruptions for Indian agricultural exports. It also identifies key policy priorities for effectively addressing emerging challenges and seizing opportunities in the global food market.

2. INDIA'S AGRICULTURAL TRADE: TRENDS AND PATTERNS

2.1. Recent Trends in Agricultural Trade

Figure 1 presents the trends in India's agricultural exports and imports from 2015–16 to 2025–26. Between 2015–16 and 2022–23, agricultural exports increased by over 1.6 times, from US\$32.1 billion to US\$53.2 billion, before decreasing to US\$48.8 billion in 2023–24. However, exports subsequently rebounded to US\$52.5 billion in 2025–26. Notably, despite these strong trends, agricultural products consistently accounted for approximately 12% of the country's total merchandise exports.

Agricultural imports also increased from US\$16.6 billion in 2015–16 to US\$20.7 billion in 2020–21. They surged to US\$32.4 billion in 2021–22 and continued to increase, reaching US\$40.3 billion in 2025–26. Despite this rapid increase, the share of agricultural products in the country's total merchandise imports remained at around 5%. Nevertheless, India has maintained a positive trade balance in agricultural products, indicating its status as a net exporter. Notably, the trade surplus narrowed after 2020–21 owing to a faster increase in imports than in exports.

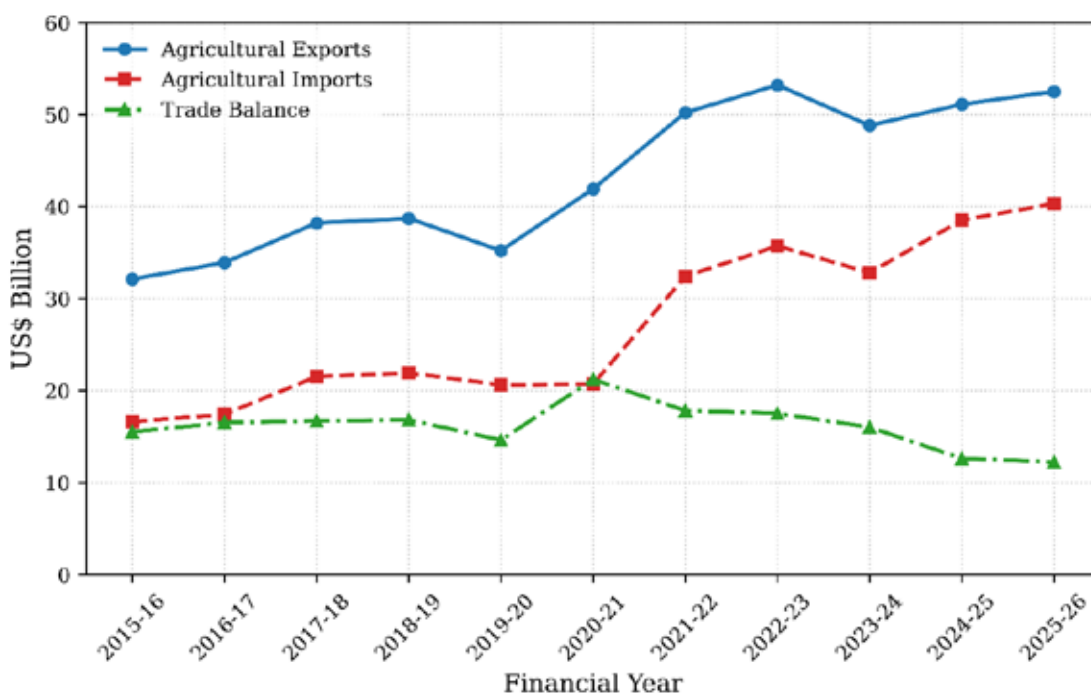


Figure 1: Trends in agricultural exports and imports

Source: Convenor's compilation based on data from the Directorate General of Commercial Intelligence and Statistics (DGCIS), Ministry of Commerce and Industry, Government of India (various years)

2.2. Export Portfolio and Market Destinations

Table 1 shows India's exports of agricultural commodities based on the World Customs Organization Harmonized System (HS 2022) at the 4-digit (HS-4) level, which ensures international comparability. For product-level specifics, information at the HS-8 level is provided in Annexure 1.

Table 1: Exports of agricultural commodities and their destinations, 2023-24 to 2025-26*

Commodity	Average export value (US\$ billion)	Share in agricultural exports (%)	Top five export destinations (% share)
Rice	12.4	23.9	Saudi Arabia (10.8), Benin (8.3), Iraq (7.4), Iran (6.9), Guinea (5.6)
Marine products	7.8	15.0	USA (33.8), China (18.1), Japan (5.8), Vietnam (5.6), Thailand (4.5)
Spices	4.3	8.3	China (19.8), USA (14.3), Bangladesh (7.6), UAE (6.4), Thailand (5.2)
Buffalo meat	4.1	7.7	Vietnam (18.2), Egypt (16.2), Malaysia (15.2), Iraq (8.9), Saudi Arabia (7.8)
Processed foods	3.2	6.2	USA (15.0), UAE (10.6), Malaysia (8.0), Bangladesh (4.9), Canada (4.5)
Sugar	2.8	5.4	Sudan (14.8), Somalia (7.7), Sri Lanka (6.8), Bangladesh (6.1), UAE (5.7)
Animal feed & feed ingredients	2.1	4.1	Bangladesh (18.6), Vietnam (12.3), South Korea (8.4), China (6.4), Indonesia (5.9)
Coffee	1.6	3.1	Italy (16.1), Germany (10.6), Belgium (7.1), Russia (6.5), USA (5.4)
Fresh fruits	1.2	2.3	Iraq (15.9), UAE (15.2), Netherlands (13.6), Bangladesh (5.6), Nepal (5.0)
Tea	0.9	1.8	UAE (18.0), USA (9.4), Russia (9.3), Iraq (8.3), UK (5.7)
Fresh vegetables	0.9	1.7	Bangladesh (28.0), UAE (14.6), Malaysia (8.3), Nepal (7.3), Sri Lanka (7.1)
Dairy products	0.6	1.2	USA (35.2), UAE (12.7), Saudi Arabia (9.9), Bahrain (5.3), Bhutan (4.7)

*Values are averaged over three years

Source: Convener's compilation based on data from Directorate General of Commercial Intelligence and Statistics (DGCIS), Ministry of Commerce and Industry, Government of India; Agricultural and Processed Food Products Export Development Authority (APEDA), agri-export statistics; and Marine Products Export Development Authority (MPEDA) export statistics (various years)

Rice stands as India's largest export commodity, constituting about one-fourth of the country's total agricultural exports. India exports both premium Basmati and non-Basmati rice, each with distinct international markets (Annexure 1). Premium Basmati rice is predominantly shipped to rich countries, such as Saudi Arabia, Iran, Iraq, and the United Arab Emirates, whereas non-Basmati rice is exported to African countries/African markets, including Benin, Guinea, Côte d'Ivoire, Togo, and Senegal.

