



STRATEGIES TO BOOST INDIA'S CUCUMBER & GHERKINS EXPORTS





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LIST OF ABBREVIATIONS

APEDA	Agricultural & Processed Food Products Export Development Authority
AMS	Agricultural Marketing Service
APHIS	Animal and Plant Health Inspection Service
AAGR	Average Annual Growth Rate
BRCGS	British Retail Consortium Global Standards
CFR	Code of Federal Regulations
CETA	Comprehensive Economic and Trade Agreement
CIS	Commonwealth of Independent States
DPIIT	Department for Promotion of Industry and Internal Trade
DoC	Department of Commerce
EFTA	European Free Trade Association
EU	European Union
FAO	Food and Agriculture Organisation
FDA	Food and Drug Administration
FSSC	Food Safety System Certification
FTA	Free Trade Agreement
GI	Geographical Indication
GFSI	Global Food Safety Initiative
GAP	Good Agricultural Practices
GST	Goods and Services Tax
HSN	Harmonised System of Nomenclature

HDPE	High-Density Polyethylene
ICAR	Indian Council of Agricultural Research
IGEA	Indian Gherkin Exporters Association
INR	Indian Rupee
ICD	Inland Container Depot
IFS	International Featured Standards
ITC	International Trade Centre
Kg	Kilogram
KVK	Krishi Vigyan Kendra
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MT	Metric Tonnes
MSME	Micro, Small, and Medium Enterprises
Mn	Million
Mha	Million Hectares
MMT	Million Metric Tonnes
MRL	Maximum Residue Limit
MoAFW	Ministry of Agriculture and Farmers Welfare
MoCI	Ministry of Commerce and Industry
MoFPI	Ministry of Food Processing Industries
NTB	Non-Tariff Barrier
ODOP	One District One Product
PMFME	PM Formalisation of Micro Food Processing Enterprises

PMKSY	Pradhan Mantri Kisan Sampada Yojana
PLI	Production Linked Incentive
PLISFPI	Production Linked Incentive Scheme for Food Processing Industry
PGI	Protected Geographical Indication
RKVY	Rashtriya Krishi Vikas Yojana
RTE	Ready-to-eat
RoDTEP	Remission of Duties and Taxes on Exported Products
RCA	Revealed Comparative Advantage
SQF	Safe Quality Food Certification
SPS	Sanitary and Phytosanitary
TE	Triennium Ending
UAE	United Arab Emirates
UK	United Kingdom
USDA	United States Department of Agriculture
USD	United States Dollar
USA	United States of America



FOREWORD

India's journey in gherkin exports stands out as a quiet yet remarkable success in the agricultural sector. What began in the early 1990s as a small-scale initiative in parts of Karnataka has since evolved into a globally significant export industry, supported by a strong foundation of contract farming, year-round cultivation, integrated processing facilities, and a dedicated exporter base. Today, India is the world's largest exporter of prepared and preserved gherkins, accounting for nearly 23 per cent of global trade in this category. Gherkins cultivation provides income and livelihood opportunities to thousands of small and marginal farmers, particularly across Karnataka, Tamil Nadu, Andhra Pradesh, and Telangana. The industry operates almost entirely on an export-oriented model, supported by private sector participation and embedded services to farmers. With most of the produce exported in bulk or ready-to-eat form, India's gherkins are present on supermarket shelves across the United States, European Union, Russia, Canada, and the Middle East.

Despite this strong foundation, the sector faces several challenges that could constrain its future growth. These include increasing input and labour costs, inadequate post-harvest infrastructure, regulatory hurdles, and tariff disadvantages in some key markets. At the same time, the sector remains underrepresented in policy frameworks and does not receive the same level of institutional support as other niche exports.

Recognising the need for a comprehensive assessment of the cucumber and gherkins sector, this study has been jointly undertaken by Agricultural and Processed Food Products Export Development Authority (APEDA) and Indian Council for Research on International Economic Relations (ICRIER). It seeks to map the current production and export landscape, examine value chain constraints, and identify strategic opportunities for diversification, value addition, and market expansion. Drawing on ICRIER's analytical expertise and APEDA's extensive engagement with exporters and producer groups, this report offers actionable strategies to strengthen India's global position in gherkins trade.

We hope that the insights and recommendations presented in this report will serve as a useful guide for policymakers, exporters, processors, farmers and industry stakeholders. As India moves towards its broader vision of achieving USD 100 billion in agricultural exports by 2030, commodities like gherkins, which are high-value, low-regulation, and employment-intensive, will play a vital role in shaping a more diversified and resilient export basket.

SHEKHAR AIYAR

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PREFACE

India has emerged as a global leader in gherkin exports, driven by a robust ecosystem of contract farming, integrated processing units, and strong international linkages. Unlike cucumbers, which are primarily consumed fresh locally, gherkins are cultivated specifically for processing and export, positioning India as the source of nearly one-fourth of the world's prepared and preserved gherkin exports.

This transformation has been made possible through the collective efforts of thousands of small and marginal farmers, dynamic exporters, and dedicated processing units, particularly in the southern states of Karnataka, Tamil Nadu, Andhra Pradesh and Telangana. Indian gherkins are exported across the United States, European Union, Canada, Australia, and parts of the Middle East. However, the sector now faces several challenges, including labour shortages, rising input costs and increasing freight expenses, limited infrastructure, and overdependence on a few key markets threaten the sustainability and growth of this high-potential commodity. Moreover, India's gherkin exporters often contend with tariff disadvantages and increasingly stringent quality and regulatory standards in importing countries.

In order to further study the issues and challenges, the Indian Council for Research on International Economic Relations (ICRIER) in collaboration with Agricultural and Processed Food Products Export Development Authority (APEDA) has undertaken a detailed assessment of India's cucumber and gherkin export ecosystem. This study identifies key opportunities to diversify markets, build resilience across the supply chain, and scale up exports of ready-to-eat gherkin products that offer greater value addition.

The primary objective of this study is to assess India's current export capacities, identify emerging opportunities, and recommend strategic interventions that can safeguard and enhance the country's global competitiveness in the cucumber and gherkin trade. Insights from leading exporters, processors, and the Indian Gherkins Exporters Association (IGEA) complement extensive secondary data to ground the analysis in field realities.

The report is structured into six sections, each addressing a key dimension of the gherkin sector. Section 1 introduces the background, objectives, methodology, and data limitations of the study. Section 2 explores global and Indian production trends, maps the export value chain, and identifies key market players. Section 3 assesses the competitiveness of the sector, highlighting major challenges and emerging opportunities. Section 4 analyses the

export potential of gherkins across various international markets. Section 5 examines tariff and non-tariff barriers, and evaluates the role of government policies and schemes at both central and state levels. Finally, Section 6 presents policy recommendations to boost exports, support farmers, and enhance the overall competitiveness and inclusivity of the sector. By clearly outlining challenges, opportunities, and targeted solutions, this study offers a practical guide for policymakers seeking evidence-based reforms, exporters and processors looking to expand market reach, farmer organisations aiming for higher and more stable returns, and development partners supporting inclusive agri-value-chains. Implementing its recommendations can help secure India's leadership in gherkin exports, create resilient rural livelihoods, and contribute to the nation's broader ambition of achieving USD 100 billion in agricultural exports by 2030.

AUTHORS

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AUTHORS

Executive Summary



EXECUTIVE SUMMARY

India has emerged as the world's largest exporter of prepared and preserved gherkins, accounting for nearly 23 per cent of global exports. Over the past three decades, the sector has evolved into a distinct export-oriented horticultural success, supported by a robust contract farming model, integrated processing infrastructure, and strong linkages with global food supply chains. Unlike fresh cucumbers, which are largely consumed domestically, gherkins in India are cultivated almost exclusively for processing and export, making the sector highly specialised and globally integrated.

This report provides a comprehensive assessment of India's cucumber and gherkin export ecosystem, with a particular focus on gherkins. It examines production patterns, global trade dynamics, export competitiveness, policy constraints, and emerging market opportunities. Drawing on secondary data and extensive stakeholder consultations, the study identifies key challenges facing the sector and proposes targeted strategies to strengthen India's global position while ensuring sustainability and inclusive growth across the value chain.

PRODUCTION SCENARIO

Gherkin cultivation, processing, and export in India began in the early 1990s, starting modestly in Karnataka. Over the years, the industry expanded to other southern states, including Tamil Nadu, Andhra Pradesh, and Telangana. According to IGEA, India produces approximately **205 thousand metric tonnes** of gherkins annually (2024-25).

- **Karnataka** leads production with around **120 thousand MT**, cultivated over **20,000 acres**.
- **Tamil Nadu** contributes about **40 thousand MT** across **6,700 acres**.
- **Andhra Pradesh** produces roughly **25 thousand MT** over **4,200 acres**.
- **Telangana** accounts for around **20 thousand MT** across **3,400 acres**.

The sector operates almost entirely under a contract farming model, wherein exporters provide seeds, inputs, and technical guidance, and procure produce at pre-agreed prices. This model has enabled quality assurance, traceability, and income stability for farmers, while ensuring reliable supplies for exporters. India's agro-climatic advantage allows multiple crop cycles each year, enabling near year-round production and positioning the

country as a dependable off-season supplier to global markets. However, farmer participation has declined in recent years due to rising labour costs and reduced availability of farm labour, raising concerns about long-term production sustainability.

GLOBAL AND INDIAN EXPORT SCENARIO

The global trade of gherkins is largely segmented into two product categories, **bulk gherkins**, classified under **HS 071140**, which are provisionally preserved in brine or vinegar and repacked in importing countries; and **ready-to-eat (RTE) gherkins** under **HS 200110**, which are retail-packed in jars and cans. In the TE 2023, global exports of bulk gherkins stood at approximately USD 136.3 million, while RTE gherkin exports reached around USD 808.2 million. Together, the global market for gherkins is valued at nearly USD 944.5 million, reflecting strong international demand for both product types.

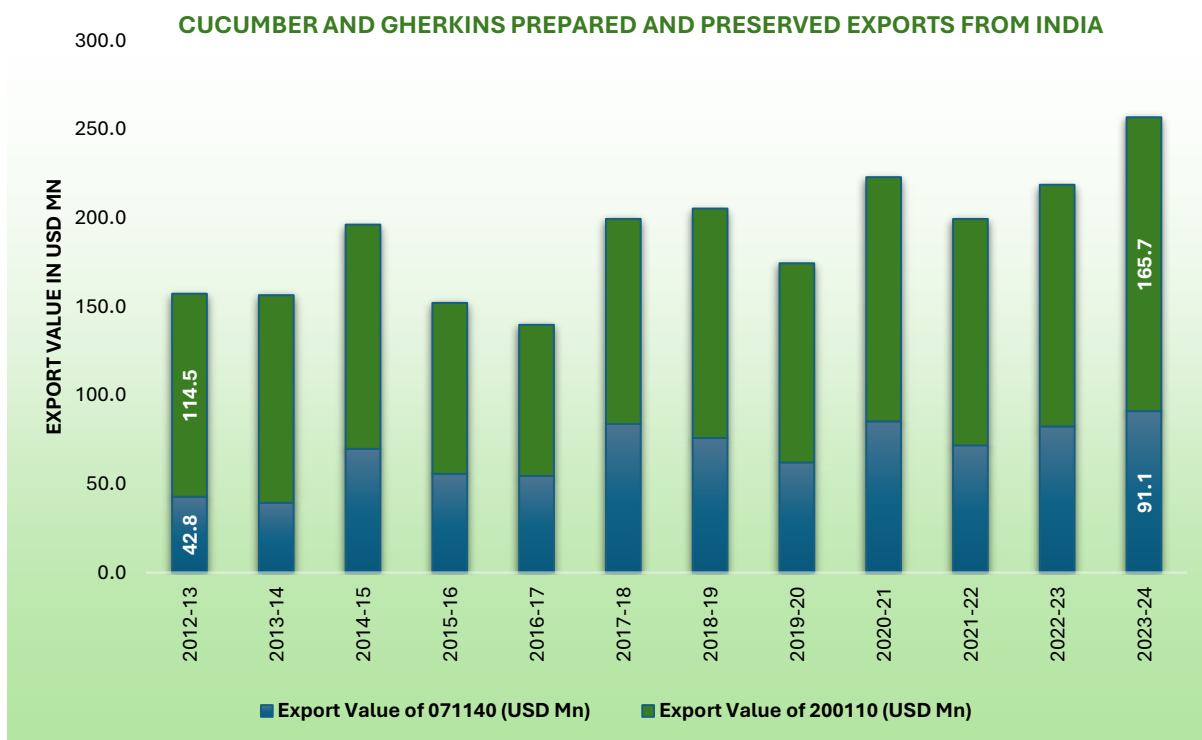
India plays a prominent role in this trade landscape. It is the world's leading exporter of bulk gherkins, accounting for nearly 57 per cent of global exports in this category (TE 2023). In the RTE segment, India ranks third globally, following the European Union and Türkiye. The European Union is the largest consumer of both bulk and RTE gherkins, with Germany, France, and the Netherlands emerging as the key destination markets. Other major importing countries include the United States, Canada, Russia, and several Middle Eastern nations. These trends highlight both the scale of global demand and the strategic importance of maintaining and expanding India's market share in both traditional and emerging markets.

India exports **gherkin** primarily in two categories:

- **Bulk gherkins** (USD **91 million** in 2023–24)
- **Ready-to-eat gherkins** (USD **165.7 million** in 2023–24).

Total gherkin exports stood at **USD 256.8 million**, with major destinations including the **USA, EU, Russia, Canada, Australia, UAE**, and **Saudi Arabia**.

India's dominance in bulk exports is driven by cost competitiveness, freight efficiency, and tariff advantages. However, the RTE segment, though smaller, offers higher value addition and growing demand in retail markets.



KEY STRENGTHS AND OPPORTUNITIES

- Production Base and Export Orientation:** Gherkin cultivation in India is highly export oriented, with over 99 per cent of production destined for international markets, supported by favourable agro-climatic conditions and a long-standing contract farming model concentrated in southern states.
- Seasonality and Supply Advantage:** India's near year-round production capability, including supply during off-season months in Europe, provides a structural advantage in meeting global demand and ensuring continuity of exports.
- Export Structure and Market Presence:** India supplies both bulk-preserved and ready-to-eat gherkins to major markets such as the United States and the European Union, with bulk gherkins continuing to dominate export volumes due to cost and freight efficiencies.
- Value Chain Strength:** The sector benefits from an integrated export value chain, encompassing input provisioning, technical support, assured procurement, processing, and compliance with international food safety standards, anchored by a relatively small but specialised group of exporters.

- **Comparative Advantage and Cost Competitiveness:** India holds a strong revealed comparative advantage in prepared and preserved gherkins, particularly in the bulk segment, driven by lower production costs, scale efficiencies, and competitive export pricing.
- **Scope for Market Diversification and Upgrading:** While traditional markets remain important, emerging regions such as the Middle East, East Asia, and CIS countries offer opportunities for diversification, alongside scope to expand higher-value ready-to-eat exports through branding, packaging, and compliance-led differentiation.

EMERGING CHALLENGES

- **High labour intensity and declining workforce in gherkins cultivation:** Gherkin cultivation is highly labour-intensive. Rising labour and input costs and declining rural workforce are discouraging farmers from continuing cultivation.
- **Logistics and Infrastructure Challenges:** Freight rate volatility, limited processing capacity during peak seasons, and gaps in rural connectivity and cold-chain infrastructure affect timely handling and export competitiveness.
- **Regulatory and compliance burden in supplying inputs:** Exporters supplying inputs to contract farmers face regulatory scrutiny and complex fertiliser licensing procedures, increasing compliance costs and operational uncertainty.
- **Lack of commodity specific policy support:** The gherkin sector lacks dedicated commodity-specific policy support, limiting targeted interventions to strengthen competitiveness against global rivals.
- **Overdependence on Volatile Export Markets:** With over 99 per cent of production exported, the sector remains highly vulnerable to global demand shocks, trade restrictions, and non-tariff barriers.
- **Lack of R&D in gherkins in India:** The absence of dedicated R&D has limited innovation in seeds and production practices, leading to dependence on imported planting material and constraining productivity growth.

STRATEGIC RECOMMENDATIONS

To safeguard and scale India's leadership in gherkin exports, a multi-pronged strategy is proposed:

Focussed strategies

1. Diversify export destinations, especially to the Middle East, CIS, and non-EU Europe, by addressing non-tariff barriers and leveraging diplomatic and trade channels.
2. Leverage the preferential tariff access secured under the recent India-European Union Free Trade Agreement for cucumber and gherkin exports (with tariff reductions expected to be implemented in a phased manner) while simultaneously expanding preferential market access in other major destinations such as the United States, United Kingdom, Canada and the Gulf Cooperation Council to ensure effective utilisation of quota-based benefits, diversify export markets, and sustain long-term growth of India's gherkin industry.
3. Develop cluster-based support systems in major producing states by enabling entrepreneurs and specialized service providers such as grading centres and pest management firms, while promoting mechanisation, skill development, and convergence with Mahatma Gandhi National Rural Employment Guarantee Act to address seasonal labour shortages, and streamlining environmental and contract farming regulations to facilitate efficient operations.