Marine products comprise the second-largest category of agricultural exports, accounting for approximately 15% of India's total agricultural exports. Frozen shrimp accounts for over half of the marine product export value (Annexure 1). The United States is the largest importer of India's frozen shrimp, whereas China imports both shrimp and other marine products from India. Together, the United States and China account for almost 50% of India's marine product exports. Other key markets for Indian marine products include Japan, Vietnam, Thailand, and Belgium.

Spices account for approximately 8.3% of India's overall agricultural exports, making them the third-largest export category. Dried chillies, cumin, turmeric, and pepper account for the bulk of spice exports (Annexure 1). However, export destinations vary considerably across spices (Annexure 1). China is the largest importer of Indian dried chillies, accounting for nearly one-third of the country's exports. China is also the main importer of cumin seeds (20%) from India. On the other hand, the United States is the largest destination for India's pepper exports, accounting for 37% of the country's total pepper exports. Turmeric exports are geographically diversified, with Bangladesh, the UAE, the United States, Malaysia, and Iran being the main destinations.

Buffalo meat constitutes 7.7% of India's agricultural exports, with the majority (66%) exported to Southeast Asian and Middle Eastern countries. Vietnam is the leading importer of Indian buffalo meat, followed by Egypt and Malaysia. Dairy products comprise only 1.2% of total agricultural exports, reflecting strong domestic demand. Animal feed and feed ingredients account for approximately 4.1% of India's total agricultural exports, with nearly 30% exported to Bangladesh and Vietnam.

Fresh fruits (grapes, bananas, mangoes, and pomegranates) account for approximately 2.3% of India's total agricultural exports. Middle Eastern and South Asian countries are key markets for Indian fresh fruits. However, Indian grapes have a strong presence in Europe, particularly in the Netherlands (Annexure 1). Fresh vegetables, including onions, potatoes, green chillies, and okra, account for approximately 1.7% of agricultural exports. Bangladesh, the UAE, Malaysia, Nepal, and Sri Lanka are the primary export destinations for vegetables.

Sugar accounts for approximately 5.4% of India's agricultural exports. Unlike several other agricultural commodities, its exports are geographically well diversified, with Sudan, Somalia, Sri Lanka, Bangladesh, and the United Arab Emirates (UAE) being the major export destinations. Coffee is exported to a few rich markets, including Italy, Germany, Belgium, Russia, and the United States. Similarly, tea exports are primarily destined for the UAE, the United States, Russia, Iraq, and the United Kingdom.

Processed foods (biscuits, pickles, fruit preparations, juices, sauces, seasonings, and other food preparations) account for approximately 6.2% of India's total agricultural exports. The United States, UAE, and Malaysia are key markets for India's processed foods.

Over the past two decades, the expansion of India's agricultural exports has primarily been fuelled by increased penetration into existing markets rather than diversification into new ones (NAAS, 2026). Similarly, India's exports have focused on a narrow range of commodities. This concentration renders India's exports vulnerable to price fluctuations, tariff changes, SPS measures, sustainability regulations, and supply chain disruptions. Therefore, there is a need for export diversification across products and markets to enhance the resilience of agricultural exports.

2.3. Import Portfolio and Sources

Table 2 shows the composition and sources of India's agricultural imports according to the HS-4 classification. Detailed product-specific information at the HS-8 level is provided in Annexure 2.

India's agricultural imports are highly concentrated in terms of the commodities imported and their source countries. India's reliance on imports for domestic edible oil needs is significant, with edible oils accounting for nearly half of the country's total agricultural imports. Crude palm oil is the single largest import, sourced from Indonesia (52%) and Malaysia (30%) (Annexure 2). Crude soybean oil is imported mainly from Argentina (46%) and Brazil (31%), whereas crude sunflower oil is sourced primarily from Russia and Ukraine.

Despite being one of the world's largest producers of pulses, India imports 15–20% of its domestic requirements to bridge the demand–supply gap. Pulses account for approximately 8% of India's agricultural imports, with lentils, pigeon peas, chickpeas, and dry peas as the principal imports. Their sources are highly concentrated. Australia is the largest supplier of chickpeas, and Canada dominates lentil exports (Annexure 2). Mozambique contributes more than one-third of India's pigeon pea imports, followed by Myanmar and Tanzania.

Table 2: Imports of important agricultural commodities and their major sources, 2023–24 to 2025–26*

Commodity	Average import value (US\$ billion)	Share in agricultural imports (%)	Top five source countries (% share)
Edible oils	18.2	47.8	Indonesia (27.5), Malaysia (16.3), Argentina (15.2), Russia (9.4), Brazil (8.2)
Pulses	3.0	7.9	Canada (26.1), Australia (25.8), Russia (12.5), Mozambique (10.2), Myanmar (8.8)
Raw cashew nuts	1.7	4.5	Ghana (15.6), Côte d'Ivoire (14.7), Tanzania (12.8), Benin (10.9), Burkina Faso (10.5)
Raw sugar	1.2	3.2	Brazil (99.2), Sudan (0.4), South Africa (0.1), Thailand (0.1), Mexico (0.1)
Almonds	1.1	2.9	USA (86.0), Australia (8.3), Afghanistan (2.2), UAE (1.8), Iran (1.3)
Animal feed & feed ingredients	0.7	1.8	Thailand (16.5), Sri Lanka (16.2), Vietnam (12.0), USA (8.8), Indonesia (5.7)
Fresh fruits	0.5	1.3	Türkiye (20.3), Iran (17.2), Chile (11.9), Afghanistan (10.3), USA (10.2)
Pepper & other spices	0.2	0.6	Sri Lanka (46.2), Vietnam (22.8), Indonesia (14.6), Brazil (5.5), Madagascar (3.9)
Coffee (green beans)	0.2	0.6	Vietnam (24.0), Indonesia (23.6), Uganda (9.8), Brazil (8.6), Ethiopia (5.5)
Cocoa beans & products	0.1	0.4	Democratic Republic of the Congo (41.3), Ecuador (25.7), Dominican Republic (14.2), Côte d'Ivoire (3.2), Ghana (1.3)
Dairy products	0.1	0.1	France (38.7), Poland (8.5), Germany (7.7), Netherlands (6.5), Italy (5.0)

*Values are averaged over three years; Source: As for Table 1

Fresh fruits account for about 1.2% of India's agricultural imports. Apples and kiwifruit dominate the fruit imports (Annexure 2). Türkiye and Iran are the principal suppliers of apples, while Chile, New Zealand, and Greece are the main suppliers of kiwifruit imports.

Imports of dry fruits, mainly almonds, pistachios, and walnuts, are also concentrated among a few suppliers. The United States dominates India's almond and pistachio imports, and Chile is the main supplier of walnuts.

Imports of raw cashew nuts and green coffee are largely for processing and re-export. Raw cashew nuts are imported from Ghana, Côte d'Ivoire, Tanzania, Benin, and Burkina Faso. Green coffee is sourced from Vietnam, Indonesia, and Uganda, whereas cocoa beans are sourced from Congo and Ecuador. India also imports spices mainly pepper from Vietnam, Indonesia, and Sri Lanka.