Other strategies

4. Promote RTE gherkin exports through targeted incentives for packaging, branding, and compliance with international standards.
5. Strengthen R&D to develop high-yield, disease-resistant indigenous seed varieties suited to Indian agro-climatic conditions.
6. Introduce gherkin-specific support under schemes like PMKSY, PLI, and ODOP to improve processing and exports.



Introduction

1

INTRODUCTION

1.1 BACKGROUND OF THE COMMODITY

Cucumbers and gherkins, though botanically the same species (*Cucumis sativus*), differ significantly in their global production, consumption, and trade patterns due to their distinct end uses. Originating in India, cucumber spread globally and is consumed fresh and used in salads, beverages, and cooked dishes across Asia, the Middle East, and Mediterranean countries. The global production of cucumbers, estimated at 97 million metric tonnes (MMT), is led overwhelmingly by China, contributing 81 per cent. India's production by comparison stood at only 1.8 MMT, accounting for around 2 per cent of the global share¹ (FAOSTAT, 2025) (MoAFW, 2025). While most cucumbers are consumed domestically, international trade remains modest, with global imports around 3.2 MMT in TE 2023 valued at USD 4.6 billion, indicating that international trade represents about 3.3 per cent of total production. India's exports of fresh cucumbers are relatively limited, totalling 1.68 thousand MT, which is 0.09 per cent of total production.

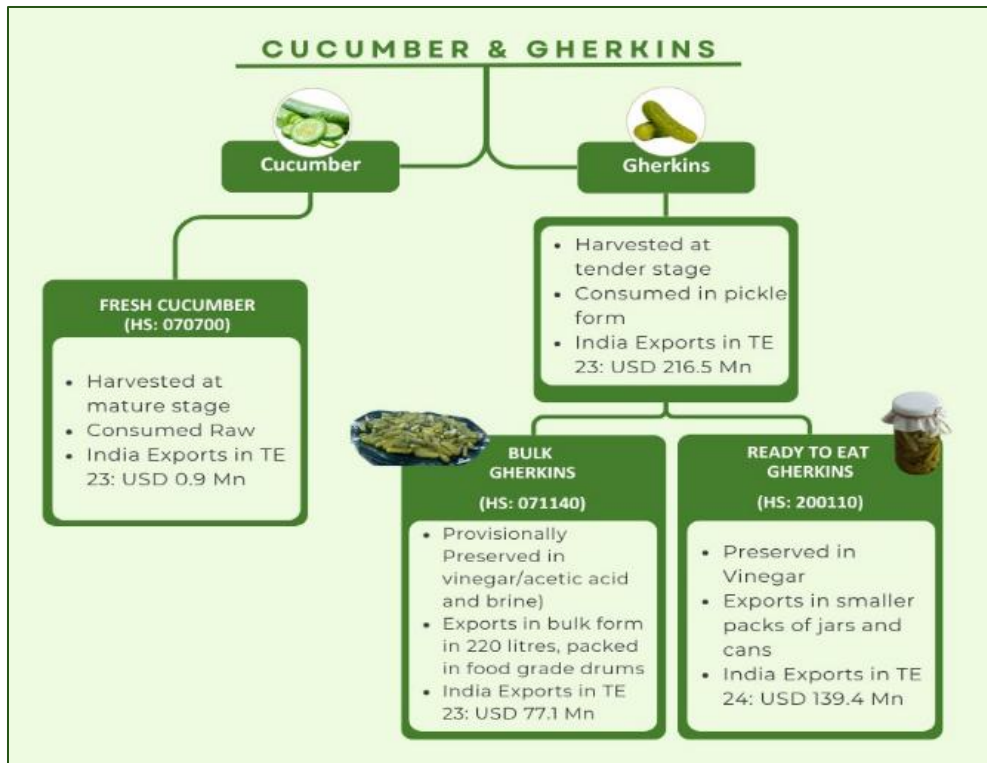
In contrast, gherkins, a type of cucumber harvested young at a tender stage (4-8 cm) and pickled, are grown specifically for processing and export. Gherkin production volumes are smaller, but the value addition through pickling makes them a high-value niche commodity. The major producers include India, Türkiye, and China, with India being a global leader in gherkin exports, accounting for 23 per cent of global trade in TE 2023. Unlike cucumbers, gherkins are not widely consumed domestically in producing countries like India. Instead, exports are heavily oriented towards Western markets, particularly the United States and the European Union, where gherkins are popular as pickled condiments.

The trade structure also differs. Fresh cucumbers are traded under HS code 070700, while gherkins fall under two processed categories: HS 071140 (provisionally preserved in brine/vinegar) and HS 200110 (fully preserved and retail-ready). While exports of fresh cucumbers by India is negligible, it dominates the processed and preserved gherkins.

¹ A discrepancy in cucumber production data was observed in FAOSTAT. The data was updated with MoAFW data. For details, see [Annexure 1](#)



Figure 1.1: Classification of Cucumber and Gherkins



Source: Created using data from Department of Commerce, 2025 & APEDA, 2025

Although cucumber cultivation in India has long been a part of traditional agriculture, the export potential of pickling cucumbers, specifically gherkins, was recognised only in the late 1980s. This discovery marked a turning point in the trajectory of Indian horticultural exports. Global demand for gherkins started rising after European producers faced higher production costs, leading to a shift in cultivation to Türkiye. However, as Turkish farmers transitioned to more lucrative crops like tomatoes, a gap emerged in the global gherkin supply chain. Indian farmers, particularly in the southern region, identified this as an opportunity and moved swiftly to fill the void (Kumar, Rai, & Rai, 2008).

Commercial gherkin cultivation, processing, and export in India began in the early 1990s, starting at a modest scale in Karnataka. Encouraged by favourable agro-climatic conditions and rising international demand, the cultivation area gradually expanded to include the neighbouring states of Tamil Nadu and Andhra Pradesh. Today, Karnataka alone accounts for approximately 60 per cent of the country's total gherkin production, while Tamil Nadu and Andhra Pradesh contribute about 20 per cent each (IIFPT, n.d.).

The Indian gherkin industry has evolved into a robust export-oriented sector, supported by contract farming models, integrated processing units, and strong linkages with global food supply chains. India is now one of the leading suppliers of gherkins to the international

market, offering both bulk and retail-ready products to major food processing companies and retailers around the world.

India exported USD 225 million worth of prepared and preserved gherkins in TE 2023-24 (MoCI, 2025), accounting for 23 per cent of the world's gherkin demand, making it a key player in global exports. Of this, USD 81.8 million was exported in bulk packs to markets such as Spain, Russia, France, the USA, and Belgium, while USD 143.2 million comprised ready-to-eat (RTE) gherkins shipped to the USA, Germany, Canada, and Australia. In contrast, exports of fresh cucumbers remained minimal at under USD 1 million during the same period.

In recent years, India's leading position in the global gherkin market is facing competition from countries like Türkiye, Germany, and the Netherlands. These countries are increasing their presence in international markets, which raises concerns about India's ability to stay ahead in the long run. At the same time, India's gherkin exports are largely focused on the United States (US) and the European Union (EU). This heavy dependence on a few markets makes India vulnerable to trade restrictions, policy changes, and other barriers.

In this context, the report looks at the current state and future potential of India's gherkin industry. It covers the entire value chain from farming and processing to exports. It assesses India's price competitiveness and identifies new and emerging export destinations. Based on these insights, the study proposes strategies to strengthen India's export capacity and secure its position in the global gherkin market.

1.2 OBJECTIVES AND SCOPE OF THE STUDY

The primary objective of this study is to assess India's current export capacities, identify emerging opportunities, and recommend strategic interventions that can safeguard and enhance the country's global competitiveness in the cucumber and gherkin trade.

To achieve this, the study undertakes a comprehensive analysis of the gherkin export ecosystem under the following dimensions:

- **Market trend analysis:** Examine domestic and international trends in gherkin production and exports, including volume, value, market destinations, and seasonality patterns.
- **Value chain mapping:** Identify key actors and stages from farm to export, covering seed sourcing, contract farming, processing, packaging, logistics, and port clearance with the aim of detecting inefficiencies and bottlenecks.

- Policy and trade environment: Review prevailing tariff and non-tariff barriers affecting India's gherkin exports, particularly sanitary and phytosanitary measures, labelling requirements, and customs procedures in major destination markets.
- Strategic recommendations: Develop actionable strategies to enhance export infrastructure, diversify export markets, promote indigenous R&D, and build resilience against global trade disruptions.

1.3 DATA SOURCES AND LIMITATIONS

This report draws on limited secondary data sources and available literature on the cucumber and gherkins export sector. While trade data is readily available, there is a significant data gap with respect to gherkin production in India. Further, most cited figures are either outdated or based on estimates. Discrepancies also persist between production and area statistics reported by international sources like FAOSTAT, compared to data from the Ministry of Agriculture & Farmers Welfare (MoAFW), Government of India.

There are very few comprehensive studies or sector-specific reports focused on gherkins, given its limited domestic consumption and niche export orientation. Unlike major horticultural crops, gherkins are not covered adequately in the national horticulture statistics framework, and data on production, area, farmgate prices, input costs, or yield trends are scattered and inconsistent.

With limited published data available, the analysis drew heavily on insights shared by the members of the Indian Gherkin Exporters Association (IGEA). Additional perspectives from leading exporters and processors operating in across key production regions such as Karnataka, Tamil Nadu, and Andhra Pradesh further enriched the analysis.





Cucumbers & Gherkins Production, Value Chain and Market Dynamics



CUCUMBERS & GHERKINS: PRODUCTION, VALUE CHAIN AND MARKET DYNAMICS

2.1 GHERKINS IN GLOBAL CONTEXT

While cucumbers are widely consumed fresh, gherkins are specifically cultivated for pickling. As a globally traded product, gherkins vary in taste, size, and preparation, and are known by different names across cultures. In the USA and Canada, pickled gherkins are simply called “pickles.” Unlike in other countries where “pickle” can refer to any pickled vegetable; in the US, the term almost exclusively means pickled cucumbers. In France, they are known as cornichons, while in Germany, they are called Gewürzgurken. The term “gherkin” is commonly used in British English and in countries influenced by the British legacy, such as India. These linguistic and cultural differences influence everything from labelling and consumer expectations to the preferred shape and size of gherkins for processing. The global gherkin trade is a striking example of agricultural globalization, where tropical farms in India supply the pickled shelves of Europe and North America.

The global production of gherkins (and related pickling cucumbers) is concentrated in a few key countries, with India standing out as the largest exporter of processed gherkins. China, which is the largest cucumber producer, is also a leading gherkin producer. It is the third largest bulk gherkin exporter after India and Belgium. Other significant producers include Türkiye, Iran, Russia, and the United States. The United States is a significant producer of gherkins, with Michigan leading in pickling cucumber production, followed by North Carolina and Texas. In the US, processors like Mt. Olive and Vlasic dominate the domestic market, sourcing both locally and from importers. Recent years have also seen American firms increasing imports from India due to cost efficiencies and consistent quality.

European countries like Germany, Poland, and the Netherlands are significant processing centres, supplying domestic and intra-EU demand. Germany, in particular, has a strong tradition of fermented pickles, often seasoned with dill and mustard seeds. Türkiye processes a considerable share of its gherkin crop, much of which is exported to the Middle East and Europe.



Consumption is highest in countries with a culinary tradition of incorporating pickled foods into daily meals. The countries with highest consumption of gherkins include United States, where it is a staple in burgers, sandwiches, and snacks. Germany, France, and other European nations also exhibit high consumption. In Russia and Eastern Europe, pickled cucumbers are common in everyday meals and festive tables, often fermented in salt brine rather than vinegar. In India, however, gherkins are primarily grown for export purposes, with less than 10 per cent of the crop consumed domestically. Gherkin consumption remains limited with traditional Indian pickles (or acharas) made from mango, lime, chilli, or garlic, much preferred in the Indian domestic market.

2.2 GHERKINS PRODUCTION IN INDIA

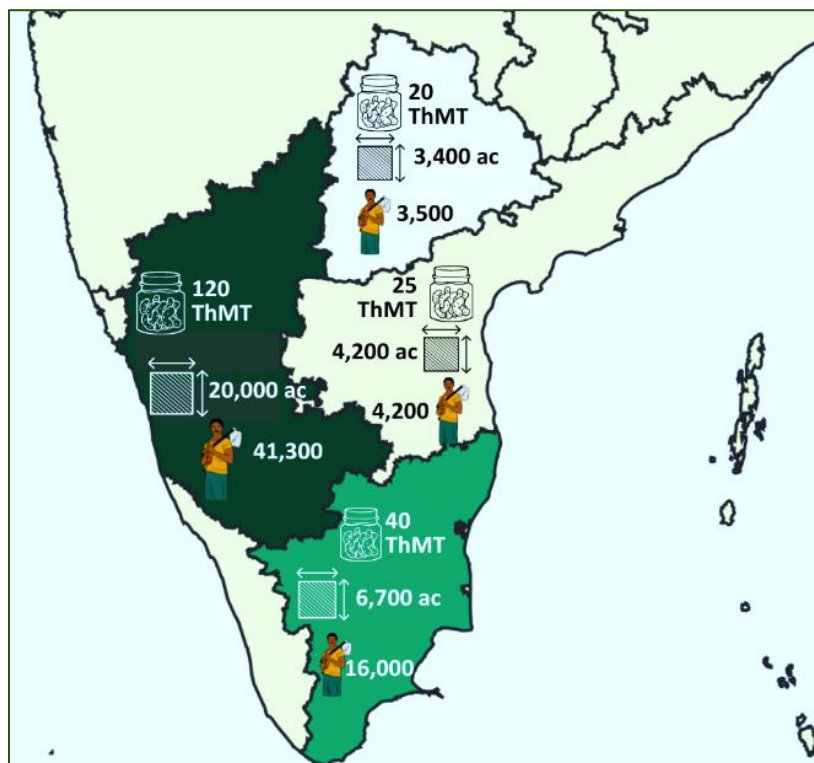
Gherkins are mainly grown in South India, where the climate and soil conditions are ideal for cultivation. The crop requires temperatures between 15°C and 35°C and well-drained sandy or loamy soils, conditions found primarily in Karnataka, Tamil Nadu, and Andhra Pradesh. These favourable conditions prevail throughout the year, allowing farmers to grow up to three crops annually. This gives the region a distinct advantage, enabling harvesting and processing of gherkins for almost 10 months each year (Indian Gherkin Exporters' Association, 2025).

Gherkin cultivation, processing, and export in India began in the early 1990s, initially on a small scale in Karnataka. Over the years, the industry gradually expanded to other southern states, including Tamil Nadu and Andhra Pradesh. According to IGEA², India currently produces approximately 205 thousand MT of gherkins annually, with cultivation concentrated in these four states.

Karnataka is the largest contributor, accounting for an estimated 120 thousand MT, with cultivation spread over approximately 20 thousand acres. Tamil Nadu follows with a production volume of around 40 thousand MT, cultivated across nearly 6.7 thousand acres. Andhra Pradesh contributes approximately 25 thousand MT, with gherkins grown over 4.2 thousand acres. Telangana reports a production of roughly 20 thousand MT, with an area under cultivation of about 3.4 thousand acres (**Figure 2.1**).

² All-India gherkin production data not separately reported by Ministry of Agriculture and Farmers' Welfare (MoAFW), as it is aggregated with cucumber.

Figure 2.1: Gherkin Production in India



Source: Created using data provided by Indian Gherkins Exporters Association (IGEA)

Gherkin farming in India is conducted entirely through the “contract farming” model. Under this system, processing companies provide farmers with all the necessary inputs, including seeds, fertilisers, and technical support. In return, farmers agree to sell their produce back to the company at pre-agreed prices. Previously, over 90 thousand small and marginal farmers were engaged in its cultivation; however, this number has declined to around 60 thousand in recent years. According to IGEA, the reduction is primarily due to rising labour costs, driven by rural-to-urban migration, and a declining interest among younger rural populations. These factors have significantly increased the financial burden on cultivators, making the crop less attractive for many.

Most of the processing and export companies operate in Karnataka, Tamil Nadu, and Andhra Pradesh. These companies oversee and guide the entire cultivation process, ensuring strict adherence to quality standards required for international markets. This structured model has helped India build a reputation for producing high-quality gherkins and has made it a reliable supplier to global buyers.

Table 2.1: Comparison of Crop Cycle of Gherkins in India with competing countries

Country	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
India	Peak Harvest	Peak Harvest	Lean Harvest			Peak Harvest	Peak Harvest	Peak Harvest	Peak Harvest		Lean Harvest	Lean Harvest
Germany							Peak Harvest	Peak Harvest	Peak Harvest			
Türkiye							Peak Harvest	Peak Harvest				
China						Peak Harvest	Peak Harvest	Peak Harvest	Peak Harvest			

Peak Harvest
 Lean Harvest

Source: (IIFPT, n.d.), (Bayer CropScience, 2013), (Woolsey, 2016)

Gherkin cultivation in India follows two main harvesting seasons: mid-June to mid-September and January to February. November, December and March are typically lean periods. Sowing is done between April and May, before the onset of the monsoon. The harvesting cycle lasts for approximately 30 to 35 days. To maintain the desired grade, daily picking is carried out, and around 50 rounds of harvesting occur during this period. This allows for some level of production almost year-round. In comparison, Germany and Türkiye harvest gherkins from July to September and from July to August, respectively. China’s season is similar to India’s, lasting from June to September. India’s ability to produce gherkins even during the lean months gives it an edge in supplying to global markets when others cannot. This creates an opportunity to meet off-season demand and strengthen its position as a key exporter.

2.3 GLOBAL EXPORT TRENDS

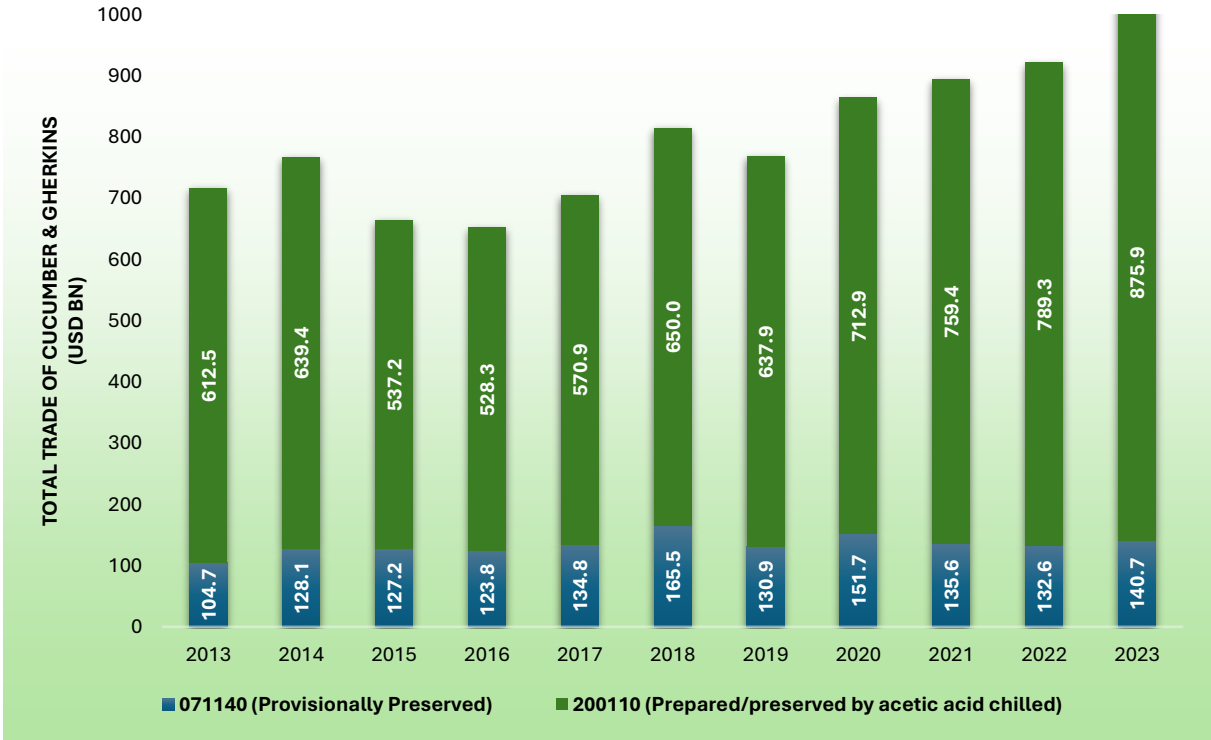
Under HSN, the trade of Gherkins is classified as HSN 200110 and 071140. These two HSNs combined constitute the Prepared and Preserved Gherkins

- i. **HS 071140 - Provisionally Preserved (preserved in vinegar/acetic acid and brine):** Gherkin exports are in bulk form in 220 litres, packed in food-grade High-Density Polyethylene (HDPE) drums. This is later repacked by the importers into smaller, ready-to-eat consumer packs to suit their consumers' requirements.



ii. **HS 200110- Preserved in Vinegar:** These are ready-to-eat gherkins which are in smaller packs of jars and cans.

Figure 2.2: Global Exports of Cucumber and Gherkins Prepared and Preserved



Source: ITC Trade Map, 2025

In TE 2023, the global exports of bulk gherkins (071140) were USD 136.3 Mn. The exports rose from USD 104.7 Mn in 2013 to USD 140.7 Mn in 2023 at an annual average growth rate (AAGR) of 4 per cent. In TE 2023, the global exports of Ready-to-eat gherkins (200110) was USD 808.2 Mn. The exports rose from USD 612.5 Mn in 2013 to USD 875.9 Mn in 2023 with an AAGR of 4 per cent (Figure 2.2).

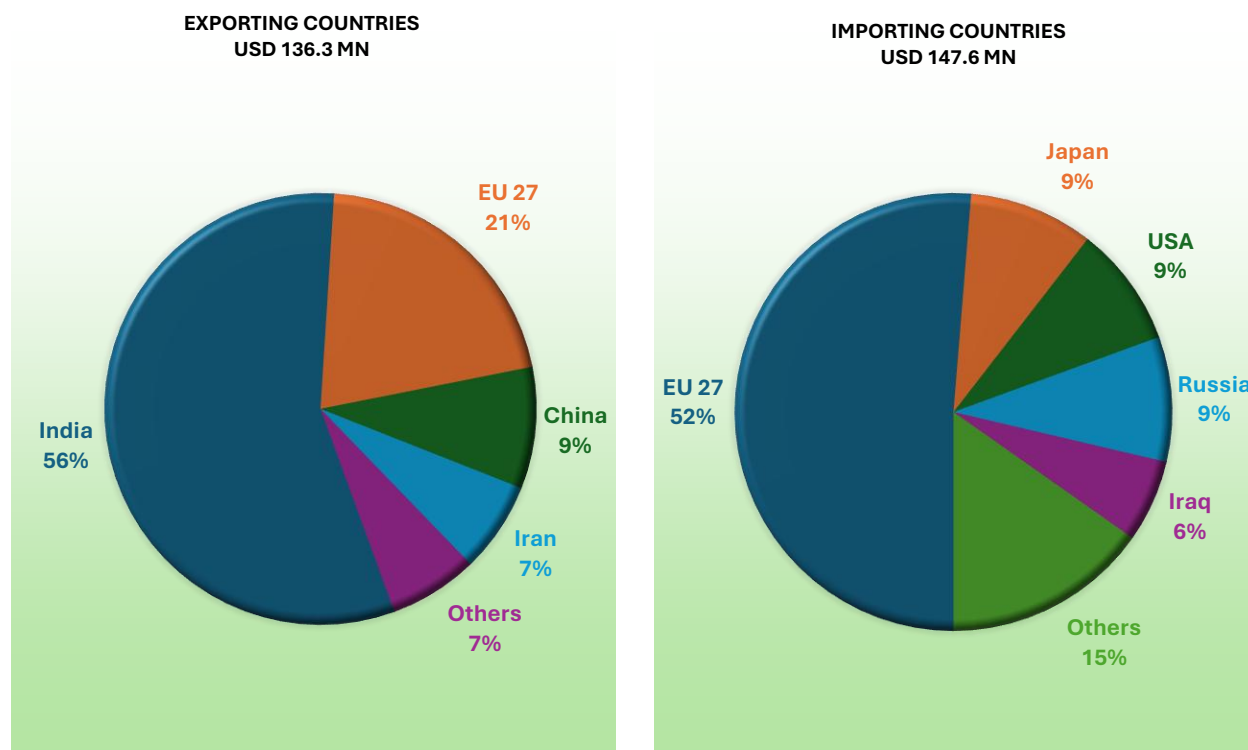
GLOBAL TRADE OF BULK GHERKINS

In the TE 2023, India emerged as the leading global exporter of gherkins in bulk form (HS Code: 071140), accounting for a dominant 57 per cent of global exports. India’s bulk gherkin exports were valued at USD 77.1 Mn. The EU followed with a 21 per cent share, valued at USD 28.4 Mn, while China stood third with a 9 per cent share, exporting gherkins worth USD 12.4 Mn. Within the EU, the top exporting countries were Belgium, the Netherlands, and Spain. Belgium alone contributed 13 per cent to global exports, with a value of USD 17.4 Mn.

On the import side, demand was primarily concentrated in the EU, Japan, Russia, and the US. In TE 2023, the EU imported gherkins worth USD 75.7 million, making up 51 per cent of

global imports. Within the EU, France was the largest importer with a value of USD 31.5 million (21 per cent share), followed by Belgium at USD 12.6 million (9 per cent) and Spain at USD 11.9 million (8 per cent). Outside the EU, Japan and Russia each imported gherkins worth USD 13.6 million (9 per cent share each), while the US imported gherkins valued at USD 13.2 million, also accounting for 9 per cent of the global import share.

Figure 2.3: Value-wise Bulk Gherkins Exporting and Importing Countries in TE 2023



Source: ITC Trade Map, 2025

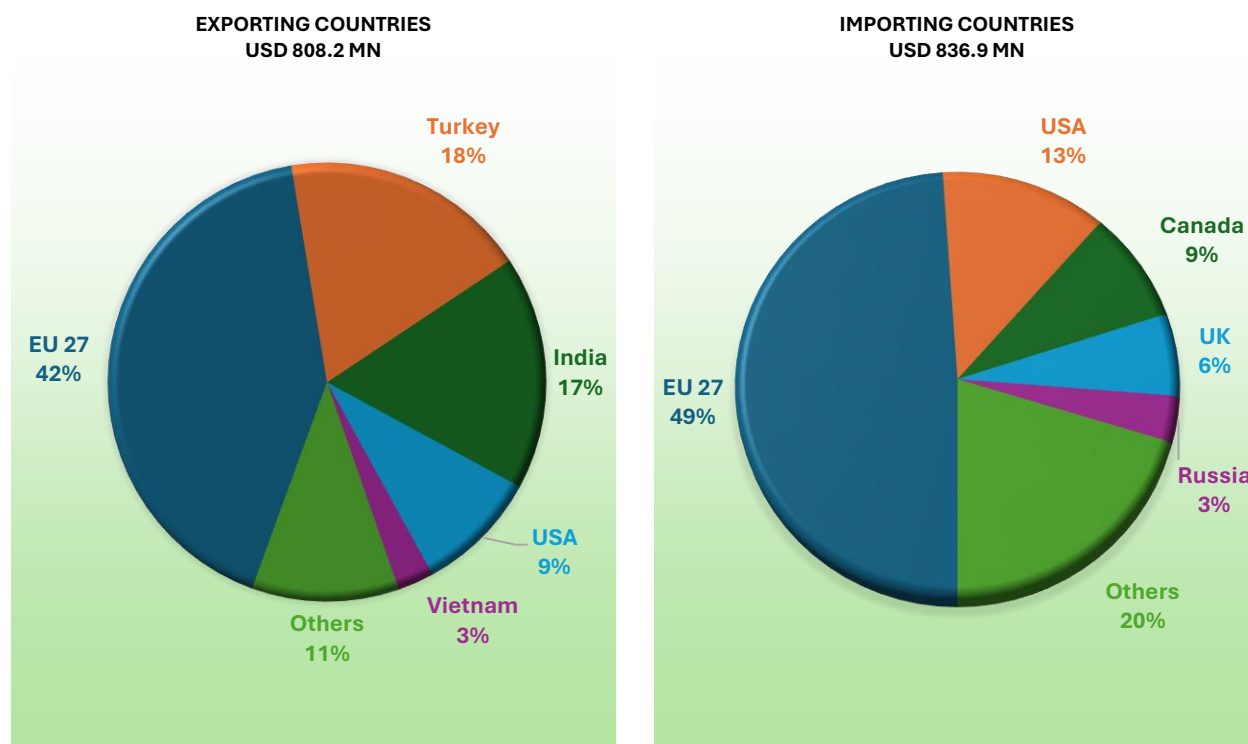
GLOBAL TRADE OF READY-TO-EAT GHERKINS

In TE 2023, the EU was the leading exporter of ready-to-eat gherkins packed in smaller containers (HS Code: 200110). The EU accounted for 42 per cent of global exports in this category, with an export value of USD 338.1 million. Türkiye ranked second with an 18 per cent share, exporting gherkins worth USD 147.6 Mn, followed closely by India, which held a 17 per cent share with exports valued at USD 139.4 Mn. Within the EU, Germany and the Netherlands were among the largest contributors to exports. Belgium also played a key role in the global market, contributing 19 per cent to total global exports, valued at USD 151.9 Mn (**Figure 2.4**).

On the import side, major demand came from the EU, the US, Canada, and the UK. In TE 2023, the EU imported ready-to-eat gherkins worth USD 409.2 Mn, making up 49 per cent of

global imports. Germany and the Netherlands were the top importers within the EU, with Germany importing gherkins worth USD 92.6 Mn (11 per cent share) and the Netherlands importing USD 57.9 Mn (7 per cent). Outside the EU, the US was a major importer with a 13 per cent share, importing gherkins worth USD 105.3 Mn. Canada followed with imports valued at USD 71.4 Mn (9 per cent), and the UK imported gherkins worth USD 52.3 Mn, contributing 6 per cent to global imports (**Figure 2.4**).

Figure 2.4: Value-wise Ready-to-eat Gherkins Exporting & Importing Countries in TE 2023



Source: ITC Trade Map, 2025

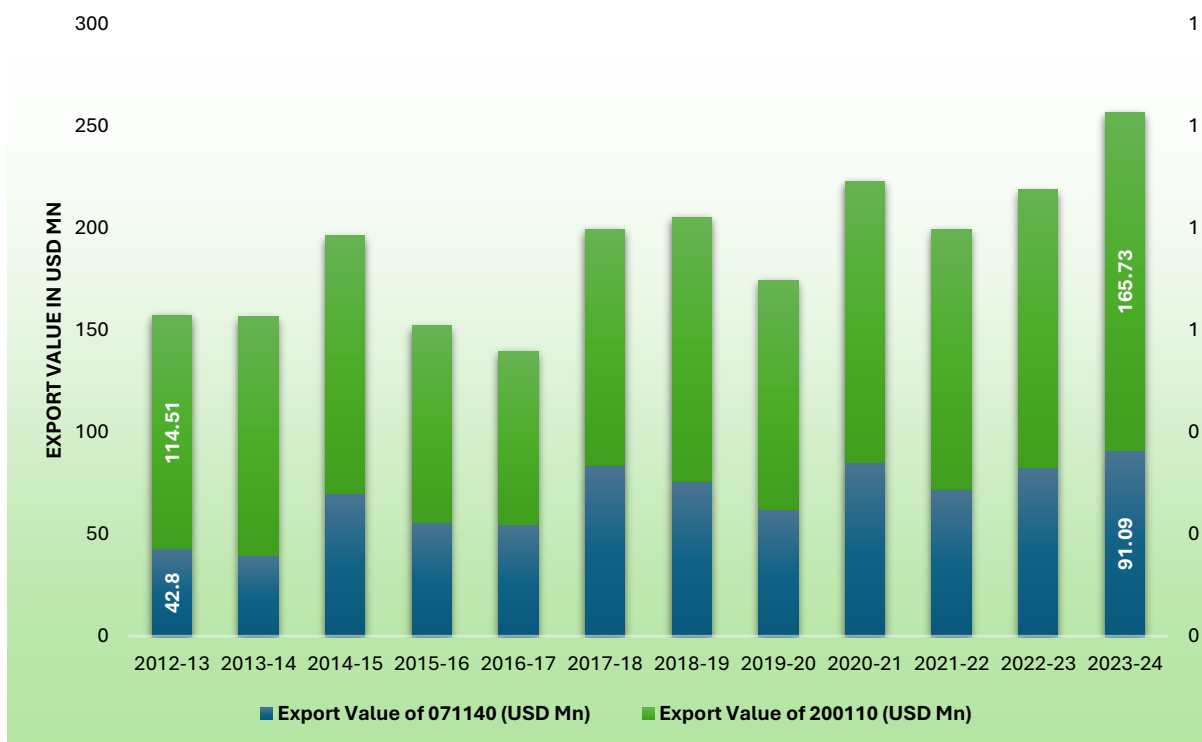
India is the largest exporter of prepared and preserved gherkins when considering both bulk and smaller packs together. In the TE 2023, the global exports of prepared and preserved gherkins stood at USD 944.5 Mn. India contributed significantly to this trade, exporting gherkins worth USD 216.5 Mn and accounting for **23 per cent of the global share**.