Imports of dairy products (milk powders and specialty products) are negligible, comprising only 0.13% of India's total agricultural imports, and are primarily sourced from France, Poland, Germany, the Netherlands, and the United States.

2.4. India's Agricultural Trade Balance with Major Partners

India has a substantial trade surplus with the United States, UAE, Bangladesh, Vietnam, and Saudi Arabia. Conversely, India has a significant trade deficit with Indonesia, Malaysia, and Brazil, mainly because of large-scale imports of edible oils. The deficit with Australia is primarily due to chickpea imports. Meanwhile, India's trade with the European Union and China is relatively balanced (Table 3).

Table 3: India's agricultural trade balance with major trading partners, 2023-24 to 2025-26*

Country / Region	Agricultural exports (US\$ billion)	Agricultural imports (US\$ billion)	Trade balance (US\$ billion)
USA	5.8	1.8	+4.0
UAE	5.3	1.2	+4.1
Bangladesh	2.9	0.3	+2.6
Vietnam	3.0	0.7	+2.3
Saudi Arabia	2.7	0.5	+2.2
EU-27	4.3	3.5	+0.8
China	2.0	2.1	-0.1
Indonesia	1.9	5.4	-3.5
Malaysia	1.0	4.3	-3.3
Australia	0.9	2.3	-1.4
Brazil	0.8	2.0	-1.2

*Values are averaged over three years; Source: As for Table 1

2.5 Major Trading Partners' Import Dependence on India

India contributes only 2-3% to the agricultural imports of the United States and the European Union. India's presence is much stronger in neighbouring countries, accounting for 30.5% of Bangladesh's agricultural imports, 8.2% of imports by the Middle East,

and 4.8% by Southeast Asia. However, China sources only approximately 1.3% of its agricultural imports from India (Table 4).

Table 4: India's share in agricultural imports of major trading partners at HS-4 level, 2023-24 to 2025-26 (%)*

Commodity	USA	EU-27	Middle East	Southeast Asia	China	Bangladesh
All agricultural products	2.8	2.0	8.2	4.8	1.3	30.5
Rice	7.5	13.5	70.5	24.0	1.2	80.0
Marine products	19.5	7.5	5.5	12.5	15.5	0.8
Spices	14.0	9.0	23.5	13.5	14.0	56.0
Fresh fruits	3.0	3.5	25.0	6.0	1.0	14.0
Fresh vegetables	2.5	2.0	24.0	8.0	0.8	68.0
Coffee	2.5	4.5	2.0	5.0	0.8	0.0
Tea	2.5	3.5	8.5	6.0	1.0	3.0

*Values are averaged over three years; Source: UN Comtrade/WITS import statistics commodity groups

India's market share varies widely across commodities and destination markets. It is the leading supplier of rice and spices to Bangladesh and the Middle East. The United States and China source 15-20% of their imports of marine products and spices from India.

India's shares in fruits, vegetables, coffee, and tea are relatively modest in developed-country imports but are considerably higher in neighbouring countries. For example, Bangladesh and Middle Eastern countries source approximately 68% and 24% of their vegetable imports from India, respectively.

3. IMPORTS OF AGRICULTURAL INPUTS: FERTILIZER AND ENERGY

Fertilizers and energy play crucial roles in agriculture as they directly impact both the productivity and economic sustainability of farming. An increase in fertilizer prices leads to higher cultivation costs. Likewise, when energy prices rise, the costs associated with irrigation, mechanization, processing, storage, packaging, and transportation also increase. The combined effect of their increasing costs is a decline in farm profitability and, consequently, the export competitiveness of agricultural products.

India heavily depends on imports of both fertilizer and energy inputs (Figures 2 and 3). India meets approximately one-fifth of its urea demand through imports from Oman (32%),

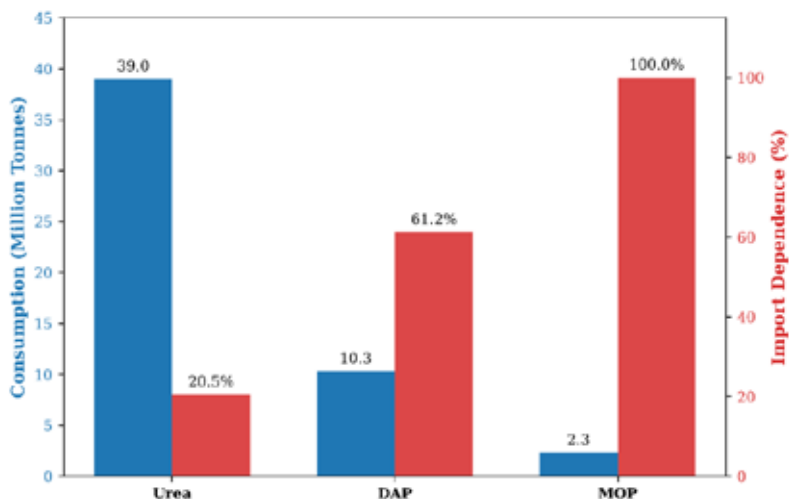


Figure 2: India's fertilizer import-dependence (million tonnes, Mt), 2023–24 to 2025–26*

*Values are averaged over three years

Note: Top five supplier share of imports (%) – Urea: Oman (26.9), China (17.9), Russia (15.0), Qatar (6.3), Saudi Arabia (5.9); DAP: Saudi Arabia (35.4), Morocco (24.9), China (21.0); Russia (10.0), Jordan (3.3); and MOP: Russia (40.0), Canada (25.6), Israel (13.4), Jordan (12.5), Turkmenistan (7.1)

Source: Department of Fertilizers, Ministry of Chemicals and Fertilizers, Govt. of India

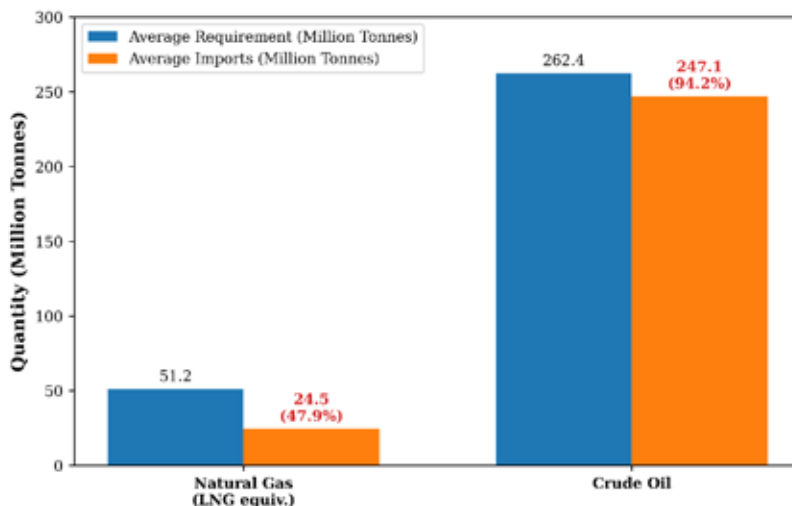


Figure 3: India's imports of energy inputs, 2023-24 to 2025-26*

*Values are averaged over three years

Gas requirement converted from MMSCM to LNG-equivalent (Mt)

Note: Major supplier countries (% share) – Natural Gas: Qatar (39.8), USA (20.4), Russia (9.6), UAE (6.3), Australia (5.8); and Crude oil: Russia (38.4), Iraq (18.7), Saudi Arabia (14.2), UAE (8.9); USA (6.1)

Source: Petroleum Planning and Analysis Cell (PPAC), Ministry of Petroleum and Natural Gas, Govt. of India

Russia (18%), and China (15%) (Figure 2). This dependence is even more pronounced for diammonium phosphate (DAP) and muriate of potash (MOP). India imports over 61% of its DAP requirements, mainly from Saudi Arabia (32%), Morocco (27%), and China (22%). Notably, India imports nearly all of its potash requirements, predominantly from Russia (36%), Canada (30%), Israel (14%), and Jordan (13%).

India is even more import-dependent for liquefied natural gas (LNG) and crude oil. Approximately 48% of its natural gas demand is met through imports from Qatar (40%), the US (20%), and Russia (10%). Interestingly, nearly one-third of the LNG in India is utilized as a feedstock for fertilizer production, particularly in urea production. India imports more than 90% of its crude oil requirements, primarily from Russia (38%), Iraq (18%), Saudi Arabia (14%), and the UAE (9%) (Figure 3).

Such a high dependence on imports of fertilizers and energy, and on a limited number of suppliers, exposes the country to significant risks from global price volatility and supply chain disruptions due to geopolitical tensions. Notably, since the escalation of geopolitical tensions in West Asia, the international prices of fertilizers, crude oil, and LNG have risen considerably, increasing the input costs across the agricultural value chain. Moreover, uncertainty in the timely availability of these critical inputs can disrupt input application, irrigation, mechanization, and other farm operations, adversely affecting the crop yields. Notably, India provides substantial fertilizer subsidies— approximately Rs. 1,670 billion in 2025–26. Consequently, global price shocks not only increase production costs, affect crop yields, and raise the fiscal burden, but also affect export competitiveness.

4. EMERGING GLOBAL TRADE ENVIRONMENT AND CHALLENGES

Over the past three decades, the global trade environment has undergone significant transformation. While the 1990s and the early 2000s were characterized by trade liberalization, tariff reductions, and greater integration of global markets, recent years have seen a rise in protectionist measures, regional and bilateral trade arrangements, and the growing use of non-tariff measures, including stringent SPS requirements and climate-related sustainability standards. These changes have created new challenges for agricultural exports by affecting market access, compliance costs and competitiveness. This section examines these emerging challenges and their implications for agricultural exports.

4.1. Tariff Uncertainties

While the AoA of the WTO has led to a gradual decrease in tariffs, the current landscape of tariff policy is marked by increasing unpredictability and volatility. The United States implemented a 10% baseline tariff in April 2025, followed by additional reciprocal

tariffs targeting specific countries. Tariffs applicable to selected Indian agricultural products were first raised to 25% and later to 50%. However, the recent trade agreement between India and the US lowered tariffs on many agricultural products to approximately 15%. Such uncertainty makes it difficult for exporters to negotiate long-term contracts, processors to plan procurement and production, and farmers to make informed production decisions.

The implications of tariff uncertainty are particularly evident in India's agricultural exports. India's shrimp exports compete with those of Ecuador, Vietnam, and Thailand. While Indian shrimp exports to the United States and the European Union are subject to tariffs, Vietnam benefits from preferential market access to the European Union under the European Union–Vietnam Free Trade Agreement, and Ecuador enjoys favourable access to several markets. The increase in U.S. tariffs has reduced the price competitiveness of Indian shrimp, leading to lower export demand, pressure on export realizations, and a diversion of U.S. sourcing towards competing suppliers, particularly Ecuador (CRISIL Ratings, 2025).

Similarly, India's exports of Basmati rice face competition from Pakistan and non-Basmati rice from Thailand and Vietnam. Indian Basmati rice enjoys a dominant position in Middle Eastern markets, particularly in Saudi Arabia, Iran, the UAE and Iraq. However, Pakistan competes in the same markets under broadly similar tariff regimes, as most Middle Eastern countries levy the same or comparable import duties on Basmati rice from both India and Pakistan. Thailand and Vietnam benefit from preferential access to several markets, particularly the European Union, through free trade agreements and tariff-rate quotas. Consequently, India's competitive advantage depends more on quality, branding, supply consistency, and compliance with quality standards than on preferential tariff access. Notably, the increase in tariffs by the United States did not impact India's Basmati rice exports, as only approximately 5% of its total rice exports go to the United States.

Overall, increasing tariff volatility, coupled with preferential trade arrangements enjoyed by competing exporters, has made market access increasingly complex and less predictable. Therefore, improving export competitiveness requires a combination of trade negotiations to improve market access and domestic investment in productivity, quality assurance, value addition, and compliance with evolving international standards.

4.2. Sanitary and Phytosanitary (SPS) Measures

Over time, SPS measures have become significantly important in the global agricultural trade. The WTO SPS Agreement allows countries to adopt such measures, provided they are science-based and transparent. Nonetheless, some developed countries have progressively imposed more stringent SPS standards by setting tougher

restrictions on pesticide residues, mandating more rigorous inspection and certification processes, implementing advanced traceability mechanisms, and requiring additional testing procedures. This raises compliance costs, especially for small producers and manufacturers (Gupta *et al.*, 2024).

Refusals by the US Food and Drug Administration (FDA) increased from 530 food and feed consignments in 2020 to 1,927 in 2024, while total refusals more than doubled from 1,944 to 4,396 (Table 5). This trend suggests increasing scrutiny of imported products and persistent compliance challenges related to food safety, labeling, contaminants, and other regulations. The EU Rapid Alert System for Food and Feed (RASFF) presents a more detailed picture. Although the total number of notifications declined from 442 in 2020 to 300–340 during 2022–24, border rejections increased from 84 in 2020 to over 220 in both 2023 and 2024 (Table 5). This indicates that regulatory controls have become more stringent at the point of entry, preventing non-compliant consignments from entering European markets.