2.4 CUCUMBER AND GHERKINS EXPORTS FROM INDIA

Being a leading global exporter of prepared and preserved gherkins, India's exports have demonstrated consistent growth over the past decade, increasing from USD 157.3 Mn in 2012-13 to USD 256.8 million in 2023-24, with an AAGR of 6 per cent.

Exports of bulk gherkins, classified under HS Code 071140, grew from USD 42.8 Mn in 2012–13 to USD 91 Mn in 2023-24, recording an AAGR of 11 per cent. On the other hand, exports of ready-to-eat gherkins (HS Code: 200110) increased from USD 114.5 Mn to USD 165.7 Mn during the same period, with an AAGR of 5 per cent (**Figure 2.5**)

Figure 2.5: Cucumber and Gherkins Prepared and Preserved Exports from India



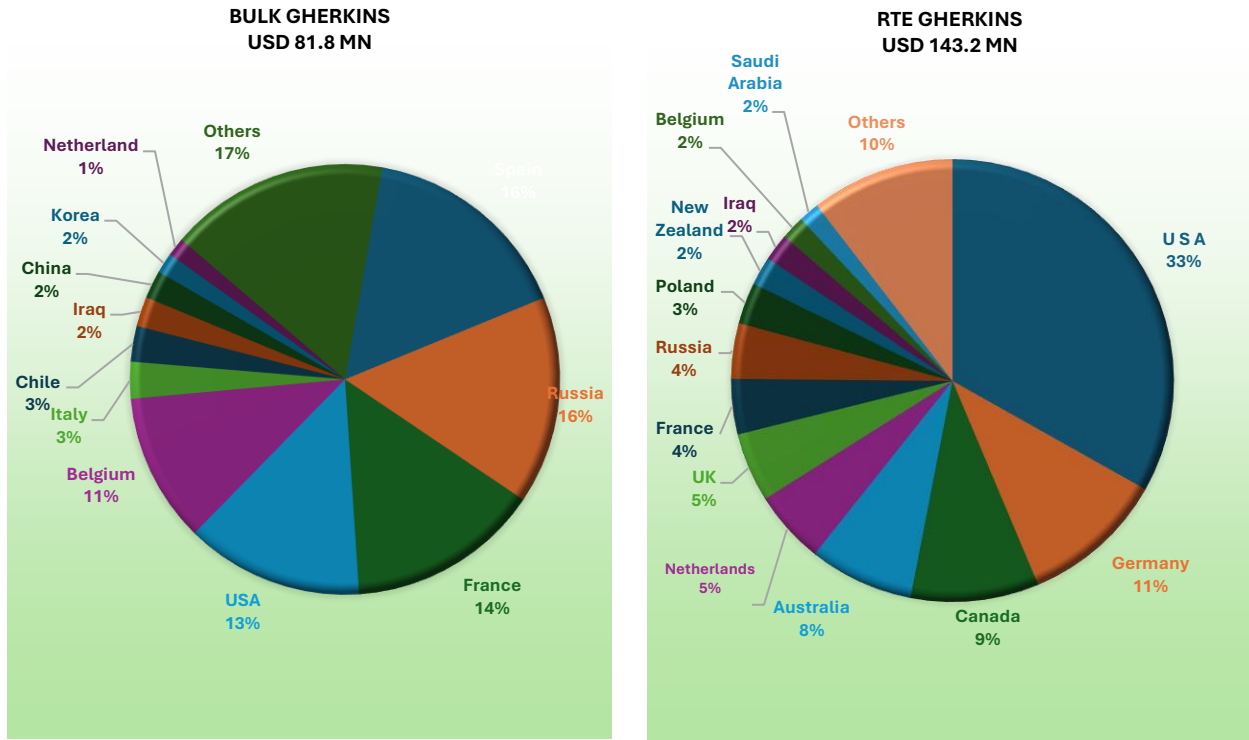
Source: Department of Commerce, 2025

In TE 2023, India exported USD 81.8 Mn worth of bulk gherkins. The main destinations were Spain and Russia, each contributing 16 per cent of the total exports (USD 13.1 million and USD 12.8 million, respectively), followed by France (15 per cent), the USA (13 per cent), and Belgium (11 per cent) (**Figure 2.6**).

For ready-to-eat gherkins, India exported USD 81.8 Mn in TE 2023. The United States was the top importer with a 33 per cent share (USD 47.9 million), followed by Germany (11 per cent), Canada (9 per cent), Australia (8 per cent), and the Netherlands (5 per cent). This distribution reflects a strong presence in both established and emerging markets, with significant potential for further expansion (**Figure 2.6**).

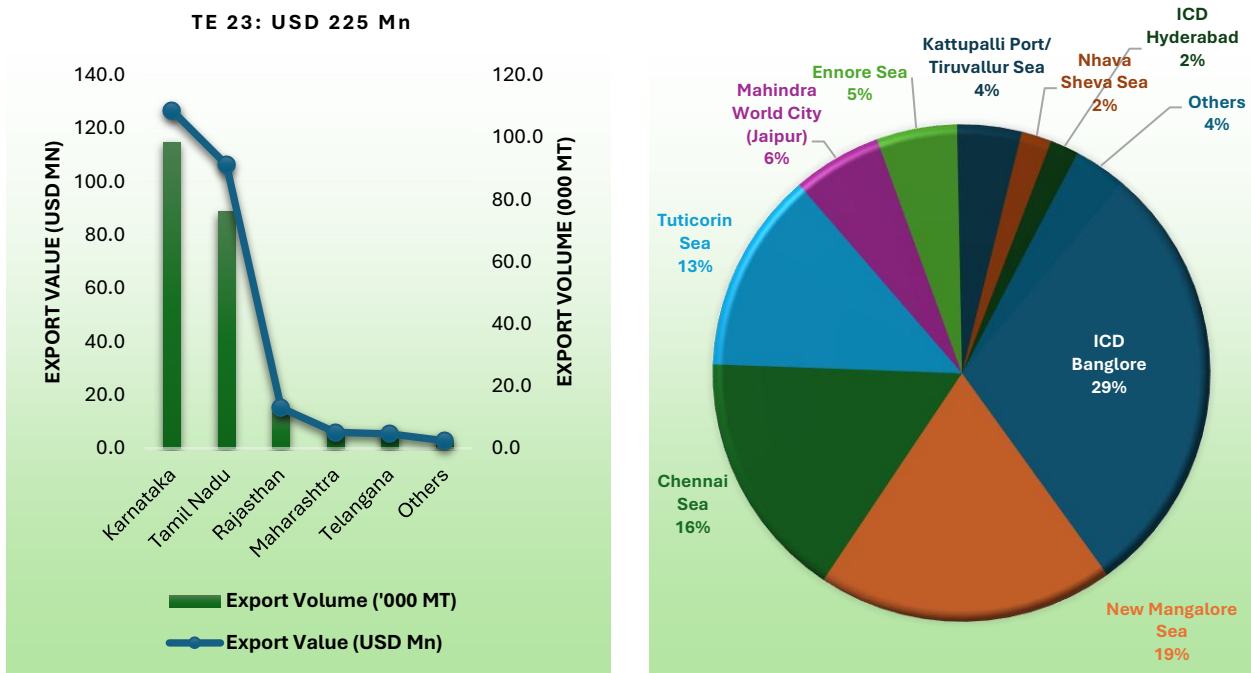
Indian exporters primarily focus on bulk shipments of gherkins, as it is more convenient and cost-effective. Bulk exports require only 5 to 6 basic ingredients. Small pack exports are less preferred due to higher certification requirements and increased operational costs.

Figure 2.6: Value-wise Top Export Destinations of India for 071140 and 200110 in TE 2023



Source: Department of Commerce, 2025

Figure 2.7: Value and Volume-wise export of Cucumber & Gherkins Prepared & Preserved from different states and major sea ports










Source: APEDA, 2025

Karnataka and Tamil Nadu play a pivotal role in India’s gherkin exports, together accounting for nearly 89 per cent of the country’s total shipments. Karnataka is the top contributor, with a 48 per cent share valued at USD 108.6 Mn, followed closely by Tamil Nadu with a 41 per cent share valued at USD 91.1 Mn. Most of the exports from these states are routed through key logistics hubs. In Karnataka, exports are primarily facilitated through the Inland Container Depot (ICD) Bangalore and the New Mangalore Port. In Tamil Nadu, Chennai Port and Tuticorin Port handle the bulk of outbound shipments (**Figure 2.7**).

2.5 MAJOR GHERKINS TRADING COMPANIES

Global Companies

COMPANY		COUNTRY	ESTABLISHED YEAR
Hugo Reitzel		France/ Switzerland	1909
Hengstenberg		Netherlands	1945
Carl Kühne		Germany	1903
Spreewälder Rabe		Germany	1932
Alfred Paulsen		Germany	1909
Tat		Türkiye	1967
Tukas		Türkiye	1962

Source: Compiled by authors from Ministry of Foreign Affairs, EU and respective companies’ websites

The global gherkin industry is characterised by several long-established companies, many of which are family-owned businesses with rich legacies in pickled and processed vegetables.

Founded in 1909 and headquartered in Switzerland, Hugo Reitzel is a family-run enterprise with operations in Switzerland, France, and India. The company functions under multiple brands and is active in the pickled and processed vegetable sector. In India, it operates through its subsidiary, Reitzel India, which engages in contract farming and export-oriented production of gherkins and other vegetables.

Spreewälder Rabe, based in Lübbenau, Germany, is a family-run business established in 1932. The company produces a range of pickled gherkins, including mustard-flavoured,

garlic-infused, and salted dill varieties. Its product portfolio also includes items such as cucumber-onion dips, honey cucumbers, and chilli-flavoured cucumbers. SpreewaldRabe processes Spreewald cucumbers from Brandenburg, which holds Protected Geographical Indication (PGI) status in the European Union, indicating their regional origin and production standards.

Carl Kühne KG, a company with over 300 years of history, was the first to introduce pickled gherkins in Germany in 1903. It currently offers more than 20 varieties of gherkin products. In addition to its retail operations, the company has a dedicated B2B division, Kühne Food Partners, which supplies processed vegetable products to the food service and industrial sectors






Hengstenberg, a German brand, has been a family-owned company for over 150 years. Founded in Esslingen, it focuses on sustainably produced pickled vegetables, including sauerkraut, red cabbage, and various gherkin products. Hengstenberg's commitment to sustainable agriculture is reflected in its practice of sourcing gherkins through contract farming, with most farms located close to its manufacturing facilities to ensure freshness and traceability.

Türkiye is a major competitor in the global gherkin export market. Its food processing industry is well-established and has been a key driver of economic growth for over a decade. The country's leading players in the pickled cucumber and gherkin segment include Tat, Tamker, Tukas Gıda, Penguen Gıda, and Sera. These companies not only produce gherkins but also offer a wide range of processed food products such as canned vegetables, ketchup, and pickled assortments, serving both domestic and international markets.

In India, most of the 35-40 processing units are concentrated in Karnataka, Tamil Nadu, and the border regions of Telangana and Andhra Pradesh, with more than half of them located in Karnataka. All of these units are export-oriented, focusing on bulk exports of gherkins.

Reitzel India is one of the leading players in the industry. A subsidiary of the internationally renowned Hugo Reitzel, the company established its operations in India in 2005 by setting up a facility in Kunigal, Karnataka. Reitzel India operates across Karnataka, Andhra Pradesh, and Tamil Nadu, with 16 production centres and a network of over 6,000 farmers engaged in contract farming. The factory at Kunigal spans 11 acres and produces nearly 35,000 metric tonnes of pickled products annually, including gherkins, jalapeños, baby corn, and other vegetables.

Indian Companies

Company	State	Established Year
Reitzel India		Tumkur, Karnataka
Blossom Showers Agro		Bengaluru, Karnataka
Koeleman India		Bengaluru, Karnataka
Freshara Agro Exports		Chennai, Tamil Nadu
Unicorn Pickles		Bengaluru, Karnataka
Ken Agritech Private Limited		Hubballi, Karnataka

Source: Compiled by authors from Ministry of Foreign Affairs, EU and respective companies' websites

Blossom Showers Agro operates out of Tamil Nadu and Yelahanka in Bangalore. The company exports gherkins and other pickled products to North and South America, Europe, and Australia, marking its strong presence in international markets.

Koeleman India Pvt. Ltd., a subsidiary of OFB Tech Pvt. Ltd., operates in the fresh fruit and vegetable processing sector. The company engages over 8,000 farmers and undertakes contract farming across more than 1,000 acres in Karnataka, Tamil Nadu, and Telangana. Their strong farmer network and processing infrastructure contribute to their leadership in the export market.

Ken Agritech Private Limited Established in 1997 is the dominant Gherkin processing Unit located in North Karnataka working with 4500 farmers. Ken Agritech has extended its contract farming network to Maharashtra /Telangana. Company has established the best sustainability model in the industry.

Freshara Agro Exports works with over 4,000 farmers and exports gherkins to more than 50 countries worldwide. Unicorn Pickles manufactures and exports gherkins in both jar and bulk forms to over 56 countries.

Given the export-oriented nature of most processing units, companies in this sector comply with major international certifications and regulatory standards to ensure quality and market access across global destinations.

2.6 EXPORT VALUE CHAIN OF GHERKINS IN INDIA

India has emerged as a significant player in the global gherkin market, largely due to a well-structured export value chain that integrates contract farming, efficient post-harvest practices, standardised processing, and stringent export protocols.

Figure 2.8: Export Value Chain of Gherkins



i. Cultivation and Harvesting

Gherkin cultivation in India is conducted exclusively through a **contract farming model**, which ensures both quality control and farmer security. Under this model, processing companies supply farmers with essential inputs such as high-yield seeds, fertilisers, crop protection chemicals, and continuous technical support. In exchange, farmers agree to sell their produce at pre-determined prices for one crop cycle, shielding them from market volatility and ensuring income stability. In exchange, farmers agree to sell their produce at pre-determined prices, shielding them from market volatility and ensuring income stability. As part of the contractual support, inputs worth approximately INR 40,000 are provided to each farmer, along with an additional advance of around INR 10,000 for land preparation, making the total upfront support to INR 50,000. All gherkin seeds used for cultivation are imported from the Netherlands and Germany, with the cost ranging between INR 0.90 and INR 1.00 per seed. Payments to farmers are made on a fortnightly basis.

According to IGEA, farmers on an average receive INR 28 to INR 35 per kilogram of raw gherkins, depending on the size and grade of the produce. A farmer cultivating gherkins on 1 acre of land typically earns a profit of around INR 1 lakh per crop cycle, making it a financially attractive proposition in contract farming.

This model allows processors to maintain end-to-end quality control, from the seed stage to harvest, aligning cultivation with international quality standards. Gherkins are typically ready for harvest within 30 to 35 days, and fruit maturity at harvest directly affects pricing. The smallest fruits (Stage 1, weighing 4g each or 250 fruits/kg) fetch the highest value in export markets. To retain quality and pricing advantages, daily harvesting is essential.

ii. Post-Harvest Operations

Post-harvest handling is designed to preserve the freshness and quality of the crop. Gherkins are transported in jute bags that help reduce spoilage by allowing airflow. Pre-cooling begins within 2–6 hours after harvest using methods such as hydro-cooling or cold-water drenching.

Fruits are then manually sorted to eliminate overripe, broken, or damaged items. Temporary storage facilities use ventilated structures with clean tarpaulins to prevent contamination. To ensure freshness, gherkins are transported to processing units on the same day, either directly or through local collection centres.

iii. Processing

Processing is carried out under strict hygienic and quality-controlled conditions to meet international export standards. Key steps include:

- **Washing and Inspection:** Dirt and debris are removed using brushes or drum washers. Defective fruits are discarded after visual inspection.
- **Grading:** Fruits are sorted by size and weight. Smaller grades command premium prices in export markets. European buyers, in particular, prefer smaller, high-quality grades, while the US market accepts larger grades that are often exported whole or processed into chips.
- **Brine and Additive Preparation:** Depending on buyer requirements, gherkins are preserved in brine, vinegar, or acetic acid, with food-grade additives like calcium chloride to maintain firmness. Brine is predominantly used for exports to the United States, vinegar for Europe, and acetic acid for Russia.
- **Spicing and Filling:** Clean jars or cans are layered with spices (e.g., dill, garlic, chillies), and gherkins are manually packed to specified weights. Some products are sliced or shaped as per demand.
- **Fermentation and Packing:** For fermented products, gherkins are packed in HDPE barrels with brine and fermented for up to a month. The produce is then washed and repacked in fresh brine.
- **Capping and Pasteurisation:** Automated sealing is followed by pasteurisation at 80–85°C for 12–18 minutes, ensuring microbial safety and longer shelf-life.