Export competitiveness is influenced not only by price but also by compliance with SPS standards (Kallummal *et al.*, 2026). India's rice exports are often rejected because of pesticide residues, especially tricyclazole and isoprothiolane, along with occasional aflatoxin

Table 5: India's agricultural export rejections — US (FDA) and EU (RASFF), 2020–2024

Year	US — FDA Import Refusals				EU — RASFF Notifications		
	Food/ feed only (codes 01–46)	+ Botanicals (codes 50, 54)	All FDA refusals	Total notifications	Border rejections	Alert notifications	Information notifications
2020	530	629	1,944	442	84	279	79
2021	716	856	1,923	350	90	168	92
2022	715	815	1,762	322	210	55	57
2023	1,023	1,175	2,480	297	220	32	45
2024	1,927	2,188	4,396	342	222	36	84

Note: US (FDA) industry codes 01–46 cover food/feed (rice, marine, spices, fruits/vegetables, meat, etc.). Botanicals (codes 50 = cosmetic-grade henna, 54 = herbals & botanicals) are added as an alternate broader view. "All FDA refusals" includes drugs, devices, cosmetics, and tobacco, which are not strictly agricultural but are listed for completeness. EU (RASFF) Total notifications = all India-origin entries; Border rejections = consignments stopped at EU external border; Alert notifications = serious risks already on the EU market (recalls/withdrawals); Information notifications combine "for attention" and "for follow-up" subtypes.

Source: U.S. Food and Drug Administration, Import Refusal Reports — <https://www.accessdata.fda.gov/scripts/importrefusals/>; European Union Rapid Alert System for Food and Feed (RASFF) Window — <https://webgate.ec.europa.eu/rasff-window/screen/search>. Date of access: February 20, 2026.

contamination. Marine products are primarily rejected because of antibiotic residues and microbial contamination. Spices undergo frequent checks for pesticide residues, Sudan dyes, aflatoxins and Salmonella contamination. However, the export of fruits and vegetables is rejected because of fruit fly infestations and pesticide residue levels.

SPS challenges are largely structural, originating from smallholder production systems, inappropriate pesticide use, limited residue testing and monitoring, weak traceability, and inadequate post-harvest handling infrastructure. Consequently, SPS compliance cannot be achieved solely through end-product inspection but requires interventions across the entire value chain, from farm-level production practices and extension services to testing, certification, processing, traceability, and export logistics (Gupta *et al.*, 2024; Kallummal *et al.*, 2026; APEDA, 2026).

The consequences of export rejection are significant. Exporters face considerable financial stress when their consignments are rejected. Beyond the immediate financial losses from disposal, they also bear expenses related to freight, insurance, port handling, laboratory testing, and storage. Repeated rejections erode the trust of international buyers and complicate efforts to maintain current contracts or obtain new ones. Additionally, they lead to more frequent inspections and testing of future consignments, increasing compliance costs. On a broader scale, frequent export rejections can tarnish the exporting country's reputation, limit market access, and discourage investment in export-oriented production and processing.

The policy implication is that compliance with food safety standards must be strengthened throughout the value chain, rather than only at the export stage. This requires improving residue monitoring, laboratory testing, traceability, post-harvest handling, cold chain infrastructure, and farmer awareness of good agricultural and aquaculture practices. Smallholders and small exporters also need technical and financial support to meet the evolving SPS requirements.

4.3. Climate-related Sustainability Standards

Climate-related sustainability standards are becoming increasingly important determinants of market access. The European Union's Deforestation Regulation (EUDR) and Carbon Border Adjustment Mechanism (CBAM) are prominent examples of such standards that have raised concerns among developing countries regarding rising compliance costs.

The EUDR, adopted on June 29, 2023, requires that products for the European market not originate from land deforested after December 31, 2020. The regulation applies from December 31, 2026, to large and medium-sized enterprises, and from June 30, 2027, to micro and small enterprises. It covers coffee, cocoa, palm oil, soy, cattle, rubber, wood, and derived products, including beef, leather, furniture, paper, charcoal, and palm oil

derivatives. Exporters must provide plot geolocation coordinates, electronic due diligence statements, supply chain information, deforestation risk assessments, and evidence of mitigation measures.

India is not a major exporter of most EUDR-covered commodities; therefore, its impact on India's overall agricultural exports is likely to be limited. The annual exports of EUDR-covered commodities to the European Union are estimated at approximately US\$1.3 billion (GTRI, 2023). However, products such as coffee, leather and leather products, wood products, paper products, rubber products, and oil cakes are likely to face compliance costs. Coffee is particularly vulnerable, as approximately 60% of India's coffee exports are targeted to the European Union (Sharma *et al.*, 2026). Compliance will be challenging for smallholder-based supply chains, where farm-level traceability and digital record-keeping involve substantial transaction costs. While these requirements may increase short-term compliance costs, they could strengthen traceability, improve transparency, and enhance access to premium sustainability-conscious markets (Sharma *et al.*, 2026).

The Carbon Border Adjustment Mechanism (CBAM) aims to ensure a level playing field by aligning the carbon cost of imported products with that faced by European producers under the EU Emissions Trading System (EU ETS). Introduced on October 1, 2023, it initially covered carbon-intensive sectors such as fertilizers, steel, cement, aluminium, electricity, hydrogen, and selected iron and steel products through a transitional reporting phase. From January 1, 2026, importers are required to purchase CBAM certificates corresponding to the embedded emissions of their imports.

Although agricultural commodities are not directly covered under the CBAM, its indirect implications for agricultural export competitiveness may be significant. Fertilizers, a critical agricultural input, are energy-intensive to produce, and India depends heavily on imports of fertilizers, raw materials, and intermediates to produce them. Therefore, carbon pricing under the CBAM may increase fertilizer production costs in exporting countries, leading to higher import prices. This, in turn, could raise agricultural production costs in India and weaken the price competitiveness of agricultural exports.

Other carbon-intensive industries, such as steel, aluminium, and cement, may also indirectly affect agricultural export competitiveness through cost transmission across supply chains. Compliance with the CBAM is likely to increase compliance and production costs as firms invest in cleaner technologies and emissions reductions (UNCTAD, 2021; Yang and Yan, 2023; Gaur and Maiti, 2025). These additional costs are likely to be passed on to downstream industries that rely on steel, aluminium, cement, and other carbon-intensive materials as intermediate inputs, including manufacturers of agricultural machinery, irrigation equipment, food processing equipment, packaging materials, warehouses, cold storage facilities, and transport infrastructure.

While the initial costs of complying with sustainability standards can be significant, these investments can generate significant long-term benefits. The adoption of sustainable production practices can improve resource-use efficiency, reduce environmental footprints, strengthen traceability and quality assurance systems, and enhance resilience to climate change. Rather than viewing sustainability standards solely as barriers to trade, they should be regarded as opportunities to modernize agricultural production and value chains, enhance productivity, and strengthen environmental accountability. Compliance can also improve market credibility, facilitate access to premium and environmentally conscious markets, and enhance the long-term competitiveness of India's agricultural exports.

4.4. Trade Fragmentation

When the global trade environment becomes increasingly uncertain, countries often engage in regional or bilateral free trade agreements that offer the advantage of lower tariffs, simplified customs, and mutual recognition of standards. However, such agreements can create tariff differentiation between partners and non-partners, affecting their trade flows. As of April 2026, the WTO reported 383 regional trade agreements (RTAs) in force. Most of these are bilateral free trade agreements. There are also regional trade blocs, such as the Association of Southeast Asian Nations (ASEAN), Regional Comprehensive Economic Partnership (RCEP), Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), and African Continental Free Trade Area (AfCFTA).