- **Cooling and Labelling:** Products are air-cooled post-pasteurisation and labelled according to export market specifications before final packing.

The average processing cost per HDPE barrel is approximately INR 32, which includes cleaning, grading, brining, and labour components.

iv. Packaging & Export

After pasteurisation, the jars or cans are cooled to ambient temperature using cool air to arrest further cooking and preserve product quality. They are then labelled as per the specifications and branding requirements of the customer.

For retail exports, the labelled jars are packed into secondary packaging, typically corrugated boxes, and stored in temperature-controlled environments until shipment. For bulk exports, processed gherkins are packed in High-Density Polyethylene (HDPE) containers, ensuring safety, durability, and compliance with international bulk packaging standards.

Inland logistics costs average around INR 70 thousand per container and cover transportation from the factory to the port, documentation, and handling. Ocean freight charges depend on the destination, with shipments to the EU typically costing between USD 1,500 and USD 1,600 per container, while those to the USA range from USD 3,000 to USD 4,000 per container.



Assessing Competitiveness



ASSESSING COMPETITIVENESS

3.1 GLOBAL PRICE SCENARIO

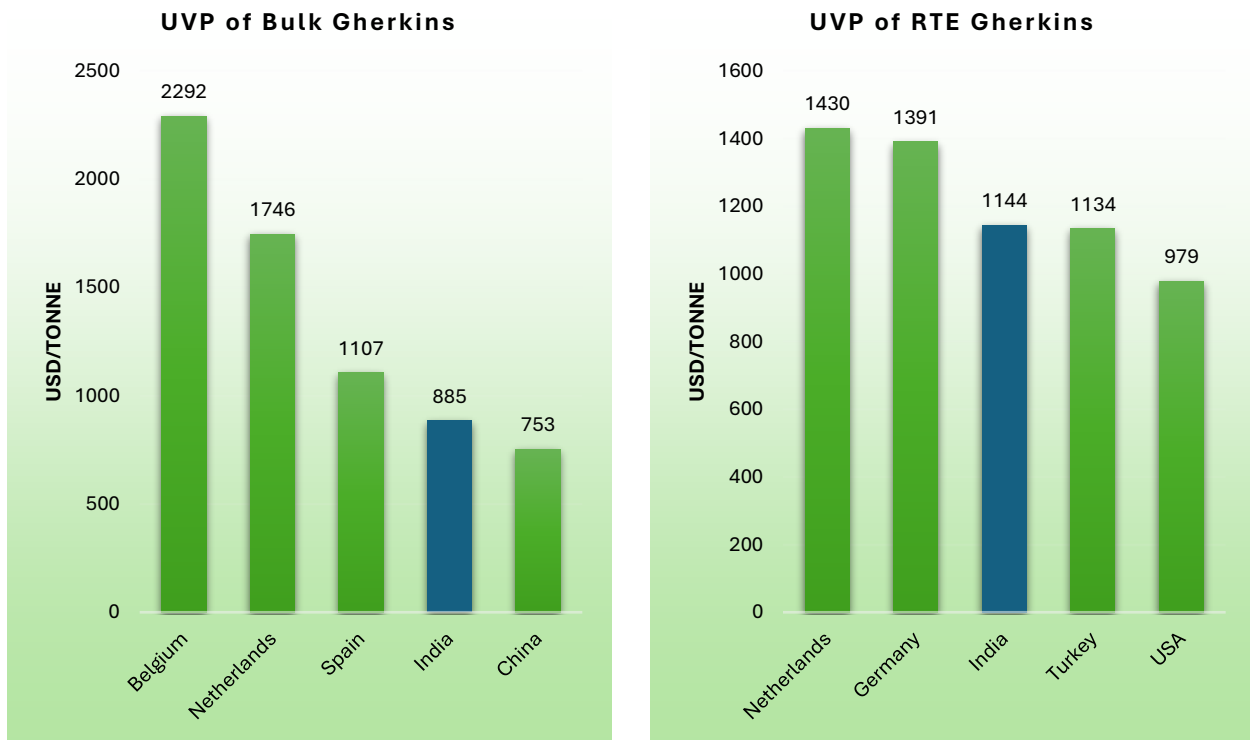
The global price trends for gherkins in 2023 reveal India's strong competitiveness in both bulk exports and ready-to-eat segments across major exporting countries (**Figure 3.1**). The comparative analysis highlights India's strong price competitiveness, particularly in the bulk export category.

For bulk exports, India emerges as a cost leader, with an average export price of USD 885 per metric tonne, significantly lower than its key competitors. In contrast, Belgium prices its bulk gherkin exports at USD 2292, followed by the Netherlands at USD 1746 and Spain at USD 1107. This substantial price differential underscores India's comparative advantage in the global gherkin value chain.

In the ready-to-eat gherkin segment, India's export price stands at USD 1144 per metric tonne, positioning it competitively within the global market. Although this is marginally higher than Türkiye's price of USD 1134, it remains considerably lower than that of the Netherlands (USD 1430) and Germany (USD 1391), both of which command a premium, possibly reflecting value addition, branding, and quality differentiation.

However, it is important to note that price alone is not the sole determinant of market competitiveness. Other critical factors, such as production efficiency, adherence to quality and safety standards, transportation and logistics costs, and supportive government policies, also play a significant role in shaping a country's competitive edge in the global market. According to the Indian Gherkin Exporters Association (IGEA), Indian processors prefer exporting bulk gherkins over ready-to-eat (RTE) gherkins, primarily because bulk gherkins attract lower customs duties. For bulk exports, the duty is levied only on the gherkins per kilogram, whereas in the case of RTE products, the customs duty is calculated on the entire packaged unit including the glass jar, caps, and gherkins which significantly increases the cost. Additionally, freight efficiency plays a key role: a 20-foot container can carry approximately 14,400 kg of bulk gherkins, compared to only about 7,500 kg of jarred gherkins. This makes bulk shipments more cost-effective. Consequently, many buyers prefer to use their own glass jars and caps to reduce both customs duties and freight costs.

Figure 3.1: Global Price Scenario of Bulk Gherkins and Ready-to-Eat Gherkins (2023)



Source: ITC Trade Map, 2025

3.2 ASSESSING COMPARATIVE ADVANTAGE THROUGH RCA

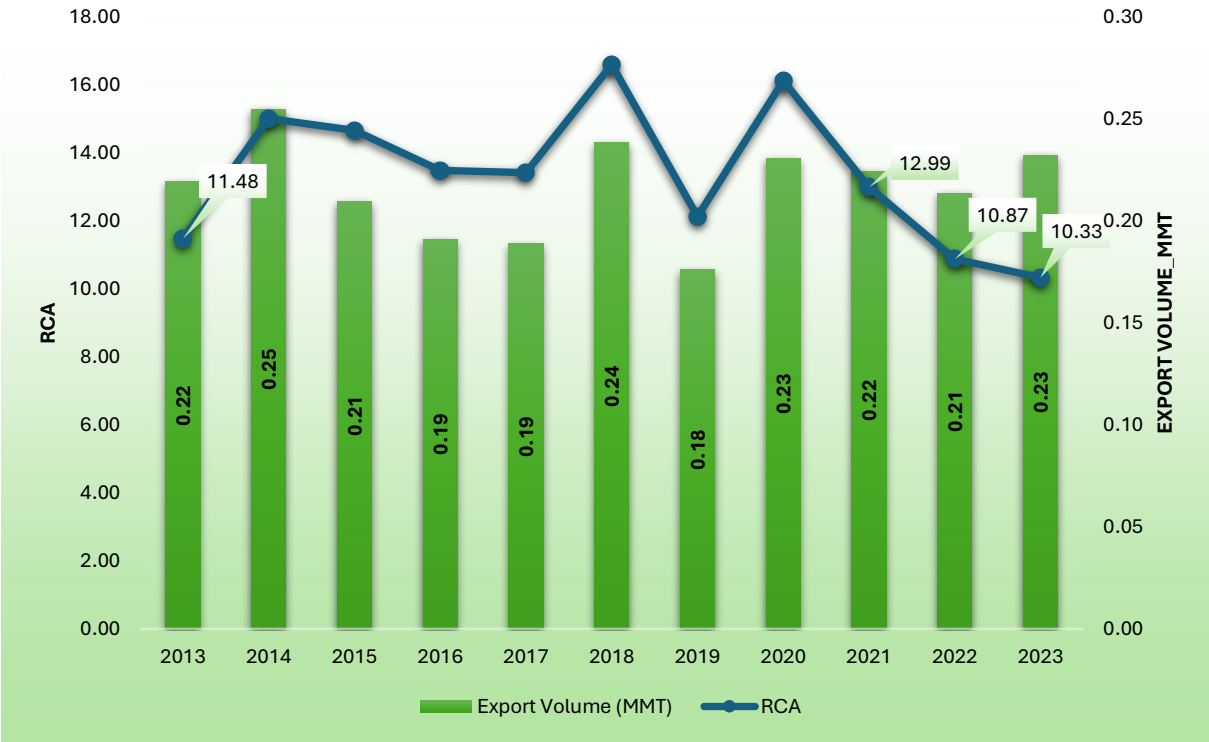
The Revealed Comparative Advantage (RCA) index is a widely used tool in international economics to evaluate a country's relative advantage in exporting specific goods or services. An RCA value greater than 1 suggests that a country holds a comparative advantage in a particular product, whereas a value below 1 implies a comparative disadvantage. The index reflects the share of a commodity in a country's exports relative to its share in global exports, thereby indicating areas of export strength.

India's RCA values for prepared and preserved gherkins, calculated using the combined HS codes 071140 and 200110, are illustrated in **Figure 3.2**. The data reveals that India has consistently exhibited a strong comparative advantage in gherkin exports, with RCA values significantly greater than 1, often exceeding 10, during the period 2013 to 2024. This underscores India's prominent position in the global gherkin market.

However, a declining trend is observable in recent years. The RCA dropped from 12.9 in 2021 to 10.3 in 2023, suggesting a moderation in India's relative advantage. While the country continues to maintain a high RCA, the gradual decline may reflect evolving market dynamics or increased competition.

It is important to acknowledge the limitations of the RCA metric when interpreting competitiveness. Although RCA provides valuable insights into relative export performance, it does not account for underlying structural factors such as domestic production capacity, quality standards, value addition, or trade facilitation measures. Therefore, RCA should be interpreted with broader indicators, including export growth trends, market diversification, production efficiency, and policy frameworks, to develop a comprehensive understanding of India’s competitive position in the global gherkin trade.

Figure 3.2: RCA for Indian Cucumber and Gherkins- Prepared & Preserved



Source: Authors’ own calculation using data from UN COMTRADE

3.3 EMERGENT CHALLENGES

Gherkins have positioned India as a global leader in the pickled vegetable segment, with the country accounting for nearly 23 per cent of the global exports. The sector has enabled significant rural employment and contract farming opportunities in Karnataka, Tamil Nadu, and Andhra Pradesh. However, despite its export success, the industry is grappling with a structural and operational challenges that threaten its long-term sustainability and competitiveness. Furthermore, limited policy support, regulatory hurdles, and logistical inefficiencies add to the strain on both farmers and exporters. Based on our consultations

with exporters and processors, the most pressing challenges facing the Indian gherkin industry are discussed below.

Figure 3.3: Key challenges in the gherkins sector



i. High labour intensity and declining workforce in gherkins cultivation

Gherkin cultivation is highly labour-intensive, particularly during the harvest period, which requires daily picking of tender gherkins to maintain quality, size, and grade standards. This task demands skilled labour, as improper or delayed harvesting can lead to rejection by processing units. Each crop cycle spans approximately 90 days, and most farmers undertake two to three cycles annually, making consistent and reliable labour availability essential throughout the year. However, rising labour costs, driven by rural-urban migration and a noticeable decline in interest among younger rural populations, have significantly increased the financial burden on cultivators. At the same time, the cost of key inputs such as fertilisers, pesticides, and irrigation equipment have also risen, squeezing already thin margins for small and marginal farmers. These pressures have led many to reconsider gherkin cultivation in favour of less demanding and more financially stable crops.

ii. Logistics and Infrastructure Challenges

While India's gherkin sector is recognized for its efficient contract farming model, some exporters have highlighted logistical and infrastructure related challenges that can affect competitiveness, especially during periods of high demand or external shocks. A major concern is the sharp increase in international freight costs, particularly since the COVID-19 pandemic and the Red Sea crisis. International freight rates increased from around USD 800-1,000 per container before the crisis to over USD 3,000-4,000 during the crisis. They have

now stabilized at about USD 1,500-1,600. These fluctuations have impacted margins and price competitiveness in the global markets.

Domestically, a few exporters noted that in certain producing regions, such as parts of Karnataka and Tamil Nadu, processing and storage facilities may face capacity constraints during peak harvesting seasons. This can cause delays in handling the produce, increasing the risk of post-harvest losses, and a decline in product quality. Additionally, occasional gaps in rural connectivity and limited availability of cold chain infrastructure can make timely transportation to factories and ports challenging, increasing both wastage and overall cost. These logistical inefficiencies can affect India's price competitiveness in the global markets.

iii. Regulatory and compliance burden in supplying inputs

Exporters that provide fertilisers and other inputs to their contract farmers often encounter regulatory hurdles. According to exporters, even when they maintain stockpiles to ensure timely distribution to farmers, enforcement agencies sometimes conduct raids, suspecting these stocks to be hoarding. In addition, the licensing process for fertiliser distribution across multiple districts and states is cumbersome and inconsistent, creating higher compliance costs and operational challenges. These factors discourage organised players and reduce the overall efficiency of the contract farming system.

iv. Lack of commodity specific policy support

Despite being a major contributor to India's agricultural exports, the gherkin industry lacks dedicated policy support at both the central and state levels. While existing schemes like the Pradhan Mantri Kisan SAMPADA Yojana and the Production Linked Incentive (PLI) provide valuable support to the food processing sector at large, their broad design limits the scope for addressing commodity-specific challenges and opportunities. In contrast, commodities such as makhana have benefited from focused attention through dedicated research centres, GI tagging, and inclusion under the One District One Product (ODOP) initiative. A similar approach, especially from key gherkin-producing states, could help strengthen India's competitiveness in the face of rising global competition from countries such as Türkiye and Germany.

v. Overdependence on Volatile Export Markets

India exports over 99 per cent of its gherkin production, with key markets including the United States, Europe, Russia, and parts of West Asia. This heavy reliance on foreign markets makes the entire value chain from farmers to processors highly susceptible to global disruptions. For example, the imposition of Western sanctions on Russia in 2014 led to a

sudden drop in demand from one of India's key markets, as Russia turned to lower-cost suppliers like Vietnam. More recently, reciprocal tariffs announced by the United States and increasingly stringent non-tariff barriers in Europe can raise the cost of Indian gherkins, making them less attractive compared to other global suppliers. This kind of external dependency creates market instability, discourages investment in the sector, and aggravates farmer vulnerability, especially when prices crash due to lower export demand. A lack of robust domestic market alternatives or value-added products compounds the issue, leaving few risk mitigation options for stakeholders across the supply chain.

vi. Lack of R&D in gherkins in India

India's gherkin industry suffers from a chronic absence of dedicated research and development (R&D) infrastructure, which has stifled innovation and long-term productivity growth. There is no central institution focused exclusively on gherkin-specific R&D, leaving a significant gap in the development of improved seed varieties, disease management strategies, and agronomic practices suited to Indian agro-climatic conditions.

A major consequence of this gap is the sector's continued reliance on imported seed varieties, particularly from countries like France and the Netherlands. These seeds are not always optimally adapted to local soil, climate, and pest conditions. In the absence of domestic breeding programmes or public research efforts, farmers and exporters remain dependent on private suppliers for planting material. This increases input costs and reduces the sector's resilience to evolving threats such as pest outbreaks or climate stress.

Additionally, without a strong R&D backbone, India lags behind competitors like Vietnam and Türkiye, who are investing in region-specific innovations to boost yields, reduce losses, and ensure consistent quality. The lack of locally adapted innovations also limits the ability to scale up sustainable practices or mechanisation that could help reduce the crop's labour and input intensity.



Export Potential

4

EXPORT POTENTIAL

To assess India's position in the global gherkin market, an analysis of the market share of various exporting countries to India's key export destinations and emerging markets was conducted. Countries with a market share exceeding 10 per cent in any destination were identified as India's major competitors.

In bulk gherkin exports, India faces limited competition. Within the EU, Malta and Belgium are key competitors. In Canada, the USA holds a major share, while in Japan, China and Vietnam are significant competitors.

In contrast, ready-to-eat gherkin exports see stronger competition. In Europe, major competitors include Türkiye, the Netherlands, Germany, and Poland. In the USA, Mexico is a key rival; in Canada, it is the USA. In Russia, Germany and Vietnam hold substantial shares. In Japan, Sri Lanka, the USA, and Germany are major competitors.

MIDDLE EAST

The Middle East is emerging as a promising market for ready-to-eat gherkin exports, with growing demand in countries such as Saudi Arabia, Israel, the UAE, Kuwait, and Qatar. Imports of bulk gherkins in the region remain negligible, with consumption patterns centred around the ready-to-eat category.

In TE 2023, the combined imports of ready-to-eat gherkins by these five countries amounted to USD 19 million. Saudi Arabia was the largest importer, with USD 6.4 million in imports. The leading suppliers were Syria (43 per cent), Jordan (28 per cent), and the USA (11 per cent), while India held a 10 per cent share. Israel imported USD 3.7 million, with India (31 per cent) as the largest supplier, followed by Poland (16 per cent) and Türkiye (9 per cent). The UAE imported USD 4.8 million, where Iran (22 per cent), India (21 per cent), and Lebanon (10 per cent) were the major exporters. Kuwait imported USD 2.2 million, with the USA (32 per cent), India (18 per cent), Lebanon (15 per cent), and Türkiye (13 per cent) as key players. Qatar imported USD 0.7 million, dominated by Lebanon (35 per cent), the USA (28 per cent), and Türkiye (26 per cent), while India accounted for only 6 per cent.

Despite its geographic proximity and logistical advantages, India's market share in the region remains modest. To capitalise on the growing demand and expand its footprint, India should prioritise enhancing its presence in high-potential markets such as Saudi Arabia, the UAE,

and Israel, through targeted trade promotion, competitive pricing, and market access strategies.

EUROPE

Europe represents the most significant global market for cucumber and gherkin products, both in bulk and processed forms. The European region collectively accounts for the largest share of global imports, making it the most important destination for Indian exporters. Historically, however, India's competitiveness in this market has been shaped not only by demand conditions but also by tariff preferences enjoyed by rival suppliers. Recent developments in India's trade negotiations with the United Kingdom and the European Union is expected to alter this landscape and create new opportunities for expansion.

In the case of bulk gherkins, the European Union accounts for roughly 51 per cent of global imports, making it the single largest regional market. Within the EU, France, Spain, and Belgium dominate import demand, together accounting for nearly three-quarters of EU imports. France alone represents about 21 per cent of global imports, making it the largest individual importer worldwide. India already maintains a strong foothold in this market. In France, Indian exports account for approximately 41 per cent of total imports, although intra-EU suppliers such as Malta and Belgium also hold substantial shares due to the advantages of tariff-free trade within the European Union. In other major markets such as Spain and Belgium, India is the dominant supplier, accounting for 99 per cent and 94 per cent of imports respectively, which underlines India's central role in the European bulk gherkin supply chain (ITC Trademap 2025).

Despite this strong market presence, India has historically faced a tariff disadvantage in the EU market. Imports of bulk gherkins from India are subject to tariffs of around 8.5 per cent, while suppliers within the EU benefit from zero tariffs through the Union's internal market. In addition, some external competitors enjoy preferential access through trade arrangements with the EU. This tariff asymmetry has constrained the ability of Indian exporters to further expand their market share despite strong demand and established supply relationships.

Recent progress in trade negotiations, however, is expected to gradually improve India's position, although exporters anticipate that tariff reductions under the agreement will be implemented in phases and may not have an immediate impact (Tejaswini S, 2026). The India–United Kingdom Free Trade Agreement (FTA), once implemented, will eliminate tariffs on both bulk and processed gherkin products, granting Indian exporters duty-free access to the UK market (MoCI, 2025b). The United Kingdom is one of the major gherkin importers in Europe, and the removal of tariffs will help Indian exporters compete more effectively against

established suppliers such as Türkiye and the Netherlands. This agreement also creates an opportunity for Indian exporters to deepen their presence in a market where supply chains are already well integrated with the European processed food industry.

The recent trade deal between India and European Union are expected to provide preferential tariff access through phased tariff reductions and tariff-rate quotas for selected agricultural products, including processed vegetable products such as gherkins (MoCI, 2026). Even partial tariff reductions would significantly improve India's price competitiveness relative to competing exporters and could reinforce India's already strong position in several EU markets.

The European market for ready-to-eat (RTE) gherkins is similarly large and competitive. The EU accounts for approximately 49 per cent of global imports of processed gherkins. Major importing countries include Germany, the Netherlands, France, and the United Kingdom, all of which serve as major distribution hubs for processed foods across Europe. Unlike the bulk gherkin segment, the processed market features stronger competition from several established suppliers (ITC Trademap 2025).

In particular, Türkiye is a dominant competitor in many European markets. In Germany, which is one of the largest importers of processed gherkins, Türkiye accounts for nearly 49 per cent of imports, followed by India with about 22 per cent, and the Netherlands with around 13 per cent. Similarly, in the Netherlands and the UK markets, Turkish exporters maintain strong positions alongside European suppliers such as Poland and the Netherlands. Türkiye's competitive advantage stems partly from preferential trade arrangements with the EU, which allow Turkish products to enter the market with zero tariffs, whereas Indian processed gherkins currently face tariffs of around 14.1 per cent (ITC Trademap 2025).

The removal or reduction of these tariff barriers through India–EU trade deal will have a substantial impact on India's competitiveness in the processed segment. Given India's established processing capacity and strong export orientation in the gherkin industry, improved market access could enable exporters to capture a larger share of the European processed food market.

Beyond the EU itself, non-EU European markets also present important diversification opportunities. The United Kingdom, following the conclusion of the India–UK FTA, will offer duty-free access for Indian gherkins and is likely to emerge as an increasingly attractive destination for exporters (MoCI, 2025b). Other European markets such as Norway and Switzerland, although smaller in size, maintain high consumption of processed vegetables and rely heavily on imports. Strengthening India's presence in these markets would help

reduce excessive reliance on a limited number of EU destinations while expanding the geographical reach of Indian exports.

Overall, Europe will remain the central market for India's gherkin exports in the foreseeable future. India already holds strong positions in several key markets, particularly in the bulk segment. However, tariff asymmetries and strong competition from suppliers such as Türkiye, the Netherlands, and Poland have limited further expansion in the processed segment. The recently concluded India–UK FTA and the India–EU trade agreement have the potential to significantly reshape these dynamics by reducing tariff barriers and improving India's competitiveness. If effectively leveraged, these agreements could help consolidate India's leadership in the European gherkin market while opening new avenues for growth across both bulk and processed product segments.

NORTH & SOUTH AMERICA

The USA and Canada are among the most important destinations for India's exports of both bulk and ready-to-eat gherkins. In the bulk segment, India enjoys a dominant position in the US market, accounting for 94 per cent of total imports. In Canada, India holds a 38 per cent share and faces competition primarily from the United States. Tariff structures are favourable in this segment, with India enjoying zero tariffs in Canada, similar to its competitors.

In the ready-to-eat gherkin segment, India has a significant 60 per cent share in the U.S. market but faces strong competition from Mexico. Tariff differentials pose a challenge here, as India faces a 9.6 per cent tariff, while Mexico benefits from zero-duty access under trade agreements. In the Canadian market, India holds a 19 per cent share and competes with the USA. However, India faces an 8 per cent tariff, whereas the US and European Union exporters enjoy duty-free access.

To enhance its competitiveness in these markets, India could explore strategies to address tariff disadvantages through trade negotiations or bilateral agreements. Additionally, expanding into untapped South American markets such as Brazil and Argentina could offer new opportunities for diversifying export destinations and reducing dependence on traditional markets.

COMMONWEALTH OF INDEPENDENT STATES (CIS)

In the bulk gherkin segment, India holds a dominant position in the Russian market, accounting for 98 per cent of total imports. However, in the ready-to-eat gherkin segment,

India faces competition, particularly from Germany, which has a notable presence in the region. Tariff structures in this segment are uniform across competitors, with India facing a 12 per cent tariff, similar to its rivals. While India's position in bulk exports remains strong, the ready-to-eat segment requires continued efforts to maintain and expand market share amidst moderate competition.



Policy Analysis

5

POLICY ANALYSIS

5.1 TARIFF MEASURES

Tariff structures play a critical role in shaping the competitiveness of India's cucumber and gherkin exports across international markets. Tariffs imposed on Indian gherkins vary significantly across destination markets and product categories, particularly between bulk gherkins (HS 071140) and preserved or ready-to-eat gherkins (HS 200110). Across major importing countries, tariff rates range from 0 per cent to nearly 18 per cent, with preferential trade arrangements often determining the relative competitiveness of exporters in key processed food markets.

Although India is one of the world's largest exporters of processed gherkins, its competitive position varies significantly across destination markets depending on factors such as tariff preferences, geographic proximity, and processing capacity.

Tariffs on Bulk Gherkins

Table 5.1 and **Table 5.2** presents India's key competitors and their tariffs for bulk gherkins in major importing regions. For bulk gherkins (HS 071140), tariffs in major importing markets are generally moderate, but preferential arrangements often give competing exporters an advantage. In the European Union, which remains one of the largest markets for processed vegetable products, Indian gherkins historically faced tariffs of around 12 per cent, with preferential rates of about 8.5 per cent (ITC Trademap 2025). In contrast, intra-European suppliers such as Malta and Belgium benefit from zero tariff access within the EU single market, enabling them to compete more effectively in regional supply chains.

Despite this tariff disadvantage, India maintains a strong position in several European markets. For instance, in France, India accounts for about 41 per cent of imports, followed by Malta and Belgium. In Spain, India dominates the market with nearly 99 per cent share, while in Belgium, Indian exports account for more than 90 per cent of imports (ITC Trademap 2025). These patterns reflect India's strong processing capacity and long-standing commercial relationships with European food processors and retailers.

In contrast, in Japan, India holds only a small share of imports, with the market dominated by China and Vietnam. Geographic proximity and regional trade integration give these countries a clear advantage in East Asian markets.



Table 5.1: India’s major competitors for Bulk Export of Gherkins

Importing Country	Exporting Countries	Competitors
Europe		
France	India (41%) , Malta (26%), Belgium (24%), Sri Lanka (2%)	Malta, Belgium
Spain	India (99%) , Benin (0.4%)	None
Belgium	India (94%) , Netherlands (4%), France (1%)	None
USA & Canada		
USA	India (94%) , Sri Lanka (3%), Poland (1%)	None
Canada	USA (59%), India (38%)	USA
Russia & Far East		
Russia	India (98%) , Belarus (2%)	None
Japan	China (88%), Vietnam (7%), India (4%)	China, Vietnam

Source: Compiled from ITC Trade Map

In North America, the competitive landscape is somewhat different. In the United States, India is the dominant supplier of bulk gherkins, accounting for nearly 94 per cent of imports, with smaller shares supplied by countries such as Sri Lanka and Poland. In Canada, the market is more balanced, with the United States supplying around 59 per cent and India accounting for approximately 38 per cent of imports. Canada’s zero-tariff regime for gherkin imports helps maintain a relatively open market structure (ITC Trademap 2025).

India also enjoys a strong presence in Russia, where it supplies nearly 98 per cent of imports in certain segments, with only marginal competition from neighbouring countries such as Belarus. This reflects both India’s cost competitiveness and the limited presence of alternative suppliers in this market.



Table 5.2: Tariff Analysis for Bulk Gherkins

	Exporting Countries					
Importing Countries	India	Malta	Belgium	USA	China	Vietnam
France	12 (P- 8.5)	0	0	12	12	12 (P- 0)
Canada	0	0	0	0	0	0
Japan	9 (P- 0)	9 (P- 0)	9 (P- 0)	9	9	9 (P-0-6.8)

Source: Compiled from ITC Trade Map

Tariffs on Preserved and Ready-to-Eat Gherkins

Table 5.3 and **Table 5.4** presents India's key competitors and their tariffs in major importing regions for ready-to-eat gherkins. Tariff barriers become more pronounced for preserved or ready-to-eat gherkins (HS 200110), which fall under processed food categories that generally attract higher duties. In the European market, Indian exports face tariffs of around 17.6 per cent, with preferential rates of approximately 14.1 per cent. These tariffs are significantly higher than those faced by certain competitors (ITC Trademap 2025).

One of the most important competitors in Europe is Turkey, which enjoys zero tariff access to the European market due to its customs union arrangement with the EU. As a result, Turkish exporters dominate imports in several European markets. For example, Turkey accounts for nearly 49 per cent of imports in Germany, while India holds around 22 per cent and the Netherlands accounts for about 13 per cent. In the Netherlands market itself, both Germany and Turkey maintain significant shares, while India's share remains comparatively smaller.

A similar pattern is observed in the United Kingdom, where Turkey, the Netherlands, and Poland together supply a large share of imports, while India accounts for roughly 15 per cent of the market. These patterns highlight the strong role played by regional suppliers that benefit from proximity, integrated supply chains, and preferential trade arrangements.

In the United States, Indian exports of processed gherkins historically faced tariffs of around 9.6 per cent; however, additional tariffs imposed in 2025 temporarily raised the effective duty significantly, before being reduced to about 18 per cent in early 2026, which still remains above the earlier tariff structure, whereas exporters from Mexico benefit from duty-free access under regional trade agreements (PIB, 2026).



In the Middle East, competition is shaped more by geographic proximity than by tariff differences. In Saudi Arabia, imports are largely supplied by regional producers such as Syria and Jordan, while in the United Arab Emirates, exporters from Iran and Lebanon maintain a strong presence.

Table 5.3: India's major competitors for Ready-to-eat Export of Gherkins

Importing Country	Exporting Countries	Competitors
Europe		
Germany	Türkiye (49%), India (22%) , Netherlands (13%), Poland (7%)	Türkiye, Netherlands
Netherlands	Germany (39%), Türkiye (39%), India (9%)	Germany, Türkiye
UK	Türkiye (29%), Netherlands (22%), India (15%) , Poland (15%)	Türkiye, Netherlands, Poland
Norway	Türkiye (31%), Poland (16%), France (12%), Germany (12%), India (0%)	Türkiye, Poland, France, Germany
USA & Canada		
USA	India (60%) , Mexico (10%), Canada (8%), Germany (5%)	Mexico
Canada	USA (69%), India (19%) , Hungary (4%)	USA
Brazil	USA (89%), India (6%), Germany (3%)	USA
Argentina	Germany (67%), India (30%)	Germany
Russia & Far East		
Russia	Germany (32%), India (24%) , Vietnam (15%)	Germany, Vietnam
Japan	Sri Lanka (45%), USA (13%), Germany (12%), India (11%)	Sri Lanka, USA, Germany
Middle East		
Saudi Arabia	Syria (57%), Jordan (37%), India (14%)	Syria, Jordan
UAE	Iran (22%), India (21%) , Lebanon (10%)	Iran, Lebanon

Source: Compiled from ITC Trade Map

India's exports of ready-to-eat gherkins are subject to varying import tariffs across destination markets, ranging from 0 per cent to 14.10 per cent (**Table 5.3**). In the EU, Indian products face a steep tariff of 14.10 per cent, significantly higher than that imposed on

Turkish exports, which benefit from zero tariff access. Similarly, in the US, Indian ready-to-eat gherkins are subject to a 9.60 per cent tariff, while Mexico enjoys duty-free access. These tariff differentials place Indian exporters at a competitive disadvantage, underscoring the need for targeted trade negotiations to secure preferential market access and enhance India's global competitiveness. A positive development is the India-UK Comprehensive Economic and Trade Agreement (CETA), under which tariffs on both bulk and RTE gherkins will now attract 0 per cent duty, setting a useful precedent for future trade deals.