The evidence suggests that FTAs generally promote agricultural trade. Grant and Lambert (2008) show that such agreements increase bilateral agricultural trade through trade creation. Lambert and McKoy (2009) affirmed the positive effects of FTAs, particularly on processed agricultural products. However, to fully benefit from such agreements, compliance with SPS measures, technical regulations, and other non-tariff measures is crucial (Disdier and Marette, 2010).

As of July 2026, India has signed 17 Free Trade Agreements (FTAs) and 6 Preferential Trade Agreements (PTAs). Of these, 13 FTAs are currently operational. While empirical evidence on the impact of FTAs on India's agricultural trade is limited, existing studies indicate that FTAs have contributed to the expansion of agricultural trade (Varma and Ramakrishnan, 2014; Bhasin and Manocha, 2015; Jagdambe and Elumaali, 2020; NITI Aayog, 2026).

5. STRATEGIES FOR ENHANCING EXPORT COMPETITIVENESS

In an increasingly complex and uncertain global trade environment, the performance of agricultural exports is determined not only by price competitiveness or import tariffs but also by a country's technical and financial capability to comply with non-tariff barriers, including SPS and sustainability standards. Table 6 outlines the forward-looking strategies for enhancing agricultural exports.

Table 6: Strategic framework for enhancing exports

Value chain participants	Sanitary and Phytosanitary standards	Climate-related Sustainability Standards	Market Access	Government support	Remarks
Farmers	• Adopt GAP. • Comply with pesticide MRLs • Improve post-harvest hygiene	• Adopt climate-smart practices, micro-irrigation, solar power • Maintain farm records	• Participate in export-oriented clusters and contract farming arrangements	• Subsidies for certification, micro-irrigation, solar pumps • Support for digital innovations	• Improve resource-use efficiency, product quality, and price realization
FPOs / Cooperatives	• Establish packhouses, cold chains, and residue testing facilities • Facilitate batch-level quality monitoring	• Ensure collective sustainability accounting and reporting • Promote “co-brand models	• Aggregate produce at scale • Build capacity in documentation	• Grants and credit for infrastructure • Support digital platforms for traceability and certification	• Collective action reduces compliance costs and integrates smallholders into export value chains
Exporters & Agribusiness Firms	• Implement HACCP and farm-to-ship traceability systems • Strengthen testing, certification, and shipment monitoring	• Comply with ESG standards • Report lifecycle emissions and adopt sustainable sourcing practices	• Diversify export destinations and products • Invest in branding and value addition	• Export credit, insurance, and logistics support • Timely trade intelligence and market advisories	• Sustainability compliance and traceability increasingly determine market access and premium realization

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Value chain participants	Sanitary and Phytosanitary standards	Climate-related Sustainability Standards	Market Access	Government support	Remarks
Policy and Institutions (central and state ministries)	- Strengthen residue monitoring, quarantine, and disease surveillance systems. - Establish disease-free zones and accredited laboratories.	- Develop nationally harmonized sustainability frameworks aligned with global standards. - Promote low-carbon and climate-resilient agriculture.	- Negotiate balanced FTAs and address non-tariff barriers proactively. - Ensure predictable export policies and avoid sudden bans.	- Green finance, subsidy support, and export infrastructure investment. - Inter-ministerial coordination mechanisms.	A stable, science-based, and trade-oriented policy ecosystem is critical for export competitiveness.
Export promoting agencies (APEDA/ MPEDA/ Export Inspection Council)	- Promote cluster-based export facilities - Strengthen quality certification and export inspection systems	Promote ESG-certified processing, organic production, and deforestation-free sourcing	- Promote GI-tagged, value-added products - Market intelligence and export promotion support	- Establish technology-driven market and trade intelligence systems - International branding campaigns and export facilitation systems	Institutional support for positioning Indian products in global value chains
Agricultural R&D System	- Develop pest-resistant, climate-resilient varieties - Build scientific expertise in SPS standards and MRL negotiations	Research on water, methane reduction, carbon footprints, and sustainability metrics	Identify commodities with comparative advantages	Dedicated funding for export-oriented agricultural R&D	Agricultural research must move beyond productivity towards trade competitiveness and sustainability

Source: Convener's compilation

5.1. Explore New Export Markets

India should diversify its agricultural export markets by systematically assessing import demand, competing suppliers, tariff preferences, SPS requirements, sustainability standards, and other non-tariff measures in potential destination markets. Such an approach would help identify new export opportunities, reduce dependence on a few markets, and strengthen resilience to trade and geopolitical shocks. For example, many African countries are net importers of cereals, creating opportunities for India to expand the export of staple foods, particularly rice and wheat. Similarly, the growing import demand in West Asian countries offers considerable potential for exporting fruits, vegetables, meat, and spices. In developed markets, such as the United States, Japan, and South Korea, rising consumer demand for organic foods, millet-based products, and herbal and Ayurvedic products present new opportunities for Indian exporters, conditional upon meeting the required quality, safety, and sustainability standards.

5.2. Diversify the Export Basket and Move Up the Value Chain

India's agricultural exports are concentrated on a few primary commodities, such as rice, shrimp, buffalo meat, and spices. However, growing consumer demand in international markets is creating new opportunities for value-added products, including ready-to-eat and ready-to-cook foods, millet-based products, processed fruits and vegetables, organic foods, essential oils, spice extracts, and herbal and Ayurvedic products.

To move up the agricultural value chain, the government should invest in public goods, such as quality certification and traceability systems, accredited testing laboratories, export-oriented logistics, cold chain infrastructure, and a supportive policy and regulatory environment. Simultaneously, the private sector should invest in integrated cold chains, modern storage and refrigeration facilities, food processing, value addition, branding, packaging, and market development to enhance the quality, shelf life, and export competitiveness of Indian agricultural products.

5.3. Shift from Reactive to Consistent Trade Policy

India's agricultural trade policy has primarily focused on maintaining domestic food security and price stability, with trade interventions largely determined by domestic demand and supply conditions rather than by global market developments. When domestic production is expected to fall short of demand, the government imposes export restrictions, such as bans, quotas, or minimum export prices to stabilize domestic markets. Conversely, when production exceeds domestic demand, import tariffs or other import restrictions are used to protect domestic producers from competing with foreign producers.

Such reactive trade policies create uncertainty for exporters, importers, and investors, undermining India's credibility as a reliable trading partner and discouraging private

investment in value chains, processing, storage, and logistics. A robust trade policy supported by transparent and well-defined trigger mechanisms for government intervention would enhance investor and buyer confidence and improve the competitiveness of agricultural exports.