Table 5.4: Tariff rate for Ready-to-Eat Gherkins in major importing countries (in %)

Importing Countries	Exporting Countries							
	India	Türkiye	Netherlands	Germany	Poland	Mexico	USA	Sri Lanka
Germany	17.6 (P-14.1)	17.6 (P-0)	0	0	0	17.6 (P-0)	17.6	17.6 (P-0)
Netherlands	17.6 (P-14.1)	17.6 (P-0)	NA	0	0	17.6 (P-0)	17.6	17.6 (P-0)
UK	16.0 (P-0)	16.0 (P-0)	16.0 (P-0)	16.0 (P-0)	16.0 (P-0)	16.0 (P-0)	16.0	16.0 (P-0)
USA	9.6	9.6	9.6	9.6	9.6	9.6 (P-0)	NA	9.6 (P-0)
Canada	8.0	8.0	8.0 (P-0)	8.0 (P-0)	8.0 (P-0)	8.0 (P-0)	8.0 (P-0)	8.0
Russia	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Japan	15.0 (P-0-12)	15.0 (P-12)	15.0 (P-0)	15.0 (P-0)	15.0 (P-0)	15.0 (P-0)	15.0 (P-0)	15.0 (P-12)

Note: P refers to preferential tariff rates

Source: Compiled from ITC Trade Map

Recent Trade Policy Developments

Recent progress in India's trade negotiations is expected to significantly alter the tariff landscape for gherkin exports. The recently concluded India-European Union Free Trade Agreement introduces preferential tariff provisions for several agricultural products, including cucumbers and gherkins. The agreement is expected to provide improved market access to the European Union through a combination of reduced tariffs and tariff-rate quotas for selected agricultural products. Although the agreement is yet to be fully implemented, it represents an important policy breakthrough for Indian exporters, particularly given the scale of the EU market for processed vegetables and pickled food products (MoCI, 2026).

Another important development is the progress made under the India–United Kingdom Free Trade Agreement, which is expected to eliminate tariffs on both bulk and processed gherkins (MoCI, 2025b). Once operational, the agreement will enable Indian exporters to access the United Kingdom market at zero duty, improving their competitiveness in the UK’s large retail and private-label food segments. This agreement provides a useful precedent for future trade negotiations, particularly in sectors where processed agricultural products face relatively high tariffs.

Implications for India’s Export Competitiveness

The tariff patterns highlighted in the tables demonstrate that preferential trade arrangements play a decisive role in shaping the global gherkin trade. Exporters that benefit from regional trade agreements or customs unions often enjoy substantial advantages in terms of lower landed costs and stronger integration with local processing industries.

For India, the emerging trade agreements with the European Union and the United Kingdom represent important opportunities to strengthen its position in high-value markets. However, tariff disadvantages remain in several other key markets, particularly in North America and East Asia, where competitors benefit from preferential access or geographic proximity.

Going forward, India’s export strategy should focus on maximising the benefits of recently negotiated agreements while actively pursuing preferential market access in other major consuming markets. Strengthening India’s position in global gherkin trade will require a combination of strategic trade negotiations, improved compliance with international food safety standards, and stronger integration with global food processing and retail supply chains.

5.2 NON-TARIFF MEASURES

5.2.1 Phytosanitary and SPS Measures for Pickles and Pickled Cucumbers in the European Union

The EU, along with European Free Trade Association (EFTA) countries and the UK, applies several non-tariff measures, particularly Sanitary and Phytosanitary (SPS) measures, to ensure the safety and quality of food products, including pickled gherkins. These measures are part of the EU’s “**farm to fork**” approach, which focuses on maintaining food safety throughout the entire supply chain (The European market potential for pickled cucumbers and gherkins, 2024).

i. Phytosanitary Requirements

For fresh and frozen gherkins, a phytosanitary certificate is required for import into the EU, as per EU Regulations. However, canned and pickled gherkins are exempt from this requirement, due to the low risk of pests after processing and sterilisation.

ii. Control of Contaminants

The European Union regulates the presence of contaminants in food products, including gherkins, under EU Regulations, which is updated regularly to reflect new scientific findings and safety assessments. This regulation sets maximum permissible levels for various contaminants to ensure food safety and consumer protection. Exporters must ensure that gherkins comply with the latest EU standards on contaminants, particularly those related to processing and packaging materials.

iii. Pesticide Residue Limits

The EU maintains strict Maximum Residue Limit (MRLs) for pesticides. These levels are reviewed and updated frequently. The pickling process can affect pesticide residue levels, some may decrease due to processing, while others may increase, depending on the method used.

iv. Quality and Composition Standards

Pickled gherkins must meet specific quality standards related to texture, flavour, colour, size uniformity, and mineral content. The Codex Alimentarius also defines acceptable levels of acidity and salt, depending on the product type (e.g., dill, sweet-sour, mustard, etc.).

v. Food Safety Certification

While not legally required by the EU, food safety certification is commonly expected by importers. Similarly, Indian exporters does prefer exporting the products if not certified. Commonly accepted certifications that follow Global Food Safety Initiative (GFSI) standards include:

- *International Featured Standards (IFS)*
- *British Retail Consortium Global Standards (BRCGS)*
- *Food Safety System Certification (FSSC 22000)*
- *Safe Quality Food Certification (SQF)*

These certifications help assure buyers that the product meets international food safety standards.

vi. Packaging Requirements

Packaging must follow EU rules to ensure safety and prevent contamination. Common packaging types include:

- *Glass jars: non-reactive and recyclable; used mostly for retail.*
- *Plastic containers: must be BPA-free and food-safe.*
- *Tin cans: must be coated with food-grade lacquer to prevent tin contamination.*

These SPS measures are critical for maintaining food safety and quality. Exporters of pickled gherkins must follow these rules carefully to access and remain in the EU market.

5.2.2 Phytosanitary and SPS Measures for Pickles and Pickled Cucumbers in the United States

The import of pickles and pickled cucumbers into the United States is subject to a range of SPS measures designed to protect public health and prevent the introduction of plant pests and diseases. These measures are primarily governed by the United States Department of Agriculture (USDA) and the Food and Drug Administration (FDA), with additional oversight provided by US Customs and Border Protection.

i. USDA APHIS Phytosanitary Regulations

Under the authority of the Animal and Plant Health Inspection Service (APHIS), the USDA regulates the importation of plant-based products. However, processed products such as pickles and pickled cucumbers are typically exempt from phytosanitary certificates and import permits, provided they are dried, cured, cooked, or otherwise processed. These exemptions are outlined under the category of “Generally Authorized Non-Propagative Plant Products.” (USDA, 2024) Despite the exemption, such imports remain subject to inspection upon arrival at US ports of entry to verify compliance and to ensure that the products are free from quarantine pests and contaminants.

ii. FDA Sanitary Regulations and Food Safety Standards

The FDA is responsible for ensuring the safety of all food products entering the U.S. market, including pickled vegetables. Pickles are classified as acidified foods under the Code of

Federal Regulations (CFR). These products must have a final equilibrium pH of 4.6 or lower and a water activity level above 0.85, as these parameters inhibit the growth of *Clostridium botulinum* and other harmful microorganisms (NCRFSMA).

Producers must adhere to Good Manufacturing Practices (GMPs) to ensure food safety during production, packaging, and handling. Additionally, all food labels must conform to FDA guidelines, including accurate ingredient listings, allergen declarations, and nutritional information, all presented in English. Mislabelling or non-compliance may result in the product being listed in the FDA's import alerts and subjected to detention without physical examination (FDA, 2024).

iii. **USDA AMS Quality and Grading Standards**

The USDA Agricultural Marketing Service (AMS) provides voluntary quality grading standards for pickles and pickling cucumbers. These standards not mandatory for importation, assist importers and exporters in aligning product specifications with market expectations. The grading criteria cover factors such as uniformity of size, colour, shape, texture, and the absence of defects, which influence consumer acceptance and pricing (USDA).

iv. **Additional Regulatory Considerations**

Certain US states may impose additional processing, licensing, or labelling requirements for food products sold within their jurisdiction. Moreover, alignment with Codex standards, such as the Codex Standard for Pickled Cucumbers, can enhance international acceptability and facilitate smoother customs clearance.

5.3 **GOVERNMENT SCHEMES**

According to the Indian Gherkins Exporters Association (IGEA), RoDTEP (Remission of Duties and Taxes on Exported Products) is the only active scheme benefiting gherkin exporters. The scheme aims to reimburse exporters for embedded duties and taxes not covered under other schemes. It was discontinued on 5th February 2025 but reinstated from 1st June 2025. While the Indian gherkin industry lacks commodity-specific support, the broader policy environment and several government schemes offer pathways that can be leveraged to strengthen the sector. Various central and state government initiatives aim to promote value addition, enhance export readiness, and support infrastructure development across agro-processing sectors. These schemes, while not tailored specifically for gherkins, can be strategically tapped to address critical gaps in the value chain, from production and processing to marketing and global market access. A more targeted approach within this

existing policy environment could play a vital role in strengthening the gherkin sector and ensuring its long-term competitiveness.

5.3.1 Central Government Schemes

i. Pradhan Mantri Kisan SAMPADA Yojana (PMKSY)

Implemented by the Ministry of Food Processing Industries (MoFPI), the Pradhan Mantri Kisan SAMPADA Yojana is a flagship umbrella scheme designed to modernise infrastructure and enhance supply chain efficiency in the food processing sector. Its components, such as the development of mega food parks, cold chains, and agro-processing clusters, are particularly relevant for gherkin processors and exporters. By offering financial support for setting up or upgrading processing facilities, the scheme helps stakeholders improve value addition, reduce post-harvest losses, and tap into larger domestic and international markets (PIB, 2024).

ii. Production Linked Incentive Scheme for Food Processing Industry (PLISFPI)

While PLISFPI has a broader industry scope, it presents valuable opportunities for larger gherkin processors and export-oriented companies. The scheme incentivises investments aimed at increasing production capacity, enhancing branding and marketing efforts, and expanding sales in international markets. Companies that meet the eligibility criteria can leverage these incentives to scale up operations and strengthen their global footprint (MoFPI, 2025).

iii. PM Formalisation of Micro Food Processing Enterprises (PMFME) Scheme

Targeting micro and small enterprises, the PMFME scheme seeks to bring informal units into the formal economy and promote their integration with organised supply chains. Operating under the “One District One Product” (ODOP) framework, this scheme provides financial and technical assistance for capacity building, technology upgradation, and infrastructure development. For small-scale gherkin processors, particularly in rural areas, this initiative can help them enhance product quality, meet regulatory standards, and access better market linkages (PIB, 2023).

5.3.2 State Government Schemes

i. Karnataka

Karnataka is the leading hub for gherkin cultivation and exports in India, with over 25 processing units operating in the state. To support and expand the gherkin industry, the

Karnataka government has introduced several investor-friendly reforms and incentives aimed at promoting ease of doing business and encouraging agribusiness development. Key initiatives such as eBiz Karnataka, the State Industrial Land Bank, the Investment Promotion Subsidy, and the Karnataka Start-Up Policy (2022–2027) simplify regulatory processes and facilitate business setup. Additionally, the Karnataka Agribusiness & Food Processing Policy (2020–2025) offers a wide range of benefits specifically for MSMEs and enterprises located in Category A, B, and C zones. These include investment promotion subsidies, exemption from stamp duty, concessional registration charges, reimbursement of land conversion fees, exemption from entry tax, and a 6 per cent per annum interest subsidy on term loans. Enterprises are also eligible for exemptions from electricity tariff tax, GST reimbursements, subsidies for adopting technology from recognised national labs, and market fee exemptions under the Incentive Services scheme (valid up to 2025). These measures collectively aim to reduce costs, enhance competitiveness, and support the sustainable growth of the gherkin industry in Karnataka (GoK, 2025).

ii. **Telangana**

Telangana, the youngest state of India, ranks third in the country for ease of doing business, as per the Department for Promotion of Industry and Internal Trade (DPIIT). The state boasts a strong ecosystem for the food processing industry, supported by prominent agri-research institutions like ICRISAT and over 10 food technology training institutes (MoFPI, 2025). Telangana has also established the Telangana State Food Processing Society to coordinate and promote the sector's growth. The state government actively incentivises the development of new food processing units as well as the modernisation and expansion of existing ones. Emphasis is also placed on fostering entrepreneurship and facilitating collaboration between industry and academia to drive innovation and adoption of best practices (Telangana Industries Association, 2020). A key initiative of the state is the promotion of Special Food Processing Zones (SFPZs), which are developed on plots ranging from 200 to 1000 acres. Under the Telangana State Food Processing & Preservation Policy, SFPZs are supported through various incentives. These include a 35 per cent capital grant-in-aid of up to INR 5 crore under the MoFPI scheme for the creation or expansion of food processing and preservation capacities, reimbursement of 75 per cent of interest payable on term loans (up to INR 2 crore), 100 per cent reimbursement of APMC fees for seven years, and a 25 per cent rebate on land costs (Telangana Food Processing Society, 2025). These initiatives are aimed at positioning Telangana as a competitive and innovation-driven hub for food processing in India.

iii. Andhra Pradesh

Andhra Pradesh offers a supportive policy environment and robust infrastructure to promote the growth of the food processing industry. The state has implemented several schemes aimed at attracting investments, facilitating technology upgradation, and providing financial support to new and existing food processing units. As per the Andhra Pradesh Food Processing Policy 4.0 (2024–2029), investors are eligible for a range of incentives, including capital investment subsidies, exemptions from various charges, reimbursement of stamp duty, and SGST reimbursement specifically targeted at MSMEs. The policy also includes additional tax-related incentives to further ease the financial burden on enterprises and enhance their competitiveness. These measures collectively aim to strengthen the food processing ecosystem in the state and position Andhra Pradesh as a favourable destination for agribusiness investments (GoAP, 2021).

iv. Tamil Nadu

Tamil Nadu provides a favourable business environment for establishing food processing units, including those in the gherkin industry. The state is home to several agricultural research institutions that can play a key role in supporting gherkin seed development and related R&D activities. To promote investment in the sector, Tamil Nadu offers a range of incentives under its food processing policies. These include capital subsidies ranging from INR 30 lakhs to INR 2.25 crores, with an additional 50 per cent subsidy for units set up within designated industrial parks. The policy also provides infrastructure subsidies of up to INR 30 lakhs or 25 per cent of the capital cost, whichever is lower. Furthermore, eligible enterprises can benefit from stamp duty concessions ranging from 50 per cent to 100 per cent, along with exemptions from electricity tax. These incentives are aimed at reducing operational costs, encouraging industrial development, and strengthening the state's position as a hub for food processing industries (TNAPEX, 2018).



Strategies and Policy Implications

6

STRATEGIES AND POLICY IMPLICATIONS

India's global leadership in gherkin exports has been built on a robust contract farming model and well-established rural value chains in southern India. Between 2013 and 2023, the global demand for gherkins, both RTE and bulk, has grown at an AAGR of 4 per cent. During the same period, India's gherkin exports have expanded at a higher AAGR of 6 per cent, indicating strong performance and increasing global competitiveness.

However, the sector is facing significant challenges: labour shortages, rising input and freight costs, inadequate infrastructure, limited research and development, and a lack of dedicated policy focus. If unaddressed, these issues could erode India's competitive edge, especially as global players such as Türkiye, Germany and the Netherlands step up innovation and trade promotion efforts.

That said, India remains well-positioned to consolidate and expand its leadership in the global gherkin market. Based on recent trends, India could maintain an annual average export growth of 6 per cent through 2030. With the adoption of the targeted strategies outlined below, the country has the potential to surpass this trajectory, significantly increasing export volumes and market share in new and existing international markets.

6.1 FOCUSED STRATEGIES

Expand market access to diversify export destinations

Rationale: India's gherkin exports are heavily concentrated in the US and EU, making the sector susceptible to external risks such as policy changes, trade disruptions, and evolving consumer trends. Diversifying export destinations will help mitigate these vulnerabilities and tap into growing demand in emerging and underserved markets.

Action Points:

- Explore new export markets: Target niche and underexplored markets such as non-EU Europe (e.g., Switzerland, Norway), East Asia (Japan, South Korea), the Middle East, and the CIS region beyond Russia (Kazakhstan, Uzbekistan). Leverage bilateral engagement through Indian embassies and trade offices. These markets show rising demand for pickled products and offer strong potential for Indian gherkins. Also,

negotiate trade facilitation measures to address non-tariff barriers (NTBs) such as MRL standards and packaging regulations.

- India should expand its gherkin exports to the Middle East, particularly the UAE and Saudi Arabia. In TE 2023, the UAE imported USD 4.8 million worth of RTE gherkins, with India holding a 21 per cent share, close behind Iran (22 per cent) which faces a 5 per cent tariff, while Indian exports are tariff-free. This, along with India's logistical advantage, makes the UAE a high-potential market. Saudi Arabia imported USD 6.4 million, where India has a smaller share (14 per cent) compared to Syria and Jordan, which benefit from zero tariffs. Despite a 5 per cent tariff on Indian gherkins, the Saudi market also offers growth opportunities with the right strategies.