5.4. Establish a Market Intelligence and Market Outlook System

In the dynamic global trade environment, market information is indispensable for policymakers, producers, processors, exporters and importers. Access to timely data on trade flows, demand and supply conditions, consumer preferences, domestic and international prices, tariffs, SPS standards, and sustainability regulations empower them to address challenges and seize opportunities. Equally critical is the ability to predict and monitor production, stocks, and prices in the domestic market.

Despite the increasing importance of market information in both global and domestic markets, India currently lacks an effective system for the collection, analysis, and dissemination of market and trade data. Establishing a centralized, technology-driven market and trade intelligence system is essential for effectively managing trade uncertainties and developing credible strategies to enhance exports.

5.5. Strengthen SPS Compliance Infrastructure

As SPS standards become increasingly stringent in global agricultural trade, India must adopt a proactive approach to ensure compliance. Compliance should begin at the farm level, where exporters, in collaboration with research institutions and extension agencies, should enable farmers to adopt good agricultural practices (GAP) throughout the production cycle, traders to follow good marketing and handling practices, and processors to implement good manufacturing practices (GMP), including proper packaging, branding, storage, traceability, and quality assurance. Simultaneously, the government should strengthen the supporting ecosystem by investing in internationally accredited testing laboratories, advanced residue and microbial contamination detection technologies, quarantine and certification facilities, digital traceability and reporting systems, and efficient border inspection infrastructure.

5.6. Embed Sustainability Standards in Value Chains

Climate-related sustainability standards are becoming increasingly important in international trade. Although the initial cost of complying with sustainability standards may be high, they offer significant long-term benefits. Compliance helps maintain access to high-value export markets, build buyer confidence, reduce the risk of shipment rejections and trade disruptions, and improve the reputation of Indian products. It also enables exporters to earn premium prices for sustainably produced products and enhances the long-term competitiveness of India's agricultural exports.

Meeting these standards requires decisive action throughout the agricultural value chain. Farmers must receive technical and financial support to implement climate-smart practices and invest in micro-irrigation and renewable energy. Processors and exporters should invest in low-carbon technologies, emission monitoring, and certification. The government needs to enhance testing and certification infrastructure, extension services, and digital traceability systems.

5.7. Integrate Trade with Cluster-based Production Approaches

Individual smallholders lack the financial resources and technical knowledge to comply with stringent SPS and sustainability standards. Co-operatives, Farmer Producer Organizations (FPOs), and contract farming arrangements help overcome these constraints through collective action. Collective action enables produce aggregation, production standardization, and quality assurance, reducing transaction and compliance costs while improving quality and supply consistency. These institutions strengthen farmers' bargaining power, facilitate access to domestic and export markets, and help realize prices through value addition and market linkages. They enhance access to institutional credit, crop insurance, market intelligence, and risk management services, improving farmers' resilience to market volatility, trade policy changes, and climate-related shocks. Strengthening institutions is essential to enable smallholders to participate competitively in high-value global agricultural markets.

5.8. Reduce Dependence on Critical Agricultural Inputs

India's agricultural production and export competitiveness remain highly dependent on imported fertilizers and energy inputs. The country relies heavily on imports of phosphatic and potassic fertilizers, fertilizer raw materials and intermediates, crude oil, and natural gas, exposing agriculture to global price volatility, supply chain disruptions, geopolitical tensions, and trade restrictions.

Reducing this dependence requires supply- and demand-side interventions. On the supply side, India should strengthen domestic fertilizer production by securing raw material supplies, promoting overseas resource partnerships, and encouraging investment in domestic manufacturing capacity. On the demand side, fertilizer use efficiency should be enhanced through soil test-based nutrient management, precision application technologies, integrated nutrient management, and wider adoption of biofertilizers, nano-fertilizers, and organic nutrient sources. Similarly, dependence on fossil fuels can be reduced by improving energy efficiency in agriculture, promoting solar-powered irrigation, expanding the use of renewable energy in processing and cold chain infrastructure, and encouraging energy-efficient farm machinery. Together, these measures would reduce production costs, enhance resilience to external shocks, and improve the long-term competitiveness of India's agricultural exports.

5.9. Reorient Agricultural Research Agenda

Reorienting agricultural research towards market and export requirements has considerable potential to enhance export competitiveness by facilitating the sustainable transformation of agri-food systems. This can be achieved through the development of climate-resilient, pest- and disease-resistant crop varieties, improved production technologies, and digital innovations that increase productivity, enhance resource-use efficiency, reduce water and carbon footprints, and improve product quality, shelf life, and compliance with international SPS standards. Research can also support the development of improved post-harvest technologies, residue management practices, traceability systems, and climate-smart production methods, which are increasingly important for accessing high-value export markets.

Investment in agricultural research is particularly important for strengthening long-term competitiveness, as evidence suggests that it generates high economic returns, with every rupee invested yielding an estimated return of Rs. 13.85 (Kandpal *et al.*, 2024). However, realizing the full benefits of research requires stronger linkages between research, innovation and market demand. Research priorities should be increasingly guided by evolving consumer preferences, export market requirements, climate-related sustainability standards, and emerging trade regulations.

This calls for closer collaboration among research institutions, universities, export promotion councils, commodity boards, regulatory agencies, certification bodies, private industries, and farmer organizations. Such partnerships can accelerate the development and dissemination of market-oriented technologies, strengthen extension and technology transfer, improve traceability and quality assurance systems, and establish effective feedback mechanisms between exporters and researchers. A stronger research–industry–farmer interface will ensure that innovations respond to changing domestic and international market requirements, thereby enhancing the productivity, sustainability, and global competitiveness of India’s agricultural exports.

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Annexure 1: India's exports of major agricultural commodities, 2023-24 to 2025-26 at HS 8 level*

Commodity	Average export value (US\$ billion)	Share in agricultural exports (%)	Top five export destinations (% share)
Basmati rice	5.94	11.3	Saudi Arabia (20.8), Iran (15.1), Iraq (12.5), UAE (6.4), Yemen (5.9)
Non-Basmati rice	6.53	12.4	Benin (12.4), Guinea (7.0), Côte d'Ivoire (6.7), Togo (5.5), Senegal (5.2)
Frozen shrimp	4.85	9.2	USA (40.8), China (17.2), Japan (6.5), Vietnam (6.2), Belgium (3.5)
Other marine products	2.56	4.9	USA (23.1), China (17.4), Thailand (9.4), Spain (6.2), Vietnam (4.8)
Dried chillies	1.42	2.7	China (34.5), Thailand (11.6), USA (9.4), Bangladesh (9.3), Sri Lanka(5.3)
Cumin seeds	0.71	1.4	China (22.0), Bangladesh (11.8), UAE (8.9), USA (8.5), UK (4.2)
Pepper	0.11	0.2	USA (37.2), Canada (7.1), Sweden (6.7), UK (6.6), Germany (4.7)
Turmeric	0.28	0.5	Bangladesh (15.8), UAE (11.6), USA (8.2), Malaysia (5.2), Iran (5.0)
Other spices	0.46	0.9	UAE (22.3), Saudi Arabia (9.8), Bangladesh (9.1), China (5.9), Iran (5.7)
Frozen boneless buffalo meat	4.06	7.7	Vietnam (18.5), Malaysia (15.6), Egypt (14.8), Iraq (8.5), Saudi Arabia (5.6)
Dairy products	0.63	1.2	USA (35.2), UAE (12.7), Saudi Arabia (9.9), Bahrain (5.3), Bhutan (4.7)
Animal feed preparations	1.34	2.6	Bangladesh (18.4), Vietnam (12.6), South Korea (8.3), China (6.5), Indonesia (5.8)
Oil meals	1.34	2.6	South Korea (20.3), Vietnam (16.5), Thailand (11.2), Bangladesh (8.1), Indonesia (7.4)
Fresh grapes	0.82	1.6	Netherlands (21.4), Bangladesh (10.3), UK (8.2), Russia (7.5), UAE (6.7)
Bananas	0.18	0.3	UAE (32.4), Iran (14.8), Saudi Arabia (12.6), Nepal (8.7), Oman (6.1)
Mangoes	0.36	0.7	UAE (42.3), UK (9.5), Saudi Arabia (7.8), Qatar (5.6), Kuwait (4.8)

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Commodity	Average export value (US\$ billion)	Share in agricultural exports (%)	Top five export destinations (% share)
Pomegranates	0.33	0.6	UAE (29.8), Netherlands (14.3), Bangladesh (8.7), Saudi Arabia (7.2), UK (5.6)
Onions	0.63	1.2	Bangladesh (24.2), UAE (13.8), Malaysia (9.8), Nepal (6.5), Sri Lanka (6.1)
Potatoes	0.12	0.2	Nepal (22.6), Sri Lanka (18.5), UAE (12.4), Malaysia (10.8), Oman (6.2)
Green chillies	0.08	0.2	UAE (38.5), Saudi Arabia (12.7), Bangladesh (10.4), UK (5.8), Malaysia (5.2)
Okra	0.05	0.1	UAE (44.6), Saudi Arabia (14.8), UK (7.1), Qatar (6.8), Kuwait (4.3)
Pickles & preserved vegetables	0.22	0.4	USA (22.4), UAE (14.3), UK (8.7), Canada (5.9), Australia (5.2)
Mango pulp & fruit preparations	0.44	0.8	Saudi Arabia (21.6), UAE (18.4), Netherlands (8.7), USA (7.8), Yemen (6.4)
Fruit & vegetable juices	0.19	0.4	UAE (18.3), Saudi Arabia (15.7), USA (8.4), Oman (6.3), Qatar (5.8)
Biscuits	0.41	0.8	USA (17.6), UAE (10.8), UK (6.9), Australia (5.5), Saudi Arabia (4.8)
Tomato ketchup & sauces	0.12	0.2	USA (18.4), UAE (11.5), UK (8.1), Australia (6.4), Canada (5.9)
Mixed seasonings & condiments	0.18	0.3	USA (19.5), UAE (12.8), UK (7.6), Saudi Arabia (6.3), Malaysia (5.9)
Miscellaneous food preparations	1.68	3.2	USA (16.1), UAE (11.4), Malaysia (9.2), Nepal (5.4), Australia (4.8)

*Values are averaged over three years

Source: Convener's compilation based on data from DGCIS, APEDA and MPEDA

Annexure 2: India's imports of major agricultural commodities, 2023-24 to 2025-26 at HS 8 level*

Commodity	Average import value (US\$ billion)	Share in agricultural imports (%)	Top five source countries (% share)
Crude palm oil	7.95	19.4	Indonesia (52.1), Malaysia (29.8), Thailand (8.4), Papua New Guinea (3.6), Singapore (2.4)
Refined palm oil & fractions	1.78	4.3	Indonesia (44.3), Malaysia (38.5), Nepal (5.6), Singapore (4.8), Thailand (3.1)
Crude soybean oil	4.92	12.0	Argentina (46.1), Brazil (31.2), Russia (7.4), Paraguay (5.3), Uruguay (3.2)
Crude sunflower oil	3.65	8.9	Russia (39.4), Ukraine (20.3), Argentina (16.2), Romania (13.5), Bulgaria (3.0)
Chickpeas (gram)	0.56	1.4	Australia (71.8), Tanzania (13.5), Sudan (6.3), Argentina (4.7), Russia (1.5)
Lentils (masur)	1.08	2.6	Canada (49.5), Australia (42.4), USA (3.3), Türkiye (1.2), UAE (0.9)
Pigeon peas (tur)	0.96	2.3	Mozambique (34.2), Myanmar (26.4), Tanzania (18.9), Sudan (9.5), Malawi (6.5)
Dry peas	0.58	1.4	Canada (49.2), Russia (31.6), Türkiye (7.2), Argentina (3.5), Ukraine (2.7)
Animal feed preparations	0.72	1.8	Thailand (16.5), Sri Lanka (15.9), Vietnam (12.3), USA (9.1), Indonesia (5.7)
Milk powder	0.04	0.1	France (36.5), Poland (10.1), Germany (8.4), Netherlands (7.1), Belgium (5.0)
Fresh apples	0.42	1.0	Türkiye (24.1), Iran (17.8), Afghanistan (8.3), Italy (7.8), USA (5.5)
Kiwifruit	0.07	0.2	Chile (41.3), New Zealand (18.4), Greece (15.8), Iran (10.2), Italy (9.8)
Almonds (shelled)	1.18	2.9	USA (84.8), Australia (8.7), Afghanistan (2.4), UAE (1.5), Iran (1.2)
Walnuts (shelled)	0.11	0.3	Chile (40.2), USA (15.1), Afghanistan (10.8), Mexico (5.2), Ukraine (3.4)
Pistachios	0.25	0.6	USA (47.6), Iran (23.1), UAE (10.4), Afghanistan (5.6), Hong Kong (4.5)
Raw cashew nuts	1.74	4.2	Ghana (16.2), Côte d'Ivoire (15.1), Tanzania (12.4), Benin (10.8), Burkina Faso (10.5)

Contd...

Commodity	Average import value (US\$ billion)	Share in agricultural imports (%)	Top five source countries (% share)
Black pepper	0.18	0.4	Sri Lanka (47.5), Vietnam (22.1), Indonesia (14.7), Brazil (5.4), Madagascar (3.6)
Raw cane sugar	1.28	3.1	Brazil (98.7), Sudan (0.5), South Africa (0.2), Thailand (0.1), Mexico (0.1)
Coffee (green beans)	0.24	0.6	Vietnam (24.8), Indonesia (23.3), Uganda (9.8), Brazil (8.6), Ethiopia (5.2)
Cocoa beans	0.16	0.4	Democratic Republic of the Congo (39.5), Ecuador (27.2), Dominican Republic (14.1), Côte d'Ivoire (4.0), Ghana (2.1)

*Values are averaged over three years

Source: Convener's compilation based on data from DGCIS and APEDA

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