Leverage Preferential Market Access in the EU while Expanding Tariff Advantages for Indian Gherkins in Other Key Markets

Rationale: The recently concluded India–European Union Free Trade Agreement provides preferential tariff access for Indian cucumber and gherkin exports to the European Union, likely through a tariff-rate quota mechanism. This represents a significant improvement over the earlier regime under which Indian exports faced tariffs of approximately 8 per cent for bulk gherkins (HS 071140) and around 14.1 per cent for preserved gherkins (HS 200110), while competitors such as Turkey enjoyed preferential access. However, the quota-based structure means that the benefits will depend on effective utilisation by exporters and the ability of India to expand supply within the permitted limits. At the same time, excessive dependence on a limited number of markets exposes the sector to demand shocks and regulatory changes. Diversifying export destinations and securing preferential access in other major consuming markets such as the United States, United Kingdom, Canada and the Gulf Cooperation Council will therefore be critical for sustaining long-term export growth.

Action Points:

- **Ensure Effective Utilisation of EU Tariff Preferences:** Develop a transparent domestic mechanism for allocating export quotas negotiated under the EU agreement among Indian exporters. Allocation criteria may include historical export performance, processing capacity, and compliance with EU quality standards to ensure that the available preferential access is fully utilised.
- **Seek Expansion of Tariff-Rate Quotas through FTA Review Mechanisms:** Use built-in review provisions in the EU agreement to advocate gradual expansion of tariff-free

quotas as Indian exports increase. This will help prevent quota ceilings from constraining future export growth.

- **Secure Preferential Access in Other High-Potential Markets:** Prioritise tariff concessions for processed cucumbers and gherkins in ongoing or future trade negotiations with major consuming markets such as the United States, the United Kingdom, Canada, and the Gulf Cooperation Council. Expanding preferential access in these markets will reduce export concentration risks and create new growth opportunities for the Indian gherkin industry.
- **Strengthen Strategic Partnerships with International Buyers:** Encourage long-term supply agreements between Indian exporters and global food processors, retailers, and private label brands in Europe and other major markets. Such partnerships can provide demand stability and facilitate scaling up exports under preferential tariff regimes.

Strengthen export ecosystem in key gherkin-producing states through cluster-based support and enabling infrastructure.

Rationale: Gherkin cultivation is concentrated in Karnataka, Andhra Pradesh, and Tamil Nadu, with Karnataka leading in both area and output. However, many processing units in these regions face capacity pressures during peak harvesting periods, and the lack of integrated and coordinated infrastructure services hampers efficiency across the value chain. Developing dedicated export clusters with modern facilities, mechanisation support, and robust cold chains will improve productivity, ensure quality and traceability, and enhance competitiveness, while raising farmer incomes and reducing post-harvest losses.

Action Points

- **Designate and Develop Gherkin Export Clusters:** The key gherkin-growing districts in Karnataka, such as Koppal and Vijayanagara), and other states should be developed as modern dedicated export clusters. Provide targeted support to entrepreneurs to upgrade or set up their own processing units, pack houses, grading lines, and container handling facilities. Similarly, promote enabling services such as specialized grading centres, pest management companies, and independent cold chain logistics operators, offering credit and infrastructure subsidies through schemes like PMKSY and Agri-Infra Fund. Develop cluster-based cold chain logistics and dedicated reefer transport corridors to ICD/ports such as Bengaluru, Chennai and Tuticorin.

- **Promote Mechanisation and Agronomic Efficiency:** Introduce small-scale harvesting tools through FPOs and custom hiring centres, and pilot mechanised solutions with ICAR/KVK support to reduce labour dependency in short-cycle cultivation. Offer targeted subsidies for gherkin-specific agri-equipment. This will address the issue of rising labour costs. Also, policies should be made to allow the use of MGNREGA labour in rural gherkin farms and processing units to address acute workforce shortages during peak seasons.
- **Streamline Regulatory Framework:** Reclassify the gherkin processing industry from ‘Orange category’ to ‘Green Category’ under Pollution Control Board norms to ease regulatory burdens and facilitate smoother clearances for new units and expansions. According to IGEA, the gherkin industry exclusively uses salt and vinegar, both safe for human consumption, as processing agents. The final effluent is also non-toxic and fit for human use, with acetic acid levels diluted to below 3 per cent, posing no harm to the environment. Reclassification would lead to reduced regulatory restrictions, lower investment costs for Effluent Treatment Plants (ETPs), and decreased fees payable to Pollution Control Boards.
- Simultaneously, develop and implement a nationally accepted standard production protocol for gherkin cultivation, covering aspects such as seed quality, fertigation, pest management, and harvesting practices. This will help ensure consistent quality, traceability, and compliance with international sanitary and phytosanitary (SPS) standards, strengthening India’s positioning in both traditional and emerging export markets.

6.2 OTHER STRATEGIES

✚ Strategies expanding into Ready-to-Eat (RTE) gherkins while retaining bulk exports with strong branding to maximise value

Rationale: India currently exports a large share of gherkins in bulk-preserved form, typically in 220 L drums to countries like the Netherlands and Germany, where they are repackaged, branded, and sold at a premium. This model, while cost-efficient due to lower customs duties and better freight economics (14,400 kg per 20-ft container for bulk vs. 7,500 kg for jarred RTE), limits India’s ability to capture downstream value, build brand equity, and influence consumer perception. Furthermore, customs duties on RTE exports are significantly higher as they apply to the entire packaged product (including jars and caps), making Indian RTE products less competitive in price-sensitive markets. This requires a balanced approach- continue leveraging the cost advantages of bulk exports while

selectively building capabilities and market presence in branded RTE segments where higher margins and demand justify the additional costs. To effectively expand into the Middle East market, India should focus on RTE gherkins, as imports of bulk gherkins in the region are minimal.

Action Points:

- **Support Transition to Retail-Ready Packaging:** Provide targeted financial incentives, technical assistance, and streamlined regulatory support for exporters upgrading facilities to produce RTE formats (e.g., spiced, sliced, flavoured, or mini-packed gherkins) that align with global consumer preferences. Prioritise support for those adopting international food safety, hygiene, and packaging compliance standards.
- **Improve Cost Competitiveness of RTE Exports:** Advocate for lower or differentiated customs duties on RTE gherkins through bilateral trade negotiations or under existing FTAs. Explore schemes for exporters to source jars and caps locally at subsidized rates or collaborate with importers to use destination-country packaging to reduce landed costs.
- **Build a Branding Initiative for Indian gherkins:** Launch a coordinated branding campaign through state government export promotion councils. Emphasise product origin, traceability, sustainability, and food safety in marketing narratives. Highlight Indian gherkins as clean label, vegan, and globally compliant. The Gherkins Exporter Association of India should actively advocate for a GI tag to protect the unique identity of Indian gherkins and prevent generic branding by foreign repackages.
- **Customise Products and Build Exporter Capabilities for Target Markets:** Develop region-specific flavours, packaging sizes, and marketing messages suited to European, CIS, Middle Eastern, and East Asian consumers. For example, sweeter brines for Russia, spicier variants for the Middle East, or mini-jars for urban European consumers. Simultaneously, provide support to smaller exporters through training on branding, packaging design, shelf-ready logistics, and cold chain management to ensure product integrity and competitiveness in distant markets.

✚ Strengthen R&D and Agronomic Support to Improve Yields and reduce Seed imports

Rationale: India's gherkin yields remain lower than those in Europe, limiting its ability to meet rising global demand and capture higher export value. Dependency on imported seeds

further constrains scalability and adaptability to local conditions. Investing in a robust R&D ecosystem focused on seed development, agronomy, and farmer training can help boost productivity, reduce input costs, and sustain India's leadership in the global gherkin market.

Action Points:

- **Reinstate R&D for domestic seed production:** In collaboration with ICAR, state governments and state agricultural universities, efforts should focus on seed breeding, pest management, and climate-resilient cultivation practices. Launch public-private breeding programmes to develop indigenous high-yielding seed varieties which are disease-resistant and suited to Indian agro-climatic conditions.
- **Train Farmers in Good Agricultural Practices (GAP):** Conduct structured training programs on nutrient management, water-efficient practices, and integrated pest management, leveraging KVKs and digital extension platforms. Support applied research on organic practices, bio-inputs, and soil health to improve sustainability and reduce reliance on chemical inputs.
- **Promote Protected Cultivation under Controlled Conditions:** To mitigate climate risk, labour dependency, and water inefficiencies, gradually shift gherkin cultivation toward protected environments such as shade nets and polyhouses. This will help enhance productivity, reduce chemical inputs, and align with the global trend of clean, traceable food production. Incentives should be offered for small farmers to adopt low-cost protective cultivation models, especially in areas with high export potential.

✚ Institutionalise Dedicated Policy Support for Gherkins Across the Value Chain

Rationale: Despite being a globally competitive export commodity, gherkins currently lack crop-specific support under major government schemes. Existing support from ministries like MoAFW, MoFPI, and MoCI is generic and fragmented, limiting impact. A coordinated, crop-specific policy approach spanning production, processing, and export promotion can unlock the sector's full potential and ensure integrated value chain development.

Action Points:

- **Schemes for improving Production & Productivity:** Launch a dedicated sub-scheme for gherkins under the *Rashtriya Krishi Vikas Yojana (RKVY)* or a new MoAFW initiative, focusing on high-yield seed development, modern agronomic practices, drip

irrigation, IPM, and farmer training. States should be encouraged to include gherkins in their crop-specific promotion programmes with convergence support from KVKs and ICAR.

- Schemes for Processing & Value Addition: Extend financial incentives for gherkin-focused processing units, including grading lines, brining, pre-cooling, and consumer pack facilities under the PMFME and PMKSY schemes. Continue support through interest subvention scheme to ensure affordable short-term credit for farmers. State industries departments should support cluster-level industrial parks for gherkin processors with plug-and-play infrastructure. Recognise leading producing districts under the One District One Product framework to enable focused investment and branding support.
- Schemes for Exports & Trade Promotion: APEDA and the Ministry of Commerce should formulate a focused export strategy for gherkins under the Agri Export Policy with enhanced financial support for infrastructure development across the value chain. In addition, APEDA should strengthen efforts in market development, branding, facilitation of GI tag application through the Gherkins Exporter Association of India and support for participation in global trade fairs to boost India's visibility in key international markets.

ANNEXURES

Discrepancy in Production Data for Cucumber and Gherkins

A discrepancy has been observed in the Production, Area, and Yield data for cucumber and gherkins as reported by FAOSTAT and the MoAFW, Government of India. **The following tables** present the respective data from these two sources.

Annex Table 1: APY of Cucumber & Gherkins by FAOSTAT

Year	Area (in '000 Ha)	Production (in '000 MT)	Yield (t/ha)
2012	26.5	168.0	6.3
2013	26.5	168.0	6.3
2014	26.8	169.5	6.3
2015	28.5	180.6	6.3
2016	27.3	172.7	6.3
2017	28.0	177.1	6.3
2018	28.5	179.6	6.3
2019	28.9	181.4	6.3
2020	28.5	184.7	6.5
2021	28.6	181.9	6.4
2022	28.7	182.7	6.4
2023	28.6	183.1	6.4

To account for this inconsistency and derive a more accurate estimate of world production, a revised world production figure has been computed using the following formula:

Revised World Production

$$= (\text{World Production by FAOSTAT}) - (\text{India Production by FAOSTAT}) \\ + (\text{India Production by MoAFW})$$

Annex Table 2: APY of Cucumbers by MoAFW, GoI

Year	Area (in '000 Ha)	Production (in '000 MT)	Yield (t/ha)
2012-13	40.9	641.0	15.7
2013-14	43.3	678.2	15.7
2014-15	42.8	678.0	15.8
2015-16	71.0	1202.0	16.9
2016-17	74.0	1142.0	15.4
2017-18	82.0	1260.0	15.4
2018-19	105.0	1588.0	15.1
2019-20	112.0	1656.0	14.8
2020-21	116.6	1651.9	14.2
2021-22	119.1	1694.2	14.2
2022-23	127.5	1711.7	13.4
2023-24	138.5	2050.0	14.8

Annex Table 3: Revised Estimation of World Production of Cucumber and Gherkins Based on Adjusted Indian Data

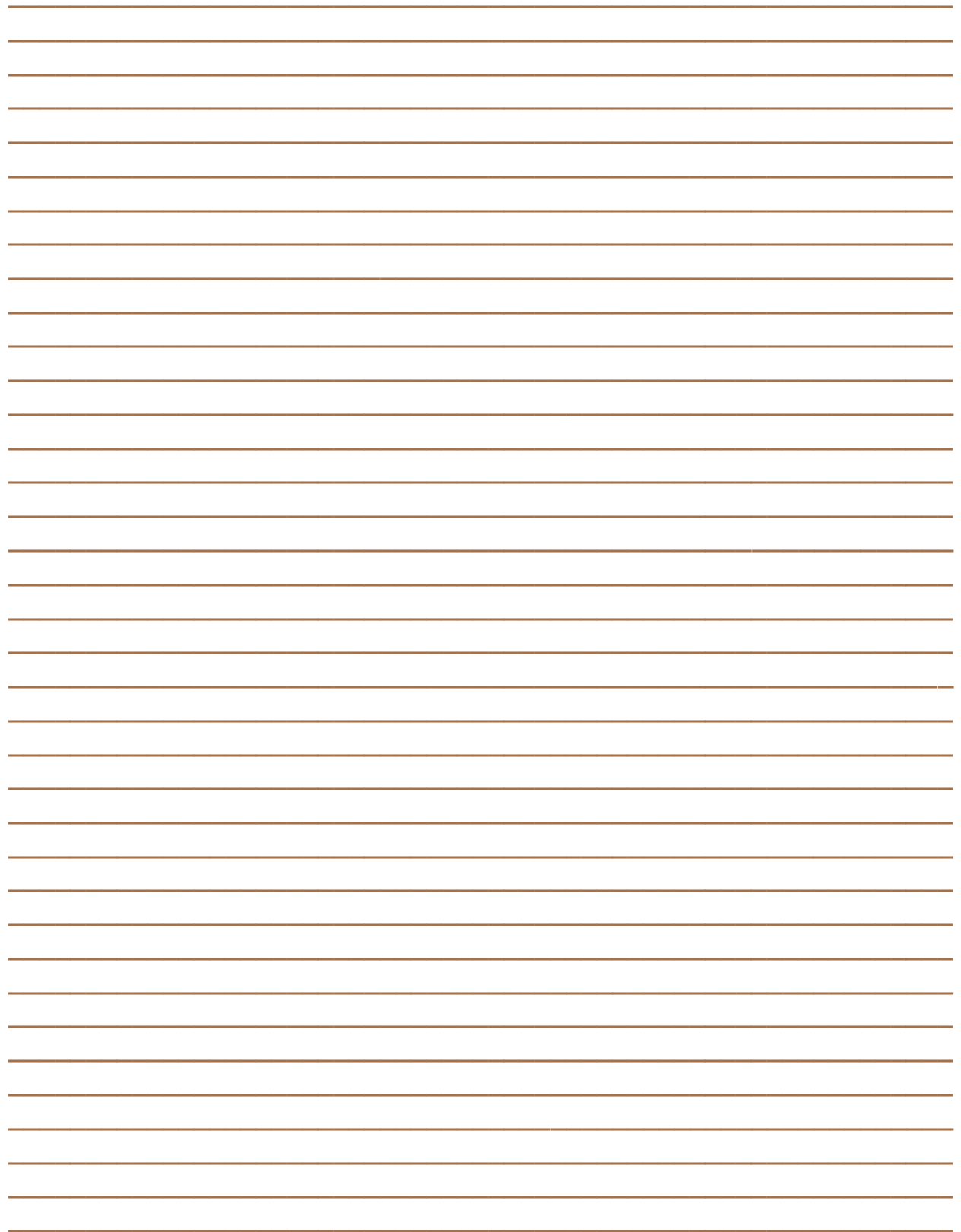
Year	Production (in MMT) (FAO)	India Prod. (in MMT) (FAO)	India Prod. (in MMT) (MoA)	Revised Global Production (in MMT)*
2012	70.8	0.168	0.64	71.3
2013	73.3	0.168	0.68	73.8
2014	76.1	0.169	0.68	76.7
2015	78.4	0.181	1.20	79.4
2016	80.9	0.173	1.14	81.9
2017	82.2	0.177	1.26	83.3
2018	84.9	0.180	1.59	86.4
2019	88.3	0.181	1.66	89.8
2020	90.9	0.185	1.65	92.3
2021	93.0	0.182	1.69	94.5
2022	95.2	0.183	1.71	96.7
2023	97.8	0.183	2.05	99.7

**Note: A minor discrepancy may still persist due to differences in reporting periods. FAOSTAT data is based on the calendar year, whereas MoAFW data follows the financial year.*

